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Investigating professional development of content and language teachers in  
English Medium Instruction (EMI) contexts in China

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Submitted in fulfilment of the requirements of the Degree of PhD

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2025

## Abstract

With the global advancement of the internationalisation of higher education, English Medium Instruction (EMI) has gained momentum in non-Anglophone contexts such as China, where EMI programmes are surging to align with goals such as attracting government funding, enhancing university rankings, and improving students' English proficiency and career prospects. However, a range of challenges faced by stakeholders (students and teachers) may jeopardise the realisation of these goals. While student-related issues have been widely recognised, challenges faced by teachers remain insufficiently explored. Specifically, content teachers often struggle linguistic and pedagogical challenges when teaching from L1 to English, while English for Academic Purposes (EAP) teachers face transitioning challenges from general English (EGP) to EAP.

Teacher professional development (PD) is therefore recommended to address these challenges. However, institutional support remains limited in practice, which may undermine the ultimate goal of EMI in ensuring students' academic success (McKinley & Rose, 2022). Furthermore, collaboration between content and EAP teachers is suggested as a promising PD format (Lasagabaster, 2022; Ploettner, 2019), enabling content and EAP teachers to synergise disciplinary and linguistic expertise to better support student learning. However, collaboration remains largely at the pilot stage (Lasagabaster, 2018), with limited relevant research on its effectiveness, leaving multiple unaddressed issues in practice.

This study investigates the current state of PD opportunities and collaboration between content and EAP teachers across different types of EMI provisions (EMI university, EMI college and EMI programme) in China. Using a multi-method qualitative approach, data were collected through document analysis of PD-related documents and interviews with content teachers ( $n = 20$ ), EAP teachers ( $n = 20$ ), and PD leads ( $n = 5$ ). The study offers both objective and subjective insights into how PD and collaboration are perceived, structured, and experienced.

Key findings reveal institutional and individual factors influencing teachers' PD and collaboration respectively, highlight significant variation across EMI provision types, and stress the need for structured mechanisms and leadership support to facilitate effective PD and also teacher collaboration. The study also underscores the critical role of EAP teachers in supporting students' academic English and calls for more equitable PD investment across teaching cohorts. It concludes by advocating for policy and institutional reforms to support more sustainable and collaborative PD practices. Ultimately, this study emphasises that the long-term success of EMI hinges on recognising teachers' endeavours made for bettering EMI teaching quality and calls for a more holistic support system which ensures the empowerment of teachers and academic achievements of students.

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## Acknowledgements

Completing this PhD has been a journey of self-development of knowledge, criticality, resilience and countless moments of struggle and triumph. While my name appears alone on this thesis, its completion would not have been possible without the support, guidance, and encouragement of many amazing individuals.

First and foremost, I would like to extend my deepest gratitude to my supervisors Dr Nicola Galloway and Dr Ide Haghi. Nicola, you are always generous to share opportunities with students and colleagues. Your passion and energy really inspire me to be a researcher. Thank you for your critical feedback, which always prompts me to think further. Ide, thank you for always giving valuable and practical suggestions for bettering my work, which have been of great help to me. Both of your unwavering patience, insightful suggestions, and steadfast belief in my potential have shaped not only my work but also my growth as a researcher. I am learning from the bests!

I am equally grateful to the convenor and examiners for their invaluable and instructive suggestions.

My genuine thanks go to ELIPRO (The Education, Languages and Internationalisation Professional Network), a warm community of practice gathering lovely people of English Medium Instruction, Global Englishes and beyond. I really enjoy working with you all. And special thanks to Emma, Nadia, Paolo and Yiming.

Thanks to my family for the countless support.

Thanks to my friends outside the academia, specifically Evelyn, who I can always turn to share my frustrations and celebrate my small victories. Thanks for being a close friend of mine.

Last but not least, I would like to thank myself, who always makes things right! Thanks for staying physically and mentally strong through this ‘cruel’ but rewarding journey. You can finally breathe now! Congrats, Dr!

## **Author's Declaration**

I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

Printed Name: Jingwen Zhou

Signature: Jingwen Zhou

## Abbreviations

- British Association of Lecturers in English for Academic Purposes (BALEAP)
- Chinese Medium Instruction (CMI)
- Content-Based Instruction (CBI)
- Content-based Language Teaching (CBLT)
- College English Test (CET)
- Content and language integrated learning (CLIL)
- Community of Practice (CoP)
- Competency Framework for Teachers of English for Academic Purposes (CFTEAP)
- Content teachers (CT)
- English for Academic Purposes (EAP)
- English for Academic Purposes teachers (EAPT)
- English as a Foreign Language (EFL)
- English for General Academic Purposes (EGAP)
- English for General Purposes (EGP)
- English as Lingua Franca (ELF)
- English for Specific Academic Purposes (ESAP)
- English Language Teaching (ELT)
- English Medium Instruction (EMI)
- Higher Educational Institutions (HEI)
- Integrating Content and Language in Higher Education (ICLHE)
- Language teachers (LT)
- Native English Speaker (NES)
- Non-Native English Speaker (NNES)
- Professional development (PD)
- Professional development leads (PD leads)
- Teachers' professional development (TPD)
- Teaching English for Academic Purposes (TEAP)
- Transnational education (TNE)

## **Chapter 1: Introduction**

### **Overview**

The main objective of this study is to investigate teachers' professional development (PD) and collaboration between content and English for Academic Purposes (EAP) teachers in Chinese English Medium Instruction (EMI) contexts. The introductory chapter begins with an introduction of the research context of this study in relation to the development of EMI and EAP in China. It then presents the rationale and the significance of the study, followed by research aims and questions. This chapter ends with the structure of the thesis.

#### **1.1 Research context of the study**

##### **1.1.1 English Medium Instruction in China**

The research context of this study is China, which is a surging EMI context with rapid growth and expansion of EMI programmes over the last two decades (Galloway et al., 2024; Rose et al., 2020). The emergence of EMI can be traced back to the 1990s (Hu, 2009) when it was initially manifested as English-taught programmes (also termed as bilingual education in Chinese higher education policy) with the varying degree of Chinese and English being both used in teaching. Along with the goal of education reform to accelerate internationalisation of higher education, in 2001, the Ministry of Education (MOE) in China (MOE, 2001) issued that 5-10 percent of all undergraduate courses in leading universities should be taught in English or another foreign language within 3 years from 2001. Consequently, a series of English-taught programmes were established, particularly in high technology and international trade majors such as business, science, and engineering (Gao & Ren, 2019; Jiang & Zhang, 2023).

In 2007, EMI continued to grow in China as it has been further promoted via multiple national policies (Hu & Duan; 2019; Rose, et al., 2020) because of the role that English plays in the internationalisation and globalisation in achieving

national socioeconomic (Liao et al., 2025) and academic development (Gao, 2018; McKinley et al., 2022). The Chinese government thus enacted language policies to emphasise the role of English and promote it in educational settings at different levels (MOE, 2007), which resulted in the establishment of EMI programmes at a large scale. It is explicitly stated in the policy that EMI programmes are supposed to improve student's English proficiency MOE (2007). The top-down language policy therefore confirms the goal of English language learning in EMI programmes in China, showing that the EMI movement is closely associated with Chinese government' objective to improve students' English proficiency on top of content learning in EMI programmes (Rose et al., 2020; Zhang, 2018). However, no further concrete details were found in relevant policy regarding how to realise the goal of improving English proficiency, which implies that universities may have a certain degree of autonomy in this regard, and English language proficiency may be improved implicitly along with the content learning in EMI.

In 2020, given that the increasing global mobility of students and the global competition in attracting international students, MOE (2010) launched a ten-year plan entitled 'the Outline of national medium and long-term education reform and development plan 2010-2020' aiming at establishing China as the major destination for international students in Asia. This plan resulted in more HEIs introducing EMI programmes across different majors and a significant increase in the enrolment of international students. Up to 2021, the number of international students was 255,720 full-time international students registered in EMI programmes in China (MOE, 2022).

As the number of EMI courses has become an important performance indicator when assessing universities (Gao, 2018; Rose et al., 2020; Zheng & Choi, 2024), EMI programmes have been initially introduced to top-tier universities in China, which were known as 'Project 985' announced in 1998 (including 39 HEIs receiving the most funding and committed to becoming world-class universities) and 'Project 211' announced in 1995 (including 211 HEIs aiming broadly to enhance the overall quality of higher education in China) (Hu et al., 2014).

Since 2015, both ‘Project 985’ and ‘Project 211’, after being screened by MOE, were further incorporated into ‘Double First-Class Initiative’ index, which aims to establish world-class institutions and disciplines by 2030 and build China into a global education powerhouse by 2050 (MOE, 2022). Consequently, a total of 145 institutions have been indexed under ‘Double First-Class Initiative’ by 2022 (MOE, 2022). As EMI continued to grow, conventional universities not indexed into ‘Double First-Class’ also began to adopt EMI programmes for the purpose of attracting government funding and improving university profile and rankings (Zhang, 2018; Zheng & Choi, 2024). Although the exact number of ‘Double First-Class’ universities offering EMI courses has not been specified, the growing expansion of EMI programmes indicate that China’s top tier and conventional universities are increasingly providing EMI courses to improve university rankings, enhance global academic collaboration, and attract international students.

#### *1.1.1.1 Types of English Medium Instruction provisions in China*

There are three main types of EMI provisions in Chinese HEIs, namely EMI university, EMI college, and EMI programme. To start with, EMI university, first commenced in the mid-2000s and mostly promoted and expanded since the 2010s (Liao et al., 2025), is often termed as transnational higher education (TNHE) university jointly run by Chinese and foreign universities (Hillman et al., 2021). Teachers (both content and EAP) are usually L1 speakers of English, while a small proportion of local Chinese teachers are also involved. The main student population is local Chinese students (Hu et al., 2014). For example, in an EMI university, English is the official working language used for classroom teaching, learning, assessments, and administration, making up over 90% of the language use (Zhou & Curle, 2024). With relatively advanced policies and management, EMI universities often viewed as pioneers to tertiary EMI education in China (Liao et al., 2025) which often provide stratified EAP provisions for students at different English proficiency level and stage of study (McKinley et al., 2021; Rose et al., 2020).

At the time of this study, there are a total of 10 EMI universities authorised by the Ministry of Education in China (CFCRS, 2022), namely University of

Nottingham Ningbo China, Xi'an Jiaotong-Liverpool University, Duke Kunshan University, Wenzhou-Kean University, New York University (Shanghai), The Chinese University of Hong Kong (Shenzhen), Beijing Normal University - Hong Kong Baptist University United International College, Guangdong Technion - Israel Institute of Technology, and Moscow University - Beijing Institute of Technology (Shenzhen), and The Hong Kong University of Science and Technology (Guangzhou) (see Table 1.1.1.1-1).

EMI University	Year Established
University of Nottingham Ningbo China	2004
Beijing Normal University - Hong Kong Baptist University United International College	2005
Xi'an Jiaotong-Liverpool University	2006
New York University (Shanghai)	2012
Duke Kunshan University	2013
Wenzhou-Kean University	2014
The Chinese University of Hong Kong (Shenzhen)	2014
Guangdong Technion - Israel Institute of Technology	2015
Moscow University - Beijing Institute of Technology (Shenzhen)	2016
The Hong Kong University of Science and Technology (Guangzhou)	2022

Table 1.1.1.1-1 EMI universities in China

Like EMI universities, EMI colleges are also THEN in nature (De Costa et al., 2022; Zhou et al., 2021), while it is an independent affiliated college at a conventional Chinese Medium Instruction (CMI) university. Within the college, all programmes are taught in an EMI manner. Teachers (content and EAP) are consisted of local staff originally affiliated with different departments in the university and teachers whose L1 is English from the collaborating foreign institutions. Specifically, being viewed by institutional leads as qualified in teaching in English (Macaro & Han, 2020), local teachers (content and/or EAP teachers) therefore are asked to undertake a dual duty of teaching CMI and EMI. Similar to EMI university type, local students consist of the majority of student population.

Based on the latest statistics reported by CNUR (2023), there are a total of 86 colleges collaborating with foreign institutions.

EMI programmes are mainly presented as degree programmes in local conventional CMI universities (Zhou et al., 2021) with particular policy-driven goals such as curriculum innovation such as ‘Double-Class Initiative’ aiming at developing a number of world-class universities and first-class disciplines by 2050 (MOE, 2022), improving university rankings, and generating more tuition fees (McKinley et al., 2021). Like EMI colleges, teachers are mainly local Chinese staff who both teach EMI and CMI courses, while a very limited proportion of foreign teachers are involved on a case-by-case basis. The latest statistics shows that there are over 600 universities in China liaising with more than 800 foreign institutions, totalling 2,238 EMI programmes by the end of 2019 (China Education Online, 2020).

### **1.1.2 English for Academic Purposes in China**

It is also acknowledged that the rise of EMI is also attributed to the development in English language teaching (ELT) and its education reform in China over past few decades (Liao et al., 2025). The development of ELT has a long history since the mid-1980s, when the Chinese government enacted national language policies, aiming to develop English curriculum and promote English education in colleges and universities (Xu & Fan, 2017). English, at that time, was solely taught as a subject with particular focus on vocabulary and grammar teaching (Lam, 2005; Zhang & Luo, 2004), not in conjunction with other academic subject content. ELT was manifested as English for General Purposes (EGP), aiming at developing students’ overall English skills in aspects such as basic grammar, vocabulary, and communicative skills for general contexts (Zheng & Cheng, 2008). In China, EGP has traditionally formed the foundation of ELT in universities, especially featured in the first-year English course (Xu & Fan, 2017).

The development of ELT in China has not been smooth sailing. Since the late 1980s, China’s College English Tests (CET) have been designed and evaluated all Chinese undergraduates whose disciplines were not majoring in English

(Feng, 2009; Zheng & Cheng, 2008). As noted by Liao et al. (2025), the CET has been criticised by bringing the unsatisfactory outcomes due to the traditional ELT approach of grammar-translation method and the lack of appropriate locally informed teaching materials. Bilingual education (a mixture of Chinese and English in teaching) was thereafter emerged and promoted in response to the call for education reform of ELT through national language policies (Zheng & Cheng, 2008). As a result, it has led to the expansion of EMI and placed higher demands on students' English language ability over the last two decades (see section 1.1.1).

Moving to the 2000s, enforced by MOE's (2001) goal of internationalisation of higher education, ELT in Chinese HEIs has become more focused on cultivating students' academic English skills and helping them engage in the cutting-edge science and technology community (Hu et al., 2014). As with the increasingly demanding requirements on English proficiency on students in EMI programmes, students have widely reported linguistic challenges in relation to academic English in speaking and writing (Li et al., 2012; Zhang & Zhu, 2016). In this regard, scholars (e.g., Fang, 2018; Galloway & Ruegg, 2020; Rose et al., 2021) called for appropriate academic English support for students to succeed in EMI learning. This is therefore reflected by a shift from EGP to academic and discipline-specific English use, which belongs to the field of EAP that focuses on academic skills in reading, writing, speaking and listening (Cai, 2017; Campion, 2016).

More specifically, under EAP, English for Specific Academic Purposes (ESAP) offers training students' English skills for specific disciplines (Hamp-Lyons, 2011), although it is not very common due to resource and personnel reasons (Galloway et al., 2024). It should be acknowledged that under the national goal of internationalisation of higher education and the enforcement of the national language policy, conventional Chinese universities using Chinese as the medium of instruction have also undergone the transformation from EGP to EAP, although not as obvious as EMI programmes (Gao & Cui, 2021). Hence, it can be concluded that with the ongoing goal of internationalisation of higher education in China, new requirements on English have been put forward for ELT, which is supposed

to be EAP-oriented in order to cultivate talents with global competence to achieve academic success.

## 1.2 Rationale of the study

The rapid expansion of EMI programmes in surging EMI contexts such as China is not without challenges. As such, numerous studies have been conducted in context of China to address the issues related to students, including language-related challenges (Galloway et al., 2017; Xie & Curle, 2020), the lack of language support (Si, 2023) and limited content knowledge acquisition in EMI (Zhou et al., 2023). However, less scholar attention was given on teaching practitioners (content and EAP teachers in this study), who are also encountered a range of challenges related to EMI teaching in aspects of English language (Curle et al., 2020; Galloway & Ruegg, 2022) and pedagogy (Galloway & Rose, 2021; Li & Ma, 2020; Macaro & Han, 2020; Shao & Rose, 2022). In this respect, scholars have called for training for content teachers (Galloway & Ruegg, 2022; Lasagabaster, 2022; Macaro & Han, 2020). However, in practice, there is a lack of PD training for content teachers in various EMI contexts, which is diagnosed as a challenge of EMI (Galloway & Ruegg, 2022; Lasagabaster, & Fernández-Costales, 2024). Furthermore, as PD studies in EMI have only recently begun to receive some scholar attention, it remains unknown what professional development entails to better support teaching practitioners in EMI (Chang, 2023; Macaro & Han, 2020), which requires a systematic approach to understand PD opportunities for teachers in EMI contexts.

Unfortunately, as noted by Lasagabaster (2022), although PD plays an essential role in ensuring the quality of EMI, it has not been a policy priority in many EMI universities, as reflected in a marked lack of institutional support offered to teachers in various EMI contexts (Galloway et al., 2024). This may be explained by policy makers' common assumption that there is no problem for content teachers with the shift of teaching content L1 to L2 (English), so both content and English language development are effortlessly guaranteed (Akıncıoğlu, 2022). However, without such institutional support, EMI practice may descend to 'a cheap solution to complex language programmes for achieving overly ambitious politico-economic goals' (Hamid et al., 2013, p. 1). That is to say,

without adequate PD opportunities for teachers, the quality of teaching may be compromised, ultimately hindering students' academic success in EMI (Lasagabaster & Fernández-Costales, 2024; Rose & McKinley, 2022).

Moreover, to date, studies on PD in EMI was predominately focused on content teachers, while EAP teachers are often understudied in EMI contexts (Galloway et al., 2024). This is worrying as EAP teachers are also an integral part of EMI because of their role of providing language support to students and content teachers (Galloway & Rose, 2021; Li & Ma, 2020). In China, EAP teachers also encounter a series of challenges when transitioning from teaching EGP to EAP under the EAP reform (see section 1.1.2), which requires relevant training for them to cope with the increasingly high English proficiency requirements of students. However, EAP teachers' PD in EMI contexts has been neither a common practice in EMI universities nor the focus of studies on this area (Li & Ma, 2020). That is, if the ultimate goal of EMI that ensuring students' learning outcomes in EMI is shared and agreed upon by different stakeholders, then the lack of an extensive body of studies in understanding teachers' PD needs is problematic. As argued by Galloway et al. (2024), in China where EMI is indeed closely linked with English proficiency goals at the national, institutional, and individual level (see section 1.1.1), it is crucial to research on both content and EAP teachers in terms of their challenges faced and PD needed to ensure that the goal of EMI can be attended. Their perceptions towards PD will shed light on much needed insights into EMI policy implementation in Chinese EMI context.

In light of the challenges faced by both content and EAP teachers in EMI, scholars (Galloway & Rose, 2021; Galloway & Ruegg, 2020; Lasagabaster, 2022; Ploettner, 2019) have proposed a need to bolster collaboration between content and EAP teachers, which is further taken as a form of PD for both groups of teachers. Specifically, as shown in sections 1.1.1 and 1.1.2, the growing expansion of EMI programmes and the ongoing paradigm shift from EGP to EAP at Chinese universities offer unprecedented opportunities for collaboration between content and EAP teachers. In practice, teachers would draw upon each other's knowledge to improve their current teaching practices (Richards & Pun, 2022), as EAP teachers learn to understand disciplinary discourses with the help of content teachers, and at the same time help raise content teachers'

awareness of linguistic issues related to disciplinary subjects. Consequently, through collaboration, content and language learning are more relevant in EMI, which is properly in line with the ultimate goal of EMI of ensuring students' academic success in EMI (Lasagabaster, 2022; Li, 2021; Yuan, 2021). In other words, collaboration between content and EAP teachers can be viewed as a strategic approach which provides students with much-needed academic support.

However, there is a lack of collaboration in practice, which is regarded as one of the challenges of EMI (Galloway et al., 2024; Lasagabaster, 2018). While being seen as inevitable and rewarding to teachers' PD in EMI contexts, the speed of development of collaboration between content and EAP teachers is regarded as slow (Li, 2020). As observed by Lasagabaster (2018), language-content collaboration in EMI contexts is mainly the 'pilot project stage' (p. 402). Such lack of collaboration practices may lie in the lack of institutional awareness and support, as institutional leads tend to ignore the actual issues raised in EMI classrooms (Costa & Coleman, 2013; Lasagabaster, 2022), which may further undermine the teaching quality of EMI as students' needs of academic language support are unmet.

There are undoubtedly many other reasons that inhibit the collaboration between content and EAP teachers in EMI contexts, yet these reasons have not been systematically explained in the literature (Galloway et al., 2024). Compared to PD studies, there are even fewer collaborative studies in Chinese EMI contexts (Li, 2021), and a lot remained unknown on what guides the practice of collaboration and how teachers perceive collaboration. As noted by Zappa-Hollman (2018), it is necessary to have more research in varied contexts to discover the nature of different forms of collaboration and factors that make it effective or less. Also, more studies should be undertaken through the lens of teachers to scrutinise whether the proposed benefits of collaboration can become a reality and offer insights into implementation of teachers' PD. Overall, the design and implementation of teachers' PD opportunities as well as collaboration between content and EAP teachers in EMI contexts should not be carried out prematurely without taking into account a scrutiny of the current state and teachers' perceptions.

### 1.3 Significance of the study

This study is of great significance as it responds to the calls made by scholars (Galloway et al., 2024; Lasagabaster, 2022; Macaro & Han, 2020; Yuan, 2021) for more research on teachers' PD and collaboration in EMI contexts. As argued by McKinley and Rose (2022), to ensure students are sufficiently supported in EMI, it is university's responsibility to devote PD resources for teachers. As it is predictable that EMI will continue to expand in China (Macaro & Han, 2020), the investigation of the measures to ensure the implementation of EMI such as teachers' PD and collaboration are therefore of vital importance.

Particularly, informed by the imperative need of cross-fertilisation between EMI and EAP practices (Galloway & Rose, 2022; Hakim & Wingate, 2022; Wingate & Hakim, 2022), this study timely supplements the current lack of knowledge of EAP teachers' PD in EMI contexts along with their views on PD, as the majority of current PD studies research are predominantly focused on content teachers (Galloway et al., 2024; Li & Ma, 2020). As noted by Macaro (2018), the delivery of TPD should be informed by EMI and EAP scholarship and the contextualised characteristics of the local context. Likewise, when investigating teachers' collaboration, context-sensitive factors are also taken when consideration (Zappa-Hollman, 2018). Hence, the findings of this study aim to provide insights into teachers' PD and collaboration in China - a surging EMI context, and to contribute to the refinement of the design and delivery of PD and collaboration in Chinese EMI contexts.

Moreover, this study contributes herein to existing research by capturing teachers' PD and collaboration not in one single institution but across different types of EMI provisions in China (EMI university, EMI college and EMI programme). This study, therefore, might serve as a go-to place for scholars who wish to have a relatively comprehensive understanding the implementation of EMI in China with regards to teachers' PD and collaboration between content and EAP teachers.

## 1.4 Research aims and questions

In light of the rationale of the study (see section 1.2), this study sets out to investigate PD opportunities and teachers' collaboration in different types of EMI provisions (EMI university, EMI college and EMI programme) in China. Therefore, the study aims at providing a comprehensive and improved understanding of teachers' PD opportunities and collaboration in order to inform more targeted PD, and enhance the quality of EMI teaching and learning. This generated three research questions as follows:

1. What professional development opportunities exist for content and language teachers in EMI contexts in China?
2. What are stakeholders (content teachers, language teachers, PD leads)' perceptions towards current professional development opportunities?
3. What are stakeholders' perceptions towards collaboration between content and EAP teachers addressed in professional development opportunities?

These research questions were emerged from the literature review (see Chapter 2 and 3), reporting the need for clearer empirical evidence regarding PD provision in EMI contexts.

## 1.5 Structure of the thesis

This section is to present an overview of the thesis structure, including particular issues addressed in each chapter. This thesis is presented in seven chapters as follows:

Chapter 1 presents the context of this study in relation to EMI and EAP in China, which is followed by the rationale and significance of the study. Research aims and research questions are therefore presented. This chapter ends with the outline of the study.

Following the introduction chapter are two chapters of literature review (Chapter 2 and 3). Chapter 2 starts with a critical review of the literature of EMI

including the problematic definition of EMI, driving forces of EMI, research on EMI and challenges of EMI. Chapter 3 is firstly concerned with issues of EAP (its definition, research and challenges), followed by the overview of teachers' PD and collaboration in different educational contexts. Finally, research review of teachers' PD and collaboration is also included to inform the research design in Chapter 4.

Chapter 4 introduces the methodology, including research paradigm, research design and research instruments, followed by the procedure of pilot study and data collection and data analysis. Ethical consideration and limitations of the study are also discussed.

Chapter 5 presents the results of the study under different research questions.

Chapter 6 presents the discussion of results in relation to previous literature.

Chapter 7 firstly presents an overview of the study including rationale, aims and research questions of the study, followed by a summary of key findings and contribution. The implications for the refinement of design and implementation of teachers' PD and collaboration are also provided. Limitations and recommendations for further study are also discussed. This chapter concludes with a chapter and thesis summary.

## Chapter 2: Literature Review I

### Overview

This chapter critically reviews relevant literature of EMI. Firstly, the definition of EMI is discussed in section 2.1 on its ongoing complexity in three aspects, namely, scope of application of EMI definition, English learning goal and the use of language(s) in EMI. Understanding these aspects is essential as they frame the core debates and challenges that are relevant to what this study attempts to address. In section 2.2, driving forces of EMI at different levels (national, institutional and individual) are unpacked to understand reasons that shape its implementation and development. Section 2.3 discusses current research trends in EMI in order to determine issues that need to be investigated in a timely manner. The following section 2.4 is to discuss challenges of EMI faced by stakeholders, including students and content teachers. This chapter concludes with a chapter summary.

### 2.1 Conceptualising existing definitions of English Medium Instruction

The most oft-cited definition of EMI belongs to Macaro et al. (2018), stating ‘the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language (L1) of the majority of the population is not English’ (p. 37). Although this is the most widely accepted definition of EMI in the literature, it is not undisputed (Akıncıoğlu, 2024). As noted by Kuteeva (2020), EMI ‘is still being defined and re-defined as an object of study’ (p. 287). In other words, alongside rapid development of EMI practices globally, old definitions of EMI are under criticisms while new amendments are being proposed and discussed across a series of recent studies. This section aims to discuss recent criticisms of EMI most-widely accepted definition (Macaro et al., 2018) in relation to three key lines of arguments, namely the scope of application, the involvement of English learning goal, and the use of language(s) in EMI. By discussing different aspects of EMI’s definition and related debates, this section argues that more contextualised understandings are needed when examining particular EMI practices across the globe.

### 2.1.1 Scope of application of the definition of English Medium Instruction

A key line of debate about the definition of EMI in Macaro et al.'s (2018) involves its scope of application, more precisely, whether it should also include English medium educational practices in Anglophone contexts.

Advocates of expanding the definitional scope questioned the criterion 'the majority of the population' in Macaro et al.'s definition (2018, p. 37). For example, Pecorari and Malmström (2018) observe that some EMI scholars interpret its scope more broadly by including 'contexts in which English is a dominant language and in which English language development is supported and actively worked for' (p. 507). They further argue that classes in English speaking countries with significant amount of non-L1 English students should be characterised as EMI. Similarly, Baker and Hüttner (2017) argue that excluding Anglophone contexts from EMI is unhelpful by failing to include the experiences of multilingual students in Anglophone universities who learn through their second language (L2). It is undeniable that internationalisation and global student mobility (Zhang, 2018) have led many Anglophone universities to experience a dramatic increase in student populations who use English as their L2 in multilingual university settings (Humphreys, 2017). Specifically, Jenkins and Mauranen (2019) indicate that English is developing as a lingua franca (ELF) not only in internationalised universities, but this expansion also took place in Anglophone universities. Consequently, Anglophone universities nowadays may also be attached with some multilingual characteristics similar to EMI.

However, scholars (Rose et al., 2021) question whether this characteristic of multilingualism alone turns such universities into the category of EMI contexts. Perhaps, in line with Rose et al. (2021) who exclude Anglophone contexts as EMI contexts, it may be safely argued that some programmes in Anglophone contexts exhibit particular features of EMI. However, one should be cautious not to generalise this to a whole, undifferentiated entity, as including whole, undifferentiated Anglophone contexts in EMI's definition may lead to potential socio-historical, and sociolinguistic misunderstandings. Put differently, if all contexts are uncritically included, academic conversations may become too

broad as EMI issues may get confused with broader matters of internationalisation and education in general.

Such lack of consensus on EMI's scope in its definition may lead to tensions in research, policy, and pedagogy, ultimately posing challenges for advancing coherent understandings of EMI. Similarly, as Rose et al. (2021) argued, 'eroding historical definitions of EMI is equally unhelpful, as it muddies the field by creating a catch-all term of educational practices where English is used and invites problematic comparative research' (p. 8). This may raise questions when evaluating and implementing policies in different contexts. To briefly sum up, as with Rose et al. (2021), although international Anglophone universities and their non-Anglophone counterparts may share similar features in terms of multilingualism, Anglophone contexts should not be incorporated in definition of EMI on this ground alone. Thus, in this study, Macaro et al.'s (2018) oft-cited definition of EMI is adopted in this regard.

### **2.1.2 English learning goal of English Medium Instruction**

A second line of argument against Macaro et al.'s (2018) classic EMI definition is on the role that English language development plays in EMI practices.

EMI is used as an umbrella term for programmes in which disciplinary subjects are taught in English in HEIs (Coleman, 2006). According to Galloway and Rose (2021), EMI can be practiced in many forms, and these forms can be placed on a theoretical continuum having a focus on content at one end and a focus on language at the other end (see Figure 2.1.2-1, adapted from Galloway & Rose, 2021). When discussing EMI, it is indispensable to refer to other terms of practices and/or pedagogies on the continuum, which have their own specific mixture of content/language foci.

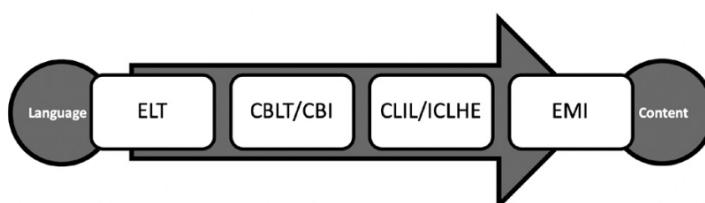


Figure 2.1.2-1 Approaches to language and content teaching (adapted from Galloway & Rose, 2021)

From the left side of the continuum, ELT focuses on teaching English language to individuals whose first language is not English. The following are Content-Based Instruction (CBI), and Content-based Language Teaching (CBLT), terms often used in the North American contexts. Language learning is the primary objective, which is achieved by using authentic content-specific materials as input. Content and language integrated learning (CLIL), sometimes interchangeably with Integrating Content and Language in Higher Education (ICLHE), is a term more commonly used in the European contexts (Dafouz & Smit, 2020). CLIL/ICLHE is defined as teaching curricular content (non-language related) through the medium of L2 (Doiz et al., 2014). As illustrated in Figure 2.1.2-1, the most significant difference between EMI and CLIL is that CLIL assigns equal importance to both content and language learning, being so positioned at the middle of the continuum, whereas EMI appears at the right end ('Content'), highlighting its strong emphasis on content learning.

However, it has been argued that the language learning goal should be stated explicitly in EMI definitions (Taguchi, 2014a). Even before Macaro et al.'s (2018) provocative, oft-cited definition, scholars have observed that EMI regulations/guidelines across different programmes remained ambiguous in terms of language learning outcome (Doiz et al., 2014). In a similar vein, reasons behind the introduction of EMI programmes vary considerably in different national contexts. On the one hand, in Europe, EMI has been initiated by the Bologna Progress (Lasagabaster, 2015), aiming primarily to ensure comparability in the standards of HE qualifications and to improve the quality standard of courses across European HEIs. Studies suggest that students particularly from Northern and Western European countries enter higher education with relatively advanced English proficiency and could cope reasonably well with EMI courses (Heisterkamp et al., 2025; Wingrove et al., 2025). Therefore, it is reasonable to assume that the definition by Macaro et al. (2018) is concluded based on these settings where 'improving students' English skills is hardly ever mentioned as an aim' (Coleman, 2006, p. 4). The absence of language learning goal in this EMI

definition strongly indicates that such language learning outcomes should not be seen as essential components (Pecorari & Malmström, 2018). Coleman (2006) even highlighted that ‘foreign language learning itself is not the reason why European HEIs adopt English medium teaching’ (p. 4).

However, as noted by Wingrove et al. (2025), EMI programmes are no longer concentrated solely in Northern and Western Europe, EMI is also expanding in Southern and Central European countries where students have lower English proficiency levels. Hence, it cannot be uniformly assumed that all European students are highly proficient in English. That is, although many European students may benefit from EMI, institutions are obliged to maintain attention to students’ language preparedness when implementing EMI.

On the other hand, in the case of Asian contexts, which have become emerging areas of EMI provision in the last two decades (Galloway & Ruegg, 2020; Macaro et al., 2018; Rose et al., 2020), seems not to fit the above assumptions. Asian contexts may have different reasons for adopting EMI than their European counterparts under quality-standardisation agenda (see section 2.2). These differences suggest that assumptions about EMI drawn from the European contexts cannot be automatically applied to Asian contexts such as China, where language learning is an explicit and essential component of EMI policy and practice (Rose et al., 2020). For example, Taguchi (2014a) defined EMI programmes as ‘curricula using English as a medium of instruction for basic and advanced courses to improve students’ academic English proficiency’ (p. 89). Exploring three Asian contexts (mainland China, Hong Kong and Japan), Taguchi (2014b) focuses on the key socio-political reasons behind the establishment of the EMI programmes as well as on current EMI practices. She found that language learning goal were explicitly stated in local definitions of EMI, which was not surprising, given Asian EMI students’ reportedly inadequate English proficiency (Hu & Lei, 2014; Rose et al., 2020; Zhang, 2018). Moreover, Asian students reveal their willingness of enrolling in EMI programmes precisely for developing their English skills (Galloway & Ruegg, 2020; Galloway et al., 2017).

Therefore, as noted by Ali (2013), even when language learning goals may not have been made explicit, these different ways of implementing EMI programmes

in different contexts denote that programme directors in Asian universities have positioned EMI classrooms as a tool to promote students' English language development along with content knowledge learning (Doiz et al., 2011; Galloway et al., 2017; Hu & Lei, 2014). It is especially the case in China as a surging EMI context (Galloway et al., 2024) where EMI is closely linked to English proficiency goals at the policy level (see in section 1.1.1).

Moreover, the debate of whether language learning goal should be explicitly stated is also related to the institutional attributes or types of EMI programmes even in the same context. For example, in Rose et al. (2020)'s large-scale fieldwork study in EMI programmes in Chinese HEIs, language learning goals were clearly listed in EMI guidelines of language-specialised universities' whereas some comprehensive universities were not. Such difference suggests that institutions themselves may have their own interpretation of EMI's definition and different interpretations of EMI at the implementation level. Hence, EMI programmes of language-specialised universities may adhere more closely to Taguchi's (2014a) definition of EMI, which placed more emphasis on cultivating students' English proficiency since English language development is regarded as the primary objective within the programme. Likewise, Jiang, Zhang and May (2019) also discovered that some programmes in Chinese HEIs even clearly spell out in EMI programme guidelines that the ultimate goal of the institutional policy was to improve students' English proficiency.

Those situations revealed above may partly stem from the fact that English is not commonly used in everyday communication of the majority of population but rather largely confined to in academic and tertiary education settings in China. There are concerns that students' lack of academic English proficiency may pose challenges for their EMI studies (Zhou et al., 2021) (see section 2.4). It is not uncommon to witness how EMI programmes in other EFL contexts emphasised the importance of language learning goal in EMI such as Japan (Aizawa & McKinley, 2020), South Korea (Kim et al., 2017), the United Arab Emirates (Wanphet & Tantawy, 2018), and Colombia (Tejada-Sanchez & Molina-Naar, 2020). If language learning goal is not stressed in EMI, the alleged 'win-win' goal of developing content and language in one class may end up with an undesirable

outcome that students who have not yet reached a certain level of English proficiency are unlikely to benefit from EMI (Pun & Jin, 2021).

Looking back at the continuum (see Figure 2.1.2-1), as Rose et al. (2020) pointed out, different stakeholders of EMI tend to place it in different places on the continuum. For example, policy makers and/or institutional leads tend to place EMI at the middle due to the national goal of content and language learning goal (Rose et al., 2021; Zhang, 2018). Content teachers would place EMI at the far right (with ‘Content’), while student may locate EMI anywhere along the centre to left part (close to ‘Language’) of this continuum (Galloway et al., 2017). Therefore, Taguchi’s (2014a) definition which locates somewhere near the middle of this continuum, may be appropriate to capture the actual practice of implementing EMI in HEIs where language learning has an important role along with the provision of language support programmes to students.

To briefly sum up, ‘there is not a one size fits all EMI archetype’ (Rose et al., 2021, p. 8), which also applies to the nature of the definition of EMI. Facing many calls for considering language learning goal as an explicit objective in EMI’s definition, it is suggested that variables such as reasons of introducing EMI, language proficiency of local students, and the availability of language support for students and should be considered when conceptualising EMI in different contexts. Thus, contexts with different requirements of EMI may put EMI differently on the continuum to better demonstrate what EMI entails therein.

### **2.1.3 The use of language(s) in English Medium Instruction**

Thirdly, new questions arise regarding the use of language(s) in EMI practice (Jablonkai & Hou, 2021; Rose et al., 2020). By definition, English is the medium of instruction in EMI classes, but what remains unknown whether English is the only instructional language in EMI, if not, to what extent have L1 and L2 been used in EMI practice.

Scholars have witnessed the fact that this seemingly straightforward definition covers a wide range of different practices. As noted by Hu (2009), as an instructional medium, the use of English in individual EMI courses can vary

vastly, ranging from 100% (English only) or almost entirely as the sole language of instruction, to being used more or less frequently than students' L1, and mainly limited to classroom management and/or translation of some concepts, definitions, and difficult terminology. What is more, EMI can refer to the situation in which all courses of the programme are taught in English to varying degrees (Macaro, 2018). Then Macaro (2018) reflected such diverse ways in which EMI is implemented in terms of language use, attributing this variation to 'a lack of consensus on EMI terminology and definition' (p. 15). This is quite similar with the discussion of whether language learning goal should be involved in EMI's definition (see section 2.1.2).

Apart from that, disparity of opinions also exists among teachers and students regarding the language use in the EMI classroom. On the one hand, from the perspective of teachers, content lecturers recognise L1 as a useful and facilitative resource for content teaching and learning (Jablonkai & Hou, 2021; Rose et al., 2021) and they also think that it is especially helpful to students whose current English proficiency is relatively poor. While on the other hand, it seems that students generally prefer their teachers to use target language (English) as much as possible. Their preference may stem from their motivation of enrolling EMI courses to improve English proficiency (Galloway et al., 2017).

In summary, the definition of EMI serves as the very first-hand reference of policy making and is of great significance in guiding implementation. As discussed above, Macaro et al.'s (2018) oft-cited definition of EMI, with its general concept and practical underpinning, is adopted in this study, though contextualised characteristics still need to be considered. As suggested by Rose et al. (2021), when it comes to specific EMI contexts, further consideration is needed when conceptualising and defining EMI. Further subdivision planning should be carried out before implementation in specific contexts by making corresponding revisions to serve the specific needs of different environments.

## 2.2 Driving forces of English Medium Instruction

The section below discusses the driving forces behind the adoption of EMI. which would ultimately inform further EMI policy and implementation. EMI is often

associated with the goal of internationalisation of higher education, high quality education, prioritised access to cutting-edge educational resources and exclusive educational support (Curle et al., 2020; Galloway & Ruegg, 2020). The main driving forces of EMI can be categorised into different levels, namely national level, institutional level, and individual level (see Figure 2.2-1). Driving forces at different levels are discussed as follows.

Level	Driving forces
National level	Globalisation and internationalisation efforts
Institutional level	Raising prestige and rankings of universities
Individual level	Improving English proficiency, career prospects of students

Figure 2.2-1 Driving forces of EMI at different levels

### 2.2.1 Globalisation and internationalisation efforts

Globalisation is widely recognised as a major driving force behind the growing popularity of EMI (Curle et al., 2020; Macaro et al., 2018). To understand how globalisation fuels EMI's expansion, it is important to examine its interplay with the internationalisation of HEIs.

Globalisation, defined as a set of economic, political, and social forces shaping 21<sup>st</sup> century higher education (Block & Cameron, 2002), is closely linked to internationalisation (Altbach, 2004). Internationalisation of HEIs, in turn, is the 'multifaceted process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education' (Knight, 2008, p. 21). In HE sectors, globalisation acts as the underlying driver of internationalisation (Altbach & Knight, 2007), with HEIs increasingly reliant on knowledge economy and skilled human capital to enhance competitiveness and economic growth.

Given above, EMI emerges as a prominent strategy within internationalisation of HEIs (Galloway et al., 2017), among which various internationalisation efforts have been made in establishing branch campuses, cross-border collaborations, and English-medium programmes and degrees (Altbach & Knight, 2007; McKinley

et al., 2021). Moreover, the dominance of English-medium scholarly publications and the dissemination of cutting-edge knowledge (Liu, 2017; Curle et al., 2020) further reinforces the appeal of EMI. As such, EMI is not only seen as a response to globalisation but also as a core mechanism to internationalise higher education (Duong & Chua, 2016; Galloway et al., 2017; Hu et al., 2014).

### **2.2.2 Raising prestige and rankings of universities**

At the institutional level, EMI plays an important role in raising the prestige and international profile of universities (Hu, 2019; Kim et al., 2017; Piller & Cho, 2013). Many universities actively invest in EMI programmes in realising these strategic aims. In China, for example, MOE uses EMI as a performance indicator in national evaluations of universities, whereby universities with at least 10% of their courses offered in EMI are rated as ‘excellent’ (Hu et al., 2014), making EMI provision a key criterion in institutional rankings. Similarly, in Japan, policymakers intended to boost the competitiveness of Japanese universities through a ten-year, vast financial investment initiative called the Top Global University Project (MEXT, 2014, p. 1). As noted by Aizawa and McKinley (2020). This policy aims to support the development of world-class and innovative universities, thereby elevating both domestic and global institutional prestige. Such strategies are highly looked-for across Asian HEIs, which are face growing pressure of internationalising HEIs (Galloway et al., 2017), namely attracting government funding (McKinley et al., 2021), attracting international students, and retaining domestic students (Xu et al., 2023; Aizawa & McKinley, 2020).

Similarly, in European HEIs, a case study at a Europe’s business university revealed that the motives behind the implementation of EMI programmes are mostly connected to university profiling (higher education rankings) and internationalisation efforts (Schmidt-Unterberger, 2018). Furthermore, researchers (Macaro et al., 2019) conducted a quantitative analysis of an emerging popular ranking list called the Academic Ranking of World Universities (ARWU) and they found that the relationship between university rankings and EMI came out as a statistically significant positive correlation (Spearman coefficient = .551; P = .002, N = 28). In other words, the higher the overall ranking of a country’s universities, the more EMI adopted.

Apart from that, the relationship between university rankings and EMI is strengthened through the policy construction of metrics. In other words, the greater the use of EMI, the higher university standing. And this belief has become a common sense across the globe, which can explain the rapid expansion of EMI provision in Asian universities (Macaro et al., 2018) which strive to raise their prestige and rankings given that the highest-ranking universities are normally located in English native speaking countries when referring to popular universities ranking platforms such as Times Higher Education and U.S. news college rankings. Consequently, it may help the universities to gain more publicity and hence attract students and staff domestically and globally. However, EMI, therefore, has the potential to become a mechanism for structuring inequality and serving as another form of linguistic imperialism (Phillipson, 2015; Sah & Li, 2018).

### **2.2.3 Improving English proficiency, career prospects of students**

At the individual level, EMI is also driven by its proposed value of improving student's English proficiency and career prospects. Several studies (e.g., Chapple, 2015; Galloway & Ruegg, 2020; Kojima & Yashima, 2017) reveal that improving English proficiency is one of the main reasons motivating students to enrol into EMI programmes, followed by other reasons such as mastery of content (Galloway et al., 2017), and discipline-specific vocabulary (Su & Kong, 2023; Xie & Curle, 2022). As found in Galloway and Ruegg's (2020) study in two Asian contexts (China and Japan), students reflected on their reasons of enrolling into EMI programmes, with the majority of them mentioning improving their English proficiency and requiring teachers to use English as much as possible in EMI classes. However, teachers believed that EMI is more oriented to content teaching and were in favour of pedagogical strategies of using L1 such as translanguaging. The mixed understanding of EMI raises questions about how different stakeholders conceptualise EMI (see section 2.1.2) and whether agreement can be reached on EMI teaching and learning.

In addition to improving English proficiency, EMI has been adopted by numerous HEIs in Europe and Asia due to the potential enhancement of students' career

opportunities, specifically by enhancing the employability skills and hence improving the competitiveness of their graduates in both domestic and global markets (Iwaniec & Wang, 2022; Serna Bermejo & Lasagabaster, 2023; Rose et al., 2020). In this regard, EMI is often viewed as a steppingstone into better employment, advanced study or study abroad, as EMI provides access to a better quality of education and, therefore, more opportunities for study abroad at the postgraduate level (Aizawa & Rose, 2019). For example, many business programmes in Japan are encouraged to introduce more EMI courses (Aizawa et al., 2020) since business companies lay an emphasis on employees' abilities to deal with issues in their L1 and English. EMI would therefore be of great help in equipping students with adequate professional skills in the business fields, thus helping them stand out when job hunting after graduation in the increasingly internationalised labour market (Galloway et al., 2017).

Also, from the perspective of students, if they can learn English well, they may have better career prospects, which echoes previous findings that talents with prominent level of English proficiency are more likely to find decent jobs with high salaries in and out of their countries (Kirkpatrick & Sussex, 2012). Yet, however, such assumption may remain at theoretical level as there is a paucity in research in terms of whether graduates get a better career after graduation as a result of taking EMI programmes (Xie & Curle, 2020). As little research has shown that students' English proficiency improves along the EMI programme (Curle et al., 2020; Macaro et al., 2018), which highlights the need for more empirical studies to practically measure students' improvements in English language learning and content mastery in EMI contexts to secure the driving factor of developing students' employability is in relation of EMI adoption.

### **2.3 Research on English Medium Instruction**

This section is to discuss the development of EMI as a research field in relation to research topics that have been studied, thereby providing insights into what still needs to be explored in EMI.

The expansion of EMI programmes has gained momentum globally since the 21<sup>st</sup> century (Dearden, 2015; Wächter & Maiworm, 2014). To date, research on EMI

has covered various aspects, including reasons contributing to the growth of EMI (e.g., Aizawa & McKinley, 2020; Fang, 2018; Lei & Hu, 2023), predictors of success in EMI (e.g., Curle et al., 2024; Rose et al., 2019; Xie & Curle, 2020) as well as EMI policy analysis (e.g., Aizawa & Rose, 2019; Ou et al., 2022; Zhang, 2018). Despite its widespread adoption of EMI across various EMI contexts (Curle et al., 2020; Macaro, 2018), its goal of realising students' academic success in EMI (McKinley & Rose, 2022) is still a subject of ongoing research and debate.

Growing research has also highlighted a number of challenges of stakeholders. Specifically, students face up challenges include language related challenges (Zhang & Pladevall-Ballester, 2021), limited mastery of content knowledge (Zhou et al., 2023) and low academic confidence (Su & Kong, 2023) as well as the lack of language support (Si, 2023). Teachers, as another important stakeholder of EMI, also encounter a range of challenges. To name a few, content teachers' limited English proficiency (Galloway et al., 2017), a lack of pedagogical competence (Dang et al., 2021; Shao & Rose, 2022), language teachers' transitioning challenge of teaching EAP (Galloway & Rose, 2021), a lack of training (Galloway & Ruegg, 2022; Macaro & Han, 2020; Yuan, 2021) and a lack of collaboration between content and language teachers (Galloway et al., 2024; Macaro & Tian, 2020).

However, some recent across-nation systematic review studies (Dang et al., 2021; Lasagabaster & Fernández-Costales, 2024; Lei & Hu, 2023) highlight that teachers' issues in EMI regarding professional development and collaboration were largely ignored in the literature, with research on teachers is much less than that on students. Similarly, Wang et al.'s (2025) review of EMI teachers' professional development in Chinese EMI contexts has confirmed the lack of studies on content teachers and further emphasised the importance of collaboration between content and language teachers. Moreover, Jablonkai and Hou's (2021) systematic review of EMI in China revealed a noticeable lack of perception studies on teachers among other research topics related in EMI. In EMI research, *perception* often refers to the attitudes, beliefs and feelings held by students and teachers towards EMI and its relevant issues (Peng & Xie, 2021). Such lack of perceptions studies is worrying given the crucial role that teachers play in informing the policy and implementation of EMI (Shao & Wilkinson, 2024),

providing insights into practical challenges (Kumari & Sahoo, 2024), and shaping institutional support and PD (Macaro & Han, 2020) in a bottom-up perspective.

As argued by McKinley and Rose (2022), it is a ‘a moral and ethical responsibility of universities’ to devote resources and professional development for teachers to ensure ‘students are adequately supported during this unfettered growth in EMI’ (p. 11). Hence, as teachers’ professional development has emerged as a key issue in the successful implementation of EMI (Dang et al., 2021; Wang et al., 2025), the current lack of PD and relevant studies are unhelpful to understanding how to better support teachers in ensuring students’ academics success. That is, more studies on professional development plus with the perspectives of teachers in EMI contexts are therefore warranted to identify effective models of PD support for EMI educators.

## **2.4 Challenges of English Medium Instruction**

As aforementioned studies reveal, many challenges arise when implementing EMI programmes in HEIs (Curle et al., 2020; Macaro et al., 2018). In this section, challenges faced by stakeholders’ (i.e., content teachers and students) are discussed respectively.

### **2.4.1 Students’ challenges in English Medium Instruction**

Students face a variety of difficulties when taking EMI programmes, among which inadequate English proficiency dominates in the literature (Aizawa & Rose, 2019; Galloway et al., 2017; Rose et al., 2020; Xie & Curle, 2020). Inadequate language proficiency impacts students’ EMI studies in different ways, including difficulties in comprehending lectures which lead to low academic confidence (Su & Kong, 2023), limited content knowledge acquisition (Zhou et al., 2023), and requiring more time to complete a course (Galloway et al., 2017). Examples can be found in Turkish HE contexts reporting that students not only had low proficiency in general English proficiency but also lacked discipline-specific vocabulary knowledge (Başibek et al., 2014; Macaro & Akıncıoğlu, 2016). Students themselves refer to deficiencies in their English language proficiency as

an obstacle to content learning in their EMI studies (Bozdoğan & Karlıdağ, 2013), while content teachers hold the similar views as well.

In East Asian contexts, Galloway et al.'s (2017) study in China and Japan revealed that content teachers generally tended to express concerns about students' low English proficiency. Likewise, in South Korea, content teachers also perceived students' inadequate English proficiency as being the greatest obstacle to effective content learning (Choi, 2013). In this regard, students' inadequate English proficiency becomes one of the hurdles hindering EMI implementation. However, it should be noted that students' inadequate English proficiency may not be the case in European contexts where students possess more advanced English proficiency. Such difference in English proficiency may stem from the greater dominance of English in society in European countries, as well as from relatively well-developed EMI practices to date (Dimova et al., 2015).

As a result, because of their inadequate English competences, students are unlikely to benefit from EMI, both linguistically and academically. That is, both English usage and academic-content delivery have to be compromised in their EMI classes (Shao & Rose, 2022). Specifically, students may encounter communication problems in EMI classroom (Chang, 2010). Communication is a dynamic process involving listening, comprehension and speaking among interlocutors. The problems centred on listening skills and related comprehension of teachers' instructions and lectures as well as on the speaking skills required for oral presentations and classroom discussion (Alhassan et al., 2021; Han, 2022). Alhassan et al. (2021) indeed reported that students in a Sudanese MBA programme found it difficult to express their ideas in English. In addition, while they were able to grasp the relevant concepts, they were unable to engage them verbally, preventing participation in classes (*ibid.*). As noted by Airey and Linder (2006), comprehending lectures are reportedly one of the most common difficulties confronted by EFL/ESL students enrolled into EMI programmes. Writing is also reported as an area of difficulty. Specifically, students reportedly encounter problems with structure, grammar, and the clarity of the writing as a whole. The complexity of writing problems can be extended to the students' lack of systematic training of writing skills, to name a

few, familiarising with different genre, critical thinking, summarising, and paraphrasing (Alhassan, 2019).

Additionally, different disciplinary subjects entail various requirements on students. For example, physics teachers in a Turkish content argue that Physics classes require relatively lower proficiency level compared with language-dependent subjects in the social sciences (Macaro et al., 2016). Another example is in Wächter and Maiworm's (2014) EMI report that Business and Engineering saw the fastest growth in EMI provision, in which Business was thought to be more language dependent as a social science related subject, and thus more challenging from a language perspective. Therefore, students are required for different academic English levels because of how English language is used in different subjects. Facing students' disciplinary linguistic challenges, language support programmes are therefore of great importance for the success of EMI implementation (Galloway & Rose, 2022; McKinley & Rose, 2022).

Students' lack of English proficiency, either general or discipline-specific, is worrying given that content teachers have to make coping strategies such as slowing down, simplifying content or repeating for several times (Pun et al., 2024). This tends to compromise the depth of subject content and the progress of course. EAP teachers also make extra efforts of making EAP courses more relevant to students' disciplinary needs, which is highly demanding (see more details in section 3.3). As proposed by Fang (2018), language support should be properly provided to minimise the negative impact on students' content and language learning. Without such support, students may find it very difficult to comprehend contents taught in English and therefore get lost in EMI class because of their limited capability of engaging in EMI. This highlights the pressing need of institutional support in providing academic support for students, as well as professional development for teachers to help scaffold subject content in English effectively to better respond to students' linguistic needs (also see section 2.3).

#### **2.4.2 Content teachers' challenges**

#### ***2.4.2.1 Content teachers' linguistic challenges***

As discussed above, apart from students' language-related challenges which pose a challenge on the implementation of EMI, teachers themselves also face a range of challenges. Firstly, content teachers' limited English proficiency is also questioned by scholars (Curle et al., 2020; Galloway et al., 2017; Macaro et al., 2018) as a challenge of EMI. In the literature, content teachers' English proficiency has been reported by content teachers themselves, their students, and EMI programme directors.

Firstly, it is widely reported in the literature that EMI teachers perceive they have limited English proficiency. For example, as found in Borg's (2016) study, university teachers in Iraq expressed concerns related to the limitations of their spoken English, resulting in a negative impact on their confidence to teach. Specifically, respondents had difficulties in conveying ideas to students even though they had rehearsed before conducting the course. Similar difficulties are found in another study in Turkey (Başbek et al., 2014) where teachers found expressing themselves fully in English challenging. The issue of EMI teachers' self-reported inadequate English proficiency level is also witnessed in European universities. As Guard and Helm's (2017) study of Italian university teachers discovered, participants attributed their difficulties and concerns about teaching EMI to the need to improve their language skills. However, there are some positive self-reported results. For example, in a Danish university, a questionnaire of self-assessing teachers' English proficiency on a scale of 1 to 6 (with 6 being the highest) by Werther et al. (2014) reflected that most participants were experiencing few or no problems with EMI (with a mean self-rating at around 4.7). However, it should be acknowledged that how 'English proficiency' is being defined and understood may vary from context to context, therefore self-assessing English proficiency alone may not be adequate to draw such a conclusion.

Secondly, teachers' English proficiency is often considered insufficient by students (Galloway et al., 2017; Han, 2022; Macaro, 2018). Specially in Asian contexts, students have doubts about their teachers' English proficiency. Evidence can be found in Japanese students' questionnaires and interviews

(Galloway et al., 2017) that they preferred foreign teachers whose first language is English over local ones who share L1 with them, suggesting that students generally held a general dissatisfaction towards their content teachers' English proficiency. Additionally, in European contexts, Pulcini and Campagna's (2015) study of Italian university teachers similarly reported that students found it difficult to comprehend the poor English of their content teachers. Hence, it is worrying that teachers' inadequate English proficiency could have a negative impact on students' understanding of the subject content, therefore having a debilitating impact on students' EMI learning experience (Pulcini & Campagna, 2015).

Lastly, EMI teachers' English proficiency level is also viewed by institutional leads and/or EMI programme directors. According to Wächter and Maiworm (2014), programme directors at European EMI universities generally rated teachers' language proficiency very positively. Moreover, interviews with EMI programme directors in a comparative study (Dearden & Macaro, 2016) in three non-Anglophone countries (Austria, Italy, and Poland) showed that one way EMI programme directors assess teachers' English proficiency was if they have a doctorate from English-speaking countries. That is, some content teachers are simply recruited to teach content through English because they have studied abroad or are considered to speak English well, although no specific criteria were given.

However, the finding in European contexts might not be applicable to other EMI contexts (see section 2.1.2 on difference between European and Asian EMI contexts regarding English language learning goal in EMI). As argued by Dearden's (2015) worldwide study, 'teaching through English is more of a problem than most people dare to openly admit, and reluctance to do so springs from a tacit assumption on the part of management that all faculty are capable of English-Medium Instruction' (p. 453). That is, institutional leads may simply believe that content teachers can automatically perform well in EMI teaching because they are perceived to be specialists in their subjects along with their EMI-like experience such as study abroad experience (if any) (Han, 2022).

In East Asia, Rose et al.'s (2020) large-scale study conducted in Chinese universities found that deans and EMI programme directors were under huge pressure to find more EMI courses to respond to the rapid expansion of EMI programmes under the trend of internationalisation of HE (see section 2.2.1). Similarly, South Korean universities have focused primarily on increasing the number of EMI courses on offer and have failed to take into account whether teachers are actually ready for teaching EMI courses (Byun et al., 2011). This shows policymakers' hastiness in increasing EMI provision for taking part in the competition of internationalisation of HE (Curle et al., 2020) by jumping on the 'EMI bandwagon' (Lasagabaster, 2022, p. 1), although there is little commitment or effort made for bettering EMI implementation such as providing support for teachers with challenges. It also shows the lack of consultation between policy makers and stakeholders such as teachers with regards to challenges they encounter in EMI teaching (Galloway & Ruegg, 2022; Rose et al., 2020), as policy makers' willingness to expand provisions of EMI is more urgent than equipping content teachers and students with certain institutional support.

Thus, it is not surprising to see content teachers who are used to teach content subject in L1 being recruited to teach EMI programmes with little or no extra requirements imposed at the institutional level. However, for the sake of EMI teaching quality, content teachers 'need to develop an awareness of the linguistic difficulties experienced by their students and this awareness should include an understanding of how L2 vocabulary is comprehended and acquired' (Macaro, 2022, p, 274).

To sum up, content teachers' linguistic competences are critically evaluated by different stakeholders of EMI. While the expertise in subject content is undoubtedly indispensable, the ability to communicate effectively and teach content through English are also of a great significance in ensuring the success of the implementation of EMI, which leads to the discussion of content teachers' pedagogical challenges in the next section.

#### ***2.4.2.2 Content teachers' pedagogical challenges***

In addition to the widely reported content teachers' linguistic challenges discussed above, challenges of EMI could also stem from content teachers' pedagogical practice in EMI classroom (Macaro & Han, 2020; Shao & Rose, 2022). Studies have shown that teachers need to adjust their curriculum, teaching approach and teaching materials to switch from L1 instruction to EMI, which demands more time and energy (Başbek et al., 2014; Hellekjær, 2017). Often and unsurprisingly so, teachers are reluctant to make changes in their pedagogy given the extra workload required in their already busy schedules. However, in Asian contexts where EMI policy comes primarily through a top-down fashion that takes limited account of students' and teachers' issues, teachers have to obey the call though they may do so at the minimum effort-threshold (Jiang et al., 2019; Wu & Tsai, 2022). In addition, other studies have found that English can distance a teacher from his/her L1 local cultural context, making it for instance difficult to introduce humour and build rapport with students as commonly witnessed in L1 classrooms (Airey, 2011).

Moreover, classroom observations of teacher and student interaction in an EMI programme in China have shown that EMI has led to monologic, and less interactive teaching styles, regardless of the teachers' English abilities (An et al., 2021). This is presumably because content teachers are not familiar with pedagogical strategies when teaching in another language. As noted by Wiseman and Odell (2014), although there are content teachers who are already excellent in their discipline, their English does not help them convey the knowledge they have to students intelligibly. Therefore, some scholars call for institutional support for content teachers to adopt from teacher-centred to a learner-centred approach (Jiang et al., 2019; Tatzal, 2011; Wilkinson, 2013).

Overall, content teachers' pedagogical challenges reflect a series of pedagogical skills required for teaching in EMI contexts, requiring the ability to integrate content knowledge with language-aware pedagogy (also see section 3.4.1). As noted in previous paragraph, when switching to teaching in English, content teachers are supposed to make adjustments in teaching materials, curriculum design, teaching practices and assessment methods. For example, content teachers should be capable of scaffolding complex concepts by explaining key terminologies (Airey, 2012) and disciplinary ideas, making content knowledge

accessible to students (Aizawa & Rose, 2019; Galloway & Ruegg, 2020). It is especially important when teaching students of various English proficiency levels (Dafouz & Smit, 2020), which requires constant cognitive and linguistic scaffolding. Additionally, interactive pedagogical skills such as dialogic questioning and group discussion facilitating are crucial for maintaining students' engagement and promoting deeper learning in linguistically demanding environments (Macaro, 2018; Smit & Dafouz, 2012; Wu & Tsai, 2022). This would provide an inclusive and supportive classroom atmosphere, particularly in classrooms of international students who do not share L1 with the content teacher (Dong & Han, 2024; Rakhshandehroo & Ivanova, 2020). These all indicate that EMI goes beyond traditional subject teaching (in L1) and demands the development of a broad range of teaching competencies, thus posing possible threats on content teachers, which may further undermine students' learning outcomes (Macaro & Han, 2020; McKinley & Rose, 2022).

#### *2.4.2.3 Content teachers' transitioning challenges*

Scholarship has also called for reassigning responsibility of content teachers (O'Dowd, 2018; Galloway & Ruegg, 2020; Pawan & Ortloff, 2011) in light of their transitioning challenges faced. That is 'subject teachers can also potentially play a role in helping students cope with EMI study through different methods' (Alhassan et al., 2022, p. 3). As Wiseman and Odell (2014) appealed, it is necessary to ask whether the EMI teachers' role has changed or should change from that of a discipline specialist to one who can equally deliver content in both L1 and a second language. Rather than saying 'equally', this statement may better be interpreted that content teachers should be aware of a huge difference between teaching content through L1 and L2 (Curel et al., 2020; Macaro, 2018). This is important as many content teachers believe that their role is merely about delivering their subject in English (Airey, 2012). When being asked about their identities in EMI, many content teachers insist that they are just subject content teachers who have no or little responsibility to correct students' language problems and impart linguistic knowledge in the EMI classroom (Curle et al., 2020; Dearden, 2015).

Given above, the call for changing roles of EMI teachers has a long way to go since content teachers' perception remains at the simple understanding of the shift of medium of instruction, believing that teaching through L2 is similar with L1 (Lasagabaster, 2022). As shown in Wiseman and Odell's (2014) study, when asked about their role, one EMI teacher said: 'I'm not interested in the students' English, I'm interested in their competency in biogenetics'. Similarly, a content teacher in Airey's (2012) study reflected that: 'I don't teach language, I teach physics' (p. 74). In other words, these teachers primarily focused on the subject content rather than language related problems students may encounter in the EMI class. However, this common mindset of content teachers is not helpful if the goal of EMI shared by stakeholders is to secure students' academic success in EMI (McKinley & Rose, 2022).

Content teachers' relatively simplistic understanding of the delivery of EMI may result from the lack of clear requirements for EMI teachers (Alhassan et al., 2022) and the absence of PD opportunities for pre- and in-service content teachers (Al Zumor, 2019; O'Dowd, 2018). As noted by Lasagabaster and Fernández-Costales (2024), the current shortage of PD opportunities for content teachers may further exacerbate the problem of the paucity of qualified content teachers, as they may not have access to appropriate pedagogical methods and resources to improve their teaching skills in EMI. As emphasised in section 2.3, the inadequate PD opportunities for teachers is concerning as the quality of teaching can be compromised in the long term, which may ultimately hinder students' academic success in EMI.

## 2.5 Chapter summary

This chapter presents a critical review of EMI regarding its definition, driving forces and relevant research on it. Challenges faced by students and content teachers are then unpacked to understand issues needing to be addressed. In the next chapter, another important stakeholder of EMI - EAP teacher - is discussed in relation to EAP as a field, EAP teachers' challenges, followed by professional development and collaboration between content and EAP teachers.

## Chapter 3: Literature Review II

### Overview

Following the discussion of EMI and challenges it presents for both students and content teachers (discussed in section 2.4.1 and section 2.4.2), this chapter shifts the focus to the EAP teachers, another important stakeholder of EMI. The chapter firstly discusses the definition of EAP, followed by specifying EAP teachers' important role of providing academic language support to students through EGAP or ESAP courses. After discussing EAP teachers' challenges, this chapter explores PD opportunities for content and EAP teachers in different educational contexts, resulting in a list of evaluation criteria to evaluate teachers' PD. Collaborative practices between content and EAP teachers are also discussed as a much-called initiative in improving EMI teaching quality and benefiting students' academic success in EMI. Finally, research reviews of teachers' PD and collaboration are also included to inform the research design of this study.

#### 3.1 The definition of English for Academic Purposes

English for Academic Purposes (EAP) was coined in the 1960s, and the term EAP was first used in the mid-1970s (Jordan, 2002). Scholars (e.g., Hyland, 2007; Jordan, 1997) indicated the focus of EAP is to help develop students' study skills so that they can perform effectively in an academic context. More specifically, EAP provides students with the specialised language and communication skills needed to learn in higher education settings (Hyland, 2017). It is worth noting that some scholars (e.g., Gillet & Wray, 2006; Hyland & Hamp-Lyons, 2002) considered EAP a branch of ESP, defined as 'the area of inquiry and practice in the development of language programs for people who need a language to meet a predictable range of communicative needs' (Swales, 1992, p. 300). That is, ESP refers to the teaching of English for the purpose which is specified based on the learners' specific needs (Flowerdew & Peacock, 2001). Therefore, EAP's definition is enriched in which 'content is explicitly matched to the language and study needs of the learners' (Gillet, 2004, p. 1).

As initially originated in the UK, EAP was introduced to respond to the needs of international students on the courses in the UK universities (Jordan, 2002). After that, EAP has become popular in other English-speaking contexts such as the USA and Australia with an influx of overseas students (Alexander, 2007). More recently, the use of EAP has been expanded globally to non-English speaking contexts where English medium programmes are in rapid growth (Curle et al., 2020; Macaro, 2018), resulting millions of students around the world studying through English in higher education (see section 1.1.1). This global expansion has diversified the linguistic, academic and cultural backgrounds of EAP learners, further broadening how EAP is conceptualised and practised. As noted by Ding and Bruce (2017), EAP has emerged over about four decades since the 1970s as a specialised, theory- and research-informed field, with the focus on meeting the changing needs of students from diverse nationalities and linguistic backgrounds who are seeking to undertake higher education in EMI contexts.

Subsequently, this development of EAP significantly influences the role of the EAP practitioners. Rather than solely teaching generic academic skills, EAP practitioners are now expected to support discipline-specific academic communication (Bell, 2024; McKinley & Rose, 2022), and integrate genre-based and critical literacy approaches (Wingate, 2022). Furthermore, the expansion of EMI reinforces these expectations by positioning EAP teachers as mediators between language and content learning (Wilkinson, 2018), collaborators with subject teachers (Galloway & Rose 2021; Li, 2021), and contributors to curriculum design and institutional policy (Hakim, 2023). In EMI contexts, particularly, EAP courses play a crucial role in addressing the widely reported students' linguistic challenges (Curle et al., 2020; Galloway & Rose, 2022) by equipping them with general and discipline-specific academic language skills essential for engaging with content delivered in English. EAP, with its needs-driven nature (Bruce, 2021), has long emphasised tailoring students' disciplinary needs of academic English, thus bridging the gap between language and content learning. This disciplinary alignment leads to the specificity of EAP, which is discussed below.

### ***3.1.1 EGAP and ESAP (English for Academic Purposes and its specificity)***

As proposed by Flowerdew (2016), EAP itself can be broken down into English for General Academic Purposes (EGAP) and English for Specific Academic Purposes (ESAP). Specifically, EGAP is concerned with the common core approach to EAP (Bloor & Bloor, 1986), claiming that there are generic academic English skills that can be transferable across all disciplines (Dudley-Evans & St John, 1998). Whereas ESAP is focused on a more tailored instruction of English language based on the needs of specific disciplines (Hyland, 2013). As noted by Hyland (2016), the way EAP is conceptualised and approached depends on its degree of specificity to certain disciplines, which leads to a debate about whether EGAP or ESAP is more effective for the development of students' academic study skills at different stages.

Notably, EGAP approach is commonly provided for students who take pre-sessional courses prior to degree courses in Anglophone context (e.g., Hyland, 2002; Sloan & Porter, 2010) and for freshmen who usually take general education curriculum in their first year in non-Anglophone contexts (Galloway & Ruegg, 2020). Specifically, by following an EGAP approach, EAP teachers attempt to isolate study skills and language forms thought to be common to all disciplines (Dudley-Evans & St John, 1998). Affirming the value of EGAP as the cornerstone of study skills needed in HE contexts, advocates (e.g., Dudley-Evans & St John, 1998; Hyland, 2016) of EGAP approach claim that there are generic skills which are believed to differ very little across the disciplines, so students who have learned the generic features of academic English in EGAP courses are able to autonomously apply the knowledge to their subject-specific needs as they become more exposed to their disciplines in senior years.

However, as EAP has evolved considerably over the past two decades, EGAP has been questioned being not adequately prepare students to address their specific needs in certain disciplines (Hyland & Shaw, 2016), as it may perhaps simply ignore the complexity of how language is being constructed and used in different disciplines (Hyland & Tse, 2007). As noted by Flowerdew (2016), there perhaps exists a risk if EGAP approach is *only* adopted to address students 'academic needs, as EGAP is 'concerned with the provision of English for students in all fields of study, ESAP is focused on the needs of students from specific disciplines' (ibid, p. 7).

Scholars (e.g., Flowerdew, 2016; Hyland, 2016; Wingate, 2022) therefore indicate the need of stopping isolating subject-specific characteristics from EAP teaching and propose that ESAP approach is necessary for students because of its focus into the linguistic features of disciplines. In practice, for example, ESAP approach focuses on the usage of English language that brings disciplinary value (via genre analysis), and the importance to the communities (via discourse analysis) that use them. It should be noted that there is no denying regarding the importance and functions of generic study skills acquired in EGAP, instead, the call for ESAP is based on the pre-requisite of knowledge of basic study skills taught by EGAP approach.

As noted by Jordan (2010), while some generalisations can be made, the differences among these skills and conventions across different disciplines are perhaps greater than the similarities. Therefore, the content can be more tailored to meet specific needs of a discipline, indicating that EAP provision is supposed to be more effective if it aims to equip students with study skills required in their disciplines. In this sense, EAP needs to take the initiative to consolidate resources to avoid the circumstance described by Bond (2022, p. 110) that '[i]ts curriculum is empty of its own content, waiting to be filled up with the language and content of an academic other.'

To briefly sum up, EGAP and ESAP have their respective value to students' development of academic skills to students' learning in EMI setting at different stages, in which both can realise their values if provided in a proper and well-resourced manner. For example, depending on their focus on linguistic features, there perhaps exist an order in which EAP is provided as EGAP at the early stage of students' degree study for building the fundamental knowledge of EAP, and ESAP at the senior stage for more specific instruction. Similar to EAP provision in Anglophone contexts (Flowerdew, 2016), such mode of EAP provision following the order of EGAP to ESAP is now gaining popularity in EMI contexts (see Galloway & Rose, 2021) where students are required to learn subject content through English in their degree. Specifically, as mentioned in section 1.1.1.1, EAP courses in Chinese EMI contexts are mainly manifested as EGAP courses among EMI universities, EMI colleges and EMI programmes, while some EGAP

provision are on offer at some EMI universities as advanced EAP courses to meet students' disciplinary needs.

### 3.2 Research on English for Academic Purposes

Over the past four decades, EAP has grown into a mature research field, as evidenced by a professional association called the British Association of Lecturers in English for Academic Purposes (BALEAP), conferences (e.g., BALEAP annual conferences) and active research journals (e.g., the *Journal of English for Academic Purposes*). To explore research on EAP, some bibliometric studies (i.e., Hyland & Jiang, 2021; Riazi et al., 2020), systematic reviews (i.e., Charles, 2022) and volume (e.g., Ding & Bruce, 2017) have been conducted to document the research foci on EAP in different periods of time, which reflect changes of the research direction of EAP since the establishment of EAP as a research field and highlight what has been under-studied. The following is to discuss research topics that need to be further explored at present.

Ding and Bruce (2017) identified an imbalance in the development of EAP research, where there is an increasing divergence of research foci. Specifically, the development of a strong theoretical and research base is a major concern, resulting in a large number of studies with topics such as register analysis, genre analysis, corpus analysis, rhetoric, ethnographic studies, academic discourse and academic literacies. However, a relative scarcity of research was unearthed to exploring EAP practitioners in terms of their work, development needs, and identities. That is, there is much less academic attention paid on EAP practitioners and issues related to them compared to academic genres and discourses. The authors (Ding & Bruce, 2017) therefore argued that the lack of research on EAP practitioners would be detrimental to EAP as a comprehensive academic field as they play an important role in teaching and materials development in EAP (Hakim, 2023). Moreover, this concern is especially salient given the continued marginalisation of EAP teachers within university structure (Blaj-Ward, 2014) compared to content teachers in both Anglophone and non-Anglophone contexts (see more in section 3.3). However, if English proficiency is a key goal, EAP teachers should play a more central role in gatekeeping

students' academic language levels (Galloway et al., 2024) rather than assuming a 'subacademic role' (Ding & Bruce, 2017, p. 155) in the universities.

Riazi et al. (2020) investigated the empirical journal articles in the Journal of English for Academic Purposes (JEAP) by examining 416 articles published during JEAP's lifespan from 2002 to 2019. The authors discovered the trend of research on five areas of inquiry, include 'instruction, features of academic language/discourse, L1 vs. L2, student produced discourse, assessment, source-based writing, and academic language/discourse development' (Riazi et al. 2020, p. 14), which reflects a focus on genre theory and students in various disciplines in HEI settings over the past two decades. Similar to Ding and Bruce (2017), the authors surprisingly found studies on EAP practitioners and professionals still remain as a less explored avenue. Furthermore, one important research direction meriting more attention is EAP teacher education, which may provide insights into EAP teachers' daily issues in classrooms so that their challenges can be voiced.

Additionally, Hyland and Jiang's (2021) bibliometric study examined 12,619 articles on EAP from 40 journals related to EAP. They specifically compare two time periods, 1980-2000 and 2001-2020, and report on the most explored topics in different time. In particular, they note a major increase between the two periods in articles on the following topics: 'identity, academic writing, learning process, graduate students, peer assessment and professional development' (ibid., p. 5). Hyland and Jiang (2021) argued that the trend reflects a move away from an earlier focus on practical classroom concerns and students' related issues towards investigation on more advanced literacy practices and the professionalism of EAP practitioners. It is corroborated with Charles's (2022) corpus-based review which examined titles of BALEAP papers in the past four decades till 2019, which indicated the lack of studies on professional development of EAP practitioners.

Overall, those reviews of EAP research above record the emergence and development of EAP as a well-established research field of study by tracing shifts of research foci over recent decades. In particular, reviews above all highlighted a lack of studies on EAP practitioners and their professional development, calling

for more exploration in such aspects. Building on this, the next section turns to the experiences, roles and challenges faced by EAP teachers in today's constantly evolving environment of education (also see section 1.1.2).

### **3.3 EAP teachers' challenges**

In Anglophone contexts, EAP teacher education is advocated by EAP researchers (e.g., Ding & Campion, 2016; Wingate, 2022) to help EAP teachers transform to better teach with an increasingly international student cohort in a multilingual university environment (Humphreys, 2017; Jenkins & Mauranen, 2019). The status of EAP teachers in higher education has been widely reported by scholars in Anglophone university settings. There are some analogies describing status of EAP teachers in HEIs, such as 'butler' (Raimes, 1991) and 'handmaiden' (Hyland, 2006), which seem to take away EAP teachers' power and status and instead place them in peripheral service roles.

While it was a metaphor created 20 years ago, but the 'butler' analogy does not seem out of date today based on the current situation of EAP teachers. This means that even though there is a huge demand for EAP practitioners, who play an important role in facilitating students improve their academic language and literacy (Hyland, 2017; Hyland & Hamp-Lyons, 2002), their position does not seem to be improved over time (Ding & Bruce, 2017; Harper & Vered, 2016). This 'butler' analogy then formed the basis for Hyland's (2006) widely cited description of EAP teachers as 'handmaiden to the proper disciplines', viewed as an ancillary professional role attached to other mainstream disciplines (e.g., engineering, science, business) only when needed. In this regard, EAP practitioners are considered as hands-on fixers of students' language related deficiencies.

More recently, EAP teachers are titled as 'Cinderella' by Charles and Pecorari (2015, p. 38), because they are perceived to have lower status and salary compared with teachers who teach subject content. In addition, due to the teaching-oriented nature of their work contract, EAP teachers may generally have fewer opportunities to conduct research (Palanac, 2022), as they are occupied by a large amount of teaching hours. Such seemingly negative analogies

indicate EAP teachers' marginalisation or even invisibility in university settings, which contradicts previous statement at the beginning of this section about the central role that EAP teachers should have. Generally speaking, EAP teachers, with their professionalism of academic English skills that different disciplines need and require, are supposed to be respected as an important part of the university teaching system (Galloway & Rose, 2021).

Similar to Anglophone contexts, EAP teachers in EMI contexts are also treated as assistants in service sectors (Li & Ma, 2020), while their challenges may become more severe due to the expansion of EMI programmes. Firstly, EAP teachers are undergoing dramatic change and therefore they need training support to adapt to the new educational environment - EMI context (Galloway & Rose, 2021; Li & Ma, 2020). The widely reported language-related challenges faced by students in EMI contexts (see section 2.4.1) has highlighted the integral role of EAP teachers in providing academic language support. In China, as discussed in section 1.1.2, under the policy of ELT reform, with an aim of better supporting students' academic English needs in EMI study, EGP courses have gradually been replaced by the EAP courses (Gao & Cui, 2021). Consequently, confirming to the reform, a large number of ELT practitioners with various years of EGP teaching experience are impelled to enter into the new field of EAP, which is widely regarded as highly demanding (Galloway & Rose, 2021; Tao & Gao, 2018).

However, taking on the new role of teaching EAP courses, newly inaugurated EAP teachers 'find that the traditional training they received in language acquisition and pedagogy on does not prepare them to teach, and often design, specialized EAP classes' (Galloway & Rose, 2021, p. 36), which suggests an urgent need of relevant training of teaching EAP for them. As noted by scholars (Galloway & Rose, 2022; Li & Ma, 2020), there is a noticeable lack of pedagogical training provided for EAP teachers in EMI contexts, as most EMI studies on teachers focus on content teachers, while EAP teachers' issues are often overlooked in despite of the impact of the rapid growth in EMI on them. In Chinese context, yet scarcely research has probed into the challenges facing ELT practitioners who newly entered into EMI programmes (Jiang et al., 2020), which is worrying to see in such surging EMI context (Galloway et al., 2024).

Secondly, the marginalised status of EAP teachers is not uncommon to witness in EMI contexts. For example, in the Chinese context, EAP teachers ‘are often perceived as instructors rather than academics’ (Cheng, 2016, p. 98). Their marginalised status may be linked with an invisible hierarchy existing in EMI contexts. As observed by Dearden (2018), ‘in some institutions, there is a traditional and rather unhelpful hierarchy in place in which academics are considered ‘superior’ to English Language teachers and this makes it difficult for EMI lecturers to ask for and accept support from language teachers and vice versa’ (p. 330). A common phenomenon is that EAP teachers are required to correct students and content teachers’ English works, which may strengthen a service mode (Li & Ma, 2020). In other words, the academic English skills provided by EAP teachers seem to be taken for granted, while these efforts are ignored by other stakeholders in universities, such as content teachers and students. Dafouz and Gray (2022) also revealed Spanish EAP teachers’ reported concern of ‘[h]ow can we overcome uneven power relations often reported by ELT practitioners?’ (p. 165). If the uneven status shared by content and EAP teachers cannot be addressed, gradually, such ideologies prevailing in universities may further aggravate the marginalisation of EAP teachers partly based on lacking knowledge of the importance of language in content learning in L2 on the part of many content teachers (Richards & Pun, 2023).

To sum up, EAP teachers in EMI contexts perhaps are at the crossroad, facing a range of challenges and external pressures of needs to adapt new ELT approach and switch medium of instruction in their contexts due to increasing EMI programmes. Combined with content teachers’ challenges faced (see section 2.4.2), it is imperative to explore what professional development are available in addressing their challenges, which are explored in the next section.

### **3.4 Professional development opportunities for teachers**

In order to better understand the PD opportunities offered for content and/or EAP teachers. This section explores the current state of professional development for content and EAP teachers, including its structure, gaps, and evaluations.

### 3.4.1 Professional development opportunities for content teachers

In this study, professional development opportunities refer to as multiple ‘learning activities professionals engage in to enhance their skills, knowledge and capabilities’ (Sánchez-García & Dafouz, 2020, p. 39), including courses, programmes, seminars, workshop series and so forth. As shown in section 2.4.2, a range of challenges are faced by content teachers, indicating that transitioning to teaching an entire curriculum in English is not a simple task (Lasagabaster, 2022; Galloway & Ruegg, 2022). Therefore, there is an increasing need of PD programmes for content teachers to tackle their reported challenges (Dang et al., 2021; Macaro & Han, 2020; Wang et al., 2025). However, research to date has revealed a scarcity of professional development in EMI contexts (Lasagabaster & Fernández-Costales, 2024; Macaro et al., 2020), which is identified as a challenge of EMI (Deignan & Morton, 2022; Jiang, et al., 2019).

Specifically, Dearden and Akıncıoğlu (2016) found in a Turkish university that none of the content teachers interviewed had received any training before they started teaching or at any stage during their teaching career. Such lack of professional development provision for content teachers may further have a negative impact on students’ EMI learning. Moreover, in China, Cheng (2017) highlighted that ‘[t]he shortage of qualified instructors has become a major roadblock for the successful continuation and expansion of EMI in Chinese universities’ and documents the lack of ‘universal guidelines on how to prepare EMI instructors’ (p. 88). That is, without such institutional support, EMI practice may descend to ‘a cheap solution to complex language programmes for achieving overly ambitious politico-economic goals’ (Hamid et al., 2013, p. 1).

In the review of the literature, studies on TPD are yet largely ignored (Lasagabaster, 2022), as evidenced by limited instances of systematic review (Dang et al., 2021; Wang et al., 2025) and few studies specifically exploring PD programmes (e.g., Ball & Lindsay, 2013; Margic & Vodopija-Krstanovic, 2018; Torra et al., 2014). The following is to discuss PD programmes documented in the literature.

Firstly, in response to content teachers' language-related challenges (see section 2.4.2.1), Margic and Vodopija-Krstanovic (2018) examined a PD programme for 60 novice content teachers (who had no prior EMI teaching experience) from science and engineering departments at a Croatian university. The importance of language competence was emphasised as it was primarily a language development programme offering teaching practice, corrective feedback, and self-reflection. The authors concluded that content teachers' English language proficiency is a primary requirement for EMI and highlighted the need to focus on academic English for teaching purposes to help with content teachers' communicative skills in improvising situation in the EMI classroom. As noted by scholars, content teachers require training in language pedagogy (Jiang et al., 2019) and language-aware teaching practices should be included in teacher training (Valcke & Wilkinson, 2017).

Furthermore, in addressing content teachers' reported pedagogical challenges (see section 2.4.3.2), some PD programmes have included pedagogical development along with language training. For example, in Ball and Lindsay's (2013) study in Basque Country, content teachers developed a more positive attitude towards pedagogically oriented courses than before, indicating 'what really matters is pedagogical awareness' (p. 59). Similar results were found in Torra et al. (2014) who examined an ad hoc EMI-related PD for pre-service content teachers in a Catalonian university. This PD programme, with double objectives of providing linguistic and pedagogical scaffolding, was designed based on a needs analysis with previous content teachers in the university. As a result, teachers reported positively after taking a series of pedagogy-oriented courses. It is encouraged for more PD programmes to equip content teachers with the pedagogical knowledge of teaching EMI (Galloway & Ruegg, 2022; Ploettner, 2019).

It can be concluded that PD provided vary from institution to institution, while English language development is always the basic component in PD. However, above-mentioned studies specifically focusing on PD programmes for content teachers are found providing sporadic information of the PD programme at the researched institutions. The lack of information reported such as guideline of designing and delivering PD makes it difficult to gain an in-depth understanding

of teachers' PD. Considering the challenges faced by teachers in EMI contexts, the lack of relevant research exploring the nature and effectiveness of PD is worrying, which warrants further study to investigate what TPD encompasses and what aspects can be improved (fully discussed in section 3.4.3).

### **3.4.2 Professional development for EAP teachers**

The previous section discussed programmes and studies related to PD for content teachers. This section now focuses on PD for EAP teachers. It is found that most EMI studies on PD are particularly focused on content teachers (Dang et al., 2021; Macaro & Han, 2020), while PD for EAP teachers is rarely documented in the literature and has not received much attention in the literature either (Bruce, 2021; Ding & Bruce, 2017; Ding & Campion, 2016). However, EAP teachers are another important stakeholder of EMI with their expertise of helping students' academic English (Galloway & Rose, 2022). Therefore, though limited, it is also necessary to understand what PD programmes are provided for EAP teachers to address their challenges faced in EMI contexts. This section is to explore what PD for EAP teachers contains in Anglophone and non-Anglophone contexts.

#### ***3.4.2.1 The British Association of Lecturers in English for Academic Purposes (BALEAP) and Teaching for Academic Purposes (TEAP)***

The British Association of Lecturers in English for Academic Purposes (in short BALEAP), with its more-than-40-year history, is a forum federating EAP professionals (BALEAP, 2008; Ding & Bruce, 2017). Aiming to be a 'global forum for EAP professionals' (BALEAP, 2008), BALEAP has yet realised its ambitions, as it currently focuses on EAP in the UK higher education contexts (Ding & Campion, 2016). It is likely that BALEAP is one of the few organisations making systematic attempt in the field of EAP, including framing the competencies required of EAP practitioners and PD schemes for EAP teachers (BALEAP, 2008; Ding & Campion, 2016). For example, in recent years, the creation of EAP teacher qualifications has begun in accordance with the guidelines formulated by experts of BALEAP (BALEAP, 2008), namely the competency framework for teachers of English for Academic Purposes (CFTEAP) established in 2008, and the

more recent development of the TEAP Accreditation Scheme successively appeared in 2014.

Such initiatives were established to respond to the lack of formal provision of EAP teacher education and development (Airey, 2016; Ding & Campion, 2016). Specifically, in order to ‘provide guidance for the professional development of less experienced teachers’ (BALEAP, 2008, p. 2), CFTEAP has been formed the foundations of a new and ambitious accreditation scheme for EAP teachers who work in the UK universities. A range of competencies required on EAP practitioners include academic practice (academic contexts, disciplinary differences, academic discourse, personal learning, development and autonomy), EAP students (student needs, student critical thinking, student autonomy), curriculum development (syllabus and programme development, text processing and text production) and programme implementation (teaching practices, assessment practices) (BALEAP, 2008). As noted by Bruce (2011), CFTEAP represents a ‘comprehensive statement of the knowledge and skills required by teachers of EAP’ (p. 4), and it has been widely adopted by the profession in the UK.

More recently, the BALEAP TEAP Accreditation Scheme has continued to extend its description of the competencies of the EAP practitioners by providing more detailed information relating to their EAP teaching career at different stages (BALEAP, 2014), namely, Associate Fellow (in the early stages of their TEAP experience), Accredited Fellow (TEAP practitioner with substantive teaching experience) and Accredited Senior Fellow (TEAP practitioner with sustained experience and has impact at departmental level and institutional level and beyond) (Ding & Campion, 2016). By following this accreditation scheme, EAP practitioners can find targeted guidelines corresponding to their career phase of teaching EAP. That is, the refinement of the TEAP scheme reflects growing demand for targeted EAP professional development (BALEAP, 2014). In this regard, provisions of TEAP have been established in several UK universities, which will be discussed in the next section.

### ***3.4.2.2 Professional development opportunities for EAP teachers in the Anglophone contexts***

As noted by EAP scholars (Ding & Bruce, 2017; Ding & Campion, 2016; Hyland & Shaw, 2016), the expansion of EAP provision has been accompanied by an increase in demand for EAP practitioners. Yet, such demand has not received adequate scholarly attention in the literature. Specifically, there is little published research exploring EAP practitioners' education and professional development (i.e., TEAP), along with correspondingly reduced opportunities to study for award-bearing postgraduate qualifications specialising in EAP (Ding & Campion, 2016). At present in the UK context, only a few professional EAP training courses and master's programmes (i.e., TEAP MA programme) are available (ibid.). Table 3.4.2.2-1 shows TEAP provisions currently available in the UK, which can be roughly divided into three groups: TEAP Mater programme (e.g., MA TEAP in University of Leeds), training courses (e.g., TEAP Online in the University of Warwick) and certificate-bearing of TEAP courses (e.g., Advanced Professional Certificate in Sheffield Hallam University; The Trinity Certificate for Practising Teachers (CertPT) in Norwich Institute for Language Education).

Institution	Duration	Format of delivery	BALEAP framework used	EMI (component) involved	Levels of qualification
University of Surrey	12 weeks	Online	Yes	Not specified	Training courses
Sheffield Hallam University	6 months	Online	Yes	Not specified	Certificate-bearing courses
University of Glasgow	4.5 months	Online	Not specified	This online course is aimed at people interested in developing their understanding of practices and skills required for teaching English for academic purposes (EAP), in anglophone	Training courses (in MA programme)

				and non-anglophone English medium instruction (EMI) contexts.	
University of Bristol	One week	Not specified	Yes	Not specified	Training courses
University of Sheffield	3 months	Not specified	Not specified	Not specified	Training courses
University of Brighton	3 months	Not specified	Yes	Not specified	Training courses
University of Leicester	2 weeks	Not specified	Yes	Not specified	Training courses
University of Northampton	2 years	Online	Yes	Critically evaluate TEAP pedagogy to make informed judgements about application in different contexts.	Training courses
Norwich Institute for Language Education	2 months	Online	Not specified	Identifying student needs and adapting to contextual constraints.	Certificate-bearing courses
The University of Leeds	6 months	Online	Not specified	Not specified	MA programme; Certificate-bearing courses
University of Manchester and Goldsmiths, University of London	10 weeks	Online	Not specified	Not specified	Certificate-bearing courses

University of London SOAS	2 weeks	Online	Not specified	Not specified	Training courses
Durham University	3 months	Not specified	Yes	Not specified	Training courses (in MA programme)
University of Warwick	10 weeks	Blended learning	Yes	Work with peers to design a teaching resource that could be used in your own teaching context.	Training courses

Table 3.4.2.2-1 TEAP provisions in the UK universities

Reviewing the public documents with regards to course descriptions of these TEAP provisions, only the University of Leeds provides master's programme for TEAP. The majority of the rest provide short-term training courses (predominantly online), among which two offer opportunities (optional) of CertPT in Teaching EAP (i.e., Norwich Institute for Language Education and the joint course of University of Manchester and Goldsmiths, University of London).

A closer glance at the course descriptions of each TEAP provision in Table 3.4.2.2-1 reveals that more than half of them (8 out of 14) are informed by the criteria of the competency framework by BALEAP, with the rest not specified. Furthermore, TEAP programmes are provided for EAP teachers teaching in different contexts. For example, the 2-week course organised by University of Leicester explicitly states that this course aims at 'develop their teaching skills in the context of a British university' (University of Leicester, n.d.). While some provisions indicate that they are preparing graduates to teach TEAP in the UK context and beyond. For instance, TEAP courses held by the University of Glasgow indicates that '[t]his online course is aimed at people interested in developing their understanding of practices and skills required for teaching English for academic purposes (EAP), in Anglophone and non-Anglophone English medium instruction (EMI) contexts' (University of Glasgow, n.d.). Similarly, another training courses offered by the University of Northampton clearly

mentions in its course descriptions that ‘critically evaluate TEAP pedagogy to make informed judgements about application in different contexts’ (University of Northampton, n.d.). These provisions reveal their efforts of reflecting how EAP is being approached in context outside the UK.

As discussed above, TEAP provisions in the UK university context are characterised as diverse and fragmented in terms of duration, format of delivery and framework followed, with a large proportion aimed at cultivating EAP practitioners in the UK university context. As noted by Ding and Campion (2016), one of the limitations lie in the UK-centric discourse which dominates current EAP teacher education. This is not helpful for building the ‘global forum for EAP professionals’ (BALEAP, 2008), as EAP teaching practices are supposed to vary in different sociocultural, linguistic academic contexts compared with the UK (Ding & Campion, 2016). As discovered by Galloway et al. (2024), there is no specific mention of preparing EAP teachers for EMI contexts in its course descriptions. Because of that, EAP practitioners who receive TEAP courses only following BALEAP competency framework may still feel ill-prepared to teach EAP in contexts other than the UK. Since there is a trend that more EAP teachers are needed in non-Anglophone EMI contexts due to the growing popularity of EMI (Galloway & Rose, 2021; Rose et al., 2020), competences required by EAP teachers should be adapted to the current educational reforming initiatives from a global perspective.

To conclude, given the diversity of EAP around the world (Ding & Bruce, 2017), EAP teacher education may better benefit from a more critical and comprehensive perspective, which will make it easier to meet the diverse needs of EAP practitioners working in a variety of different social, cultural and ideological contexts. Thus, it remains unclear whether UK-centric BALEAP competency framework indicates all the competencies required of EAP practitioners elsewhere, as it is mainly a response to (UK) specific social, economic and ideological environments (Ding & Campion, 2016). Therefore, it is risky to require every EAP practitioner to follow the competency framework by BALEAP without profound consideration of contextualised factors in their contexts. As EAP continues to evolve across diverse higher education contexts,

especially growing in EMI contexts, it should be acknowledged that the one-size-fits-all model of EAP teacher education is insufficient.

Therefore, facilitating pluralistic and locally informed approaches to EAP teacher education is essential to better reflect the situated practices, institutional demands, and language landscape that shape EAP courses in varied contexts. Such efforts can not only support the diversity of professionalisation of EAP, but also ensure that teacher education aligns with the complex demands of supporting student learning in linguistically and culturally diverse academic environments.

#### ***3.4.2.3 Professional development opportunities for EAP teachers in non-Anglophone contexts***

As discussed above, a range of TEAP programmes are training EAP teachers to work in Anglophone contexts, and some of them have begun to focus on preparing EAP teachers to work in non-Anglophone contexts with the rapid expansion of EMI programmes. To the best knowledge of the research, however, there are to date a very limited number of provisions of EAP teacher education outside the UK. One example is the LEAP project (Learning English for Academic Purposes) in Italy (Guarda & Helm, 2017), which offered EAP teachers with a wide range of activities such as lectures, seminar discussions, pair- and groupwork, and presentations. The authors reported that these events were well received by participant EAP teachers. However, detailed information about which guideline to follow and duration was not disclosed in this study.

Another example is a TEAP training programme provided in a transnational university in China, namely Xi'an Jiaotong-Liverpool University (XJTLU). This 5-day session aims at helping EAP teachers to gain the Certificate of Teaching English for Academic Purposes (CTEAP) created by XJTLU and to 'advance the very best practice in EAP in higher education in China and beyond' (XJTLU, n.d.). According to the programme description, it is the only qualification of its type in China and is also designed for employers to recognise a teacher's excellence in the field of TEAP. This practical certificate is not only a training course, but also provides a transformative experience encouraging EAP teachers

to think of their work differently and to position themselves differently within their places of work. In addition, the description stated that resources used on the programme were selected from current policy, practice, values and conventions in TEAP and were informed by best practice, with particular reference to the BALEAP competency framework. The way BALEAP framework applied in the institution reflects the wide influence of its competency framework, while the host institution still pays heed to add contextualised content in terms of how EAP is approached in EMI contexts like China, for example, ‘training who wish to enter into teaching in higher education at Chinese institutions’ (XJTLU, n.d.).

The overall, although a range of PD opportunities are identified above, whether they are adequately provided or effective requires further exploration.

Considering the teaching quality of EMI plus with both students and teachers’ challenges (see section 2.4 and 3.3), the general lack of PD for content and EAP teachers is worrying. As Kim (2011) argued, the lack of attention on PD for teachers in EMI may give the impression that the true purpose EMI appears to be upgrading the global and local ranking of academic institutions rather than the actual needs of students. It is alarming if EMI turns to become just an accelerated language policy without an accompanying and necessary institutional support to develop teachers’ delivery skills and thereby students’ development and performance (Williams, 2015).

### **3.4.3 Evaluating teachers’ professional development in higher education**

PD for content or EAP teachers discussed in section 3.4.1 and 3.4.2 indicates diverse educational contexts and various institutional goals. In order to ensure its effectiveness on developing teachers’ teaching quality and ultimate student learning outcomes, it is imperative to critically review how PD is evaluated across different HEI contexts to inform a context-sensitive approach to evaluate TPD opportunities. This section presents how teachers’ PD is evaluated in a range of different educational contexts in understanding what has been identified as important aspects for evaluating teachers’ PD. A self-built evaluation criteria list of teachers’ PD is therefore built as a result of the discussion in this section.

Before delving into TPD in different educational contexts, it is worth noting that there exist several well-established evaluation models of evaluating teachers' PD in general educational contexts, namely Kirkpatrick's (1998) Four-level Evaluation Model and Guskey's (2000) Five Levels of Teacher Professional Development. The relevance and applicability of these models to the current study are discussed in the following sections.

Originally used in evaluating the impact of business training, Kirkpatrick's (1998) model defined four levels for evaluation, namely reactions (i.e., teachers' immediate satisfaction of the PD), learning (teachers' knowledge, attitudes, and skills), behaviour (teachers' real-life teaching practice) and results (broader benefits for organisations). To evaluate different level of PD, it requires various research instruments, ranging from surveys, pre- and post-training assessments, classroom observations, self-assessments, student achievement data and attendance rates. Therefore, comprehensive evaluation at all levels may require significant time and resources, which might not be feasible in institutions where full access and administrative support are unavailable. In addition, observing and evaluating actual behavioural changes in the classroom can be subjective and challenging (Hiew & Murray, 2024), which may further influence the evaluation results of TPD. Moreover, as stated by Kirkpatrick (1994), 'none of the levels should be bypassed simply to get to the level that the trainer considers the most important' (p. 21). That is, Kirkpatrick's model is implemented in a one-way linear manner, and each level is heavily reliant on the other. Since the model does not allow each level to be evaluated separately, such flexibility of implementation therefore reduced its application into use.

Developed from Kirkpatrick's (1998) model, Guskey (2000) proposed a sequential evaluation model at five levels, including teachers' reactions of PD, learning of PD, organisational support and change, use of new knowledge and skills (in their teaching practices), and pupil learning outcomes. Similar to Kirkpatrick's model, the focus of Guskey's (2000) is also on possible change reflected in teachers' teaching practices and ultimately student outcomes. However, it has received some criticisms shared with Kirkpatrick's model. Firstly, the linear and sequential logic of both models has been contradicted with the cyclical nature of

PD evaluation (King, 2014) and the complex interplay of PD and its impact on teachers (Earley & Porritt, 2014). Secondly, there remains questionable whether changes in teachers' teaching and students' learning can be captured and measured properly. Nevertheless, it should be acknowledged that each evaluation model has its strengths and limitations. As discussed above, collectively, by considering the models' compatibility with the aim of this study (see section 4.2) as well as acknowledging the practical difficulties of data collection (see section 4.6.1.2), these evaluation models are not suitable for this study either theoretically or methodologically.

To create a list of evaluation criteria to understand teachers' professional development opportunities critically, it is important to understand what aspects have been used to evaluate TPD. As noted by Fernandes et al. (2023), there is a great need for transparency when evaluating TPD in higher education. In the general literature of TPD in higher education contexts, some scholars (e.g., Darling-Hammond et al., 2017) claim that there has begun to reach a consensus on the characteristics of effective PD. However, there is in fact little agreement (Bayar, 2014; MacPhail et al., 2019) regarding what components should be encompassed in an effective TPD opportunity given the contextualised characteristics rooted in different educational contexts. PD opportunities are considered to be 'tremendously various' (Kennedy, 2016, p. 945) among different educational contexts, thereby resulting in a lack of overall consensus on the key attributes of an effective PD (Bayar, 2014).

In light of above, the effort of evaluating TPD is challenging in EMI context due to its nature being vastly context specific (Dearden, 2015), and associated issues warrant further exploration. As noted by Ploetter (2019), the design and implementation of TPD in EMI contexts should take context-specific factors into consideration. With all this in mind, it is useful to firstly locate the literature of TPD in various HEI contexts to understand factors being considered important when examining teachers' professional development. This section therefore presents a review of the literature of TPD in different educational contexts, resulting a list of evaluation criteria that is contextually appropriate in the context of the study.

### ***3.4.3.1 Teachers' professional development in general HE contexts***

The underpinning research of TPD in HE contexts reveals a range of components recurrently proven to be important to be encompassed when reviewing TPD, which can be further subcategorised into *structural factors* and *content factors*. Specifically, structural factors refer to characteristics of the PD's structure or design (Merchie et al., 2018) and content factors refer to PD objectives. Generally speaking, TPD in general HE contexts has been examined through the perspectives of *PD trainers*, *relevance to teachers' PD needs*, *mode of assessment*, *duration* and *local adaptability*. PD objectives include *teachers' collaboration* and *teachers' specialised content knowledge*. Each of them is discussed as follows.

Firstly, *PD trainer* is recognised as an important factor in TPD. The content of PD provisions is often predetermined by academic experts on relevant topics or institutional educational officials who are authorised to design (MacPhail et al. 2019; Sokel, 2019). However, as noted by Bayar (2014), PD trainers who lack the understanding of the local educational context would limit the overall effectiveness of PD offerings. Therefore, it is necessary to examine PD trainers for the sake of the quality of PD. Secondly, *relevance to teachers' PD needs* is regarded important indicator for evaluating PD provisions (Sahin & Yildrim, 2016). As noted by Garet et al. (2001), the more relevance between the PD content and challenges and concerns of teachers, the more engagement of teachers to participate in PD activities. Additionally, *mode of assessment* at the institutional level is proposed to be equipped with effective PD provision (Darling-Hammond et al., 2017; Fernandes et al., 2023) to evaluate the quality of PD provisions on a regular basis. The justification for this is that the assessment system necessitates continuous follow-up support (Guskey & Yoon, 2009) for teachers upon completion of PD. Furthermore, *duration* is also an important factor determining effective PD (Darling-Hammond et al., 2017; Hiew & Murray, 2024). As PD is claimed to be more effective if it is sustained over time, teachers are more likely to benefit from PD opportunities of longer duration compared with single, one-off sessions that are often considered as ineffective (Merchie et al., 2018). Lastly, *local adaptability* is identified as an important factor for evaluating TPD (Lieberman et al., 2016; MacPhail et al.,

2019). The justification lies in the fact that there is no one-size-fits-all approach of TPD (Bayar, 2014), PD opportunities designed with the consideration of contextualised features of the local context are more likely to help teachers to achieve sustained change in teaching practice in a particular context.

Several PD objectives were identified in the literature, among which *teachers' collaboration* has been referred most frequently (Cordingley et al., 2015; MacPhail et al., 2019; Sokel, 2019; Xu & Zhang, 2022). As noted by Cordingley et al. (2015), PD is claimed to be more effective if teachers take part as a group. Though studies (i.e., MacPhail et al., 2019; Sokel, 2019; Xu & Zhang, 2022) did not specify the formats of collaboration, in general, the importance of collaboration is obvious in PD as '[e]ducators at all levels value opportunities to work together' (Guskey, 2000, p. 749). Successful PD provisions are therefore considered to provide opportunities for colleagues to work collaboratively and exchanging ideas (*ibid.*). Moreover, PD is found to be more effective if it involves training in *specialised content knowledge* (Cordingley et al., 2015; Darling-Hammond, et al., 2017). PD which lacks subject knowledge training has been argued being little relevant to the needs of teachers from different disciplines, which may potentially undermine teachers' experience in PD activities. More recently, As noted by Hiew and Murray (2024), current state-of-the-art PD provisions are growingly emphasising on subject content knowledge.

In a nutshell, a range of structural factors and PD objectives were recognised as important when scrutinising TPD in the general literature of TPD in HEI contexts. TPD in general HE contexts seems to be more structurally effective when it is sustained longer, equipped with assessment system, relevant to teachers' needs, and led by PD trainers knowledgeable about the local educational context. At the level of PD objective, TPD is more effective if it is concerned with teachers' collaboration and specialised subject content knowledge.

#### ***3.4.3.2 Content teachers' professional development in EMI contexts***

To date, studies related to teachers' professional development in EMI contexts have not received sufficient academic attention (Lasagabaster, 2022), resulting a lack of evaluation criteria for TPD. Although there existed several studies

exploring different aspects of PD for content teachers (e.g., Bradford et al., 2022; Park et al., 2022), they have not specified evaluation criteria of TPD in their studies. Nevertheless, as fully discussed in section 2.4.2, content teachers are encountered with a wide range of challenges in EMI teaching. It is noted that a link existed between challenges faced by content teachers and their PD needs (Lasagabaster, 2022; Macaro et al., 2020). Put differently, content teachers are highly likely to require PD opportunities when faced with challenges in EMI (Dafouz, 2021; Macaro et al., 2020; Yuan, 2021). Specifically, in the relevant TPD studies in EMI contexts (e.g., Macaro & Han, 2020; Park et al., 2022; Pérez Cañado, 2020), teachers' challenges as well as PD needs were conceptualised as a series of structural and/or content aspects of PD that need improvement, which further underpins their positions to be scrutinised as evaluation criteria of PD.

Among TPD studies in EMI contexts, to the best knowledge of the researcher, only one study (Macaro & Aizawa, 2022) has provided a list of evaluation criteria ( $n = 8$ ) to explore the PD provisions for content teachers in various EMI contexts across the globe, namely *PD trainer, mode of delivery, mode of assessment, duration, certificate, local adaptability, language of instruction and course objectives*. However, Macao and Aizawa (2022) did not elaborate on reasons for all criteria adopted in their evaluation of TPD, except *PD trainer, mode of assessment, duration and local adaptability*, which were confirmed in their review of the general TPD literature. Apart from that, other criteria have been corroborated in previous TPD studies in EMI contexts. Specifically, *certification of PD* is emphasised in EMI studies of evaluating content teachers' PD (Macaro & Han, 2022) as it recognises and certifies teachers who have obtained a range of qualifications required for being a content teacher in EMI.

There are some other structural aspects of PD provisions not mentioned in Macao and Aizawa (2022). Firstly, *relevance to teachers' PD needs* is of importance in PD (Lasagabaster, 2022; Park et al., 2022), as it is likely to further influence the degree of teachers' active participation. As highlighted by Park et al. (2022), the discipline customisation of PD content is considerably preferred by content teachers from various subjects. In addition to that, *sufficiency of PD* is viewed as an important factor of evaluating PD in EMI contexts as it is symbolised as the

success of content teachers' PD (Pérez Cañado, 2020), while there is no consensus on defining sufficiency in terms of the amount of PD in EMI contexts. It is perhaps because the existing PD opportunities have been widely reported being insufficient in relevant studies (Galloway & Ruegg, 2022; Macaro et al., 2021; Park et al., 2022). Furthermore, *sustainability of PD* has been emphasised (Helm & Guarda, 2017; Hu & Lei, 2014), considering whether TPD would have sustained impact on teachers' teaching practices.

As for content aspects, Macao and Aizawa (2020) indicated PD objectives in their series of evaluation criteria but not further specified objectives in detail. Nonetheless, several PD objectives for content teachers in EMI contexts have been identified in relevant studies. Firstly, as documented in section 2.4.2, three most recurrent teachers' PD needs reported by content teachers are *English language skills* (e.g., Macaro & Han, 2020), *pedagogical skills* (e.g., Bradford et al., 2022; Macaro et al., 2020; Park et al., 2022) and *intercultural communication skills* (e.g., Galloway & Ruegg, 2022; Sánchez- García & Dafouz, 2020). In addition, content teachers' *specialised content knowledge* is emphasised in PD provisions in EMI contexts (Macaro & Han, 2020; Yuan, 2021). Furthermore, *teachers' collaboration* (specifically between content and language teachers) is proposed by many scholars as important component in EMI teaching (e.g., Galloway et al., 2017; Lasagabaster, 2018; Macaro & Tian, 2020; Yuan, 2021). The justification lies in the fact that EMI combines two fields of education and research, namely 'Second Language Acquisition' and 'Education in the Disciplines' (Macaro & Aizawa, 2022). As proposed by scholars (Lasagabaster, 2018; Richards & Pun, 2022), content teachers' PD can be promoted by fostering collaboration between content and language teachers as each party could offer their expertise for bettering the teaching quality of EMI ultimately (see more in section 3.5).

In brief, though there are several aspects that overlap with the general PD studies in terms of structural factors and PD objectives, the evaluation criteria for TPD in EMI contexts are still at the stage of establishment, which requires much more empirical studies to confirm their practicality when evaluating TPD.

### ***3.4.3.3 EAP teachers' Professional development***

As discussed in section 3.3, EAP teachers are becoming indispensable in EMI teaching due to students' and content teachers' reported linguistic challenges (see section 2.4.1 and 2.4.2.1). However, very limited literature (e.g., Campion, 2016; Fitzpatrick et al., 2022) has explored EAP teachers' challenges and PD opportunities provided for them in the UK context where EAP originates (Ding & Campion, 2016), while relevant studies in non-Anglophone contexts remained even fewer (e.g., Kaivanpanah et al., 2021). The following section first situates relevant EAP TPD studies conducted in the Anglophone contexts, followed by relevant literature in non-Anglophone contexts.

#### **EAP teachers' Professional development in Anglophone contexts**

Several structural factors of ensuring effective PD for EAP teachers have been identified from relevant research conducted in the UK context. Firstly, *sustainability of PD* is considered important in PD (Bond, 2020; Ding & Bruce, 2017; Fitzpatrick, et al., 2022). The justification is that EAP teachers prefer PD to be organised in an on-going and continuous manner. Secondly, whether the PD content is informed by the *up-to-date* research findings of their field is an important aspect in EAP teachers' PD (Fitzpatrick et al., 2022). Specifically, EAP teachers believe that this is essential to enhance their pedagogy if they can keep up to date with the field of EAP to maintain their expertise (Tsui, 2011). Thirdly, *sufficiency of PD* is raised as a key aspect in evaluating EAP teachers' PD. It is further associated with the fact that PD opportunities for EAP teachers are currently inadequate (Ding & Campion, 2016). As noted by Fitzpatrick et al. (2022), PD for EAP teachers needs to be appropriately resourced to better attend the various needs of teachers. *The mode of delivery* is worth considering in EAP PD. The justification behind this is the alternatives of PD being offered online/ in person/ hybrid may further influence teacher's ease of participation in EAP PD. Lastly, *certification* is also viewed important (Fitzpatrick et al., 2022), which is also reflected by the increasing advance and development of TEAP courses and degree-bearing programme as well as accreditation (see section 3.4.2.1).

Several PD objectives of EAP teachers in the UK context were identified, with most objectives overlapping with the PD focus in general HE contexts and CT PD in EMI contexts, namely *specialised content knowledge* (Ding & Bruce, 2017) and *teachers' collaboration* (Woodrow, 2018; Zappa- Hollman, 2018). Particularly, specialised knowledge is required for EAP teachers teaching ESAP courses to students from specific disciplines (Fitzpatrick, et al., 2022), such as EAP for chemistry, engineering, and music (see section 3.1.1). Among these overlapping objectives, one topic was an exception - *academic research skill*, which was identified as essential by EAP teachers in the UK. In particular, they requested to be 'research minded' (Fitzpatrick, et al., 2022, p. 9) by learning academic research skills through PD.

### **EAP teachers' Professional development in non-Anglophone contexts**

As discussed above in section 3.2, the relevant literature of EAP PD in non-Anglophone contexts is particularly limited. While no structural factor was found, a range of PD objectives were identified, including *teachers' collaboration* (Jiang et al., 2020; Kaivanpanah et al., 2021; Li & Ma, 2020), *specialised content knowledge* (Kaivanpanah et al., 2021; Li & Ma, 2020), *pedagogical skills* (Jiang et al., 2020), *intercultural communication skills* (Jiang et al., 2020), and *academic research skills* (Li & Ma, 2020). There are some overlaps (i.e., *teachers' collaboration, developing specialised content knowledge* and *academic research skills*) in objectives of EAP teachers' PD in both Anglophone and non-Anglophone contexts (see above). Moreover, these objectives are to some extent shared with those covered in general TPD in HEI contexts (see section 3.4.3.1) and content teachers' PD in EMI contexts (see section 3.4.3.2), which confirms the necessity of reviewing all the literature related to teachers' PD for capturing a more complete picture of what is required for teachers PD for content and/or EAP teachers.

The following section is to critically discuss the similarities and differences in those aspects identified in different groups of literature and then to synthesise a list of context-specific evaluation criteria for reviewing TPD for content and EAP teachers in the context of this study (i.e., Chinese EMI context).

### ***3.4.3.4 Developing evaluation criteria for teachers' professional development in Chinese EMI context***

As discussed above in section 3.3, aspects for evaluating TPD in different educational contexts were collectively put in Appendix 1. Considering the context-appropriateness of EMI (Dearden, 2015, Macaro et al., 2018), this section is to further critically examine the appropriateness of incorporating evaluation criteria identified in different educational contexts into the evaluation of TPD in EMI contexts, which results in a list of evaluation criteria of TPD adopted in this study.

As Appendix 1 shows, there are some overlaps in evaluation criteria identified in different educational contexts - *PD trainer*, *mode of assessment*, *certification*, *relevance to teachers' PD needs*, *sufficiency*, *mode of delivery*, *duration*, and *local adaptability*. This means that structural factors identified in teachers' PD evaluation in the EMI contexts have been mainly corroborated to be important in evaluating TPD in other educational contexts. Firstly, *PD trainer* undoubtfully merits its position as an evaluation criterion because PD trainers in fact serve as 'teacher educator' (Yuan, 2021, p. 276), who are in charge of preparation and delivery of training for teachers. *Mode of assessment* is also prevalent in general HE contexts and EMI contexts as it concerns whether the outcomes of teachers' participation in PD can be properly measured and then reflected through substantial changes in their teaching practices. More profoundly, it involves the refinement of PD provisions in aspects such as design and delivery.

Additionally, *relevance to teachers' PD needs* is warranted as an evaluation criterion due to its relationship with the extent of teachers' active participation of TPD. Moreover, *duration* is grounded in the fact that PD is claimed to be more effective for teachers if it is sustained for a relatively longer time (Merchie et al., 2018). Lastly, *local adaptability* is raised as an aspect of scrutinising TPD in both general and EMI literature by noticing that there is no one-size-fits-all approach of TPD (Bayar, 2014). Indeed, it helps to examine whether PD for teachers is contextually applied to the local contexts by providing locally appropriate teaching materials. Otherwise, it remains questionable whether teachers' issues faced in the local teaching context can be solved.

Some structural factors were identified in both literature of PD for content and/or EAPT teachers, namely *certification*, *sufficiency (of PD)* and *mode of delivery*. Firstly, certification is regarded as an important component when evaluating TPD. It is unsurprising that a growing body of studies (e.g., Macaro et al., 2016; Macaro & Han, 2020) are exploring content teachers' competence, suggesting degree-bearing programme and accreditation for EAP teachers (see section 3.4.2.1). Although there is no consensus on the definition of *sufficiency of PD*, it is emphasised as an evaluation criterion, as PD is supposed to be well-resourced for teachers (Fitzpatrick et al., 2022). Interestingly, *mode of delivery* has been only found in EMI (see section 3.4.3.2) and Anglophone contexts (see above). The ease of teachers' participation of PD is reflected by the flexibility of mode of delivery should be recognised as an important aspect for all TPD.

However, some aspects have only been found in one single context (i.e., CT PD in EMI context or EAPT PD in Anglophone context), namely, *language of instruction*, *entry requirement* and *up-to-date PD content*. In this study, *language of instruction (of PD)* listed separately in Macaro and Aizawa's (2022) TPD evaluation criteria was incorporated into *PD trainer* as language used for instruction is one part of *PD trainers' aspects*. Another item *entry requirement (of PD)*, with no reasons provided by the researchers (ibid.), was excluded in the list of evaluation criteria of this study as it does not seem to convey information for critical evaluation, nor is it mentioned in the literature in other contexts. While for *up-to-date PD content*, it is imperative to provide updated PD accompanied by the development of the fields regardless of educational contexts. Similarly, *sustainability of PD* should be an evaluation criterion across all PD for teachers as PD organised in a sustained manner is more likely to generate positive impact on PD (Bond, 2020; Ding & Bruce, 2017). These two aspects (i.e., *up-to-date PD content* and *sustainability of PD*), with their value stressed above, were decided to be included to evaluate TPD in this study.

As for PD objectives, specifically, *teachers' collaboration* and *specialised content knowledge* seem to be concerned across all contexts (see Appendix 1), confirming their position as important components of PD objectives. Specifically, *specialised content knowledge*, apart from being regarded generally as the

fundamental competence of teachers (Darling-Hammond, et al., 2017), is particularly important for those who teach ESAP to students (see section 3.1.1). The involvement of *teachers' collaboration* (specifically between content and EAP teachers) in PD objective is justified by its perceived and practical benefit and by scholars' numerous calls of fostering more teachers' collaboration (see Galloway & Rose, 2022; Lasagabaster, 2018; Macaro & Tian, 2020).

While in EMI contexts specifically, PD for content and language teachers have both underscored the importance of including *pedagogical skills* and *intercultural communication skills* training. This is reflected in the challenges faced by content and language teachers as a result of the switch in medium of instruction as well as the increasing number of international students in the EMI contexts (Rakhshandehroo & Ivanova, 2020). However, training of *academic research skills* seems to be only concerned in EAPT PD regardless of contexts. Lastly, developing *English language skills* was only highlighted in PD for content teachers in EMI contexts, as evidenced by the widely reported language-related challenges faced by content teachers in various EMI contexts including Chinese EMI context (Galloway & Ruegg, 2022).

As discussed above, it should be acknowledged that although some structural factors and PD objectives may not be explicitly identified in certain educational contexts, such absence should not be interpreted as evidence of their insignificance. Rather, it is possibly attributed to the limited scope of relevant studies conducted. In sum, after the discussion above on their appropriateness for evaluating PD for teachers in EMI contexts, structural factors and content factors (i.e., PD objectives) for content and/or EAP teachers are summarised together as a list presented below (in Table 3.4.3.4-1).

Evaluation criteria of TPD	
Structural factors	PD trainer
	Mode of assessment
	Certification
	Relevance to teachers' PD needs
	Sufficiency
	Mode of delivery

	Duration
	Up-to-date PD content
	Sustainability
	Local adaptability
Content factors (PD objective)	Collaboration
	Specialised content knowledge
	Pedagogical skills
	Intercultural communication skills
	English language skills
	Academic research skills

Table 3.4.3.4-1 Evaluation criteria of teachers' professional development for content and/or EAP teachers

### 3.5 Collaboration between content and EAP teachers

In this study, collaboration between content teachers and EAP teachers is defined as interdisciplinary collaboration between content and EAP teachers in order to 'improve the learning results so that the whole is greater than the sum of its parts' (Lasagabaster, 2018, p. 401). As discussed above in section 3.4.3, teachers' collaboration has been a recurrently mentioned PD objective across different educational contexts. In line with the pressing calls by EMI and EAP scholars, more teachers' collaboration should be incorporated into PD. therefore, this section presents the discussion of collaboration between content and EAP teachers in Anglophone contexts and non-Anglophone contexts in terms of its current state, development, affordances and challenges.

#### 3.5.1 Collaboration between content and EAP teachers in Anglophone contexts

Before delving into collaboration between content and EAP teachers in EMI contexts, it is necessary to review the literature on a broader level involving relevant studies in Anglophone contexts in order to have a more comprehensive picture of what is known about collaboration between content and EAP teachers,

from which insights can be derived to inform the collaboration practices in EMI contexts.

As noted by Hyland's (2022) systematic review, studies on collaboration between content and EAP teachers in Anglophone contexts have grown steadily since the late 1990s. Benefits of collaboration have been proposed by scholars (e.g., Harper & Vered, 2016; Wingate, 2022). Specifically, EAP teachers, with their linguistic expertise (Li, 2020; Macaro, 2020), can gradually raise their inferior status perceived as 'instructors rather than academics' (Cheng, 2016, p. 98) in the universities through collaboration with content teachers. However, as noted by Ding and Bruce (2017), EAP teachers are being further marginalised in higher education institutions due to the shrinking of the size of language centres where EAP teachers are affiliated with. In order to change their status, EAP teachers are supposed to maintain and raise their profile within institution to keep collaborating with content teachers for the sake of their professional development as well as students' learning outcomes (Jones et al., 2001). For content teachers who normally have a 'tacit knowledge of the genres and discourse of their disciplines' (Li, 2021, p. 38), they would develop relevant linguistic knowledge and be able to articulate how language is being used in particular disciplines to students (Chanock, 2017; Jaidev & Chan, 2018; Zappa-Hollman, 2018).

Beyond the respective benefits for content or EAP teachers, there are some mutual benefits of collaboration for both parties. Firstly, collaboration between content and EAP teachers encourage teachers to develop respect for each other's work and foster a stronger relationship among colleagues (Gustafsson et al., 2016). More profound benefits lie in students' learning outcome, as teachers have a better understanding of students' needs and adjust their pedagogical instruction after when collaborating with one another (Stewart & Perry, 2005).

There are, however, several challenges that influence the implementation of collaboration between content and EAP teachers. Firstly, at the awareness level, English teachers tend to have more interest and take actions in seeking collaboration (Li, 2020), this may be explained by their PD needs and motivation to change their current status (see section 3.3). Unlike EAP teachers, content

teachers have been reported having mixed feeling towards collaborating with their counterparts (Harris & Ashton, 2011), and there are various reasons contributing to it. For instance, time constraint is widely reported by content teachers (Huang, 2017; Wingate, 2022), followed by limited understanding of linguistic knowledge (Arkoudis, 2006; Chanock, 2007) and no motivation of doing so (Chanock, 2013). Specifically, by tracking collaboration practices of a pair of teachers (one content and one EAP) for one year in one Australian university, Arkoudis (2006) revealed that it is difficult for two parties to communicate when ‘the different epistemological assumptions are buried in similar words’ (p. 472). Furthermore, shared individual challenge of collaboration lie in teachers’ personal characteristics such as finding like-minded people with mutual trust (Jacobs, 2005; Perry & Stewart 2005).

Challenges at the institutional level should also be acknowledged. For example, the traditional institutional structure which cause compartmentalisation of different departments (Cargill et al., 2012; Wilkinson, 2018; Zappa-Hollman, 2018) is worrying for maintaining a sustainable dialogue between content and EAP teachers as it may create obstacles for initiating communication between two parties. Moreover, As noted by Zappa-Hollman (2018), explicit hierarchical structures within the university and rigid dichotomies of content and EAP teachers make it difficult for collaborators to establish relationships that are perceived to be equal by both parties, which may further contribute to the lower institutional status of EAP teachers (see section 3.3). Also, the compartmentalisation issue is reflected in the geographical separation of content and EAP teachers’ offices (Arkoudis, 2006; Harper & Vered, 2016), which may be detrimental to the initiation of collaborative practice.

As noted above, collaborative practice between content and EAP teachers in Anglophone contexts has a long history (e.g., Hyland, 2022; Wingate; 2011; 2022), with a number of formats of collaboration documented in the literature. And it has been noted in the literature that collaboration between content and EAP teachers provides opportunities for professional development for both groups of teachers (Lasagabaster, 2018; Li & Ma, 2020; Stewart & Perry, 2005), as both groups of teachers develop certain skills during the process of collaboration. Firstly, EAP teachers assist as an informant, providing content

teachers with background and insights into particular kinds of practices that they engage in and their understandings of the texts they use in teaching process (Johns, 1997). It is more specifically identified as exchanging information, brainstorming of ideas, and EAP teachers sharing of materials that guided the design of a language-oriented course linked to a content-oriented course (e.g., Math, Physics) (Gassman et al., 2013; Tribble & Wingate, 2013; Zappa-Hollman, 2018). Likewise, although less discussed in the literature (Hyland, 2022), content teachers also act as informant to help EAP teachers develop a specialised knowledge in particular disciplines (Cheng, 2015; Sloan & Porter, 2009), and assist EAP teachers to select authentic texts and tasks in particular disciplines.

Collaboration at a deep level may be manifested as content teachers working directly with EAP teachers, either through team teaching (Lasagabaster, 2018) or through content and EAP teachers working together in planning tasks and coordinating instruction for a supporting EAP courses for subject content course (Stewart & Perry, 2005). Moreover, scholars have developed framework to better summarise existing collaborative practices. For example, Dudley-Evans (2001) viewed teachers' collaboration as a continuum of engagement: from cooperation, to collaboration, to team-teaching. Likewise, Sandholtz's (2000) model ranges from loose collaborations (i.e., teachers have shared responsibilities with individual instructions), to team planning (i.e., closer teachers' interactions take place) to team-teaching (i.e., closer collaborations and co-teaching are expected). However, it should be acknowledged that not all collaborations necessarily go through all stages of particular models, rather, this depends on practical factors from personal and institutional perspectives.

### **3.5.2 Collaboration between content and EAP teachers in EMI contexts**

As noted by scholars (Galloway & Ruegg, 2020; Lasagabaster, 2018; Li, 2020; Moore et al., 2015), the global trend of EMI at the tertiary level and the growing recognition of collaboration have called for fostering more PD opportunities involving collaboration between content and EAP teachers. That is, collaboration between content and EAP teachers is proposed to be an integral part in PD for teachers. This section is to discuss relevant studies on collaboration between content and EAP teachers in EMI contexts.

A range of benefits of collaboration have been put forward. On the one hand, from the perspective of EAP teachers, discipline-specific communication skills can be developed through collaborating with content teachers (Chanock, 2017). Specifically, compared with content teachers, EAP teachers are more aware of the value of such collaboration and regard it as an integral part of their commitment in their pursuance of professional development (Li & Cargill, 2019; Li & Ma, 2020). Moreover, in the long term, collaboration between content and EAP teachers may alleviate the risk of EAP teachers being side-lined given EAP teachers' current inferior status to content teachers in university settings (Ding & Bruce) (see more in section 3.3), which is also the case for EAP teachers in Anglophone contexts (see section 3.5.1). On the other hand, collaboration with EAP teachers is beneficial to content teachers' professional development (Lu, 2020), as similarly noted in Anglophone contexts (see section 3.5.1).

Mutual benefits of collaboration lie in the improvement of teaching practices for both groups of teachers. As suggested by Richards and Pun (2022), collaboration between content and EAP teachers allows them to draw upon each other's knowledge to improve their current teaching practices, as EAP teachers learn to understand disciplinary discourses with the help of content teachers. At the same time, they help raise content teachers' awareness of linguistic issues related to disciplinary subjects. In light of the importance of the role of language in content learning (Galloway & Rose, 2022), content teachers are supposed to learn about 'the value of the applied linguistics expertise brought by language teachers' (Li, 2021, p. 48).

Furthermore, Dafouz and Gray (2022) label knowledge about language, knowledge about pedagogy, and knowledge about pedagogic materials as the key resources that language specialists bring to the collaboration with content teachers. In practice, EAP teachers with their pedagogical knowledge can guide content teachers in moving to a more language-focused, student-centred teaching approach that integrates the teaching of academic literacy and language. Collaboration between content and EAP teachers is therefore regarded as reciprocal teacher education if implemented properly (Wingate, 2022). Again, the ultimate benefits of collaboration between content and EAP teachers belong

to students who take EMI programmes, as collaboration is viewed as a strategic and resource-efficient approach which provides students with much-needed academic support (Lasagabaster, 2018; Li, 2021).

Similar to what has been found in Anglophone contexts (see section 3.5.1), several formats of collaboration in EMI contexts have been identified or proposed in the existing literature (e.g., Airey, 2011; Dafouz & Gray, 2022; Lasagabaster, 2018; Yuan, 2021). For instance, Airey (2011) noted that dialogue with EAP teachers would help content teachers ‘in the task of disambiguating the communicative practices of the discipline for their students’ (p. 2), which is the expertise of language teachers. EAP teachers can also take on more responsibility as content teachers’ educators as proposed by Yuan (2021), in which EAP teachers act as ‘resource providers’ (p. 5) who share their teaching expertise as well as their knowledge of the relevant literature in language education with content teachers. Moreover, team teaching is also proposed (Lasagabaster, 2018), though there existed very limited instances of successful practices due to financial and human resources.

However, it should be acknowledged that there is a lack of collaboration in practice, which is one of the key challenges of EMI (Galloway et al., 2024; Lasagabaster, 2018). While the collaboration of content and EAP teachers is an inevitable trend with its proposed benefits, the speed of its development is regarded as slow (Li, 2021). As observed by Lasagabaster (2018), language-content collaboration is rarely found, and ‘only a handful of the few schemes involving language and content teachers’ working together have gone beyond the pilot project stage’ (p. 402).

To date in the literature, there are several attempts of collaboration between content and EAP teachers showing mixed evidence of the effectiveness of collaboration to EMI teaching and learning. Firstly, some reportedly successful practices of collaboration between content and EAP teachers are reviewed. For example, Dearden, Akıncıoğlu and Dearden (2016) introduced a collaborative planning tool as an intervention between content and EAP teachers in a Turkish preparatory programme. The findings showed that through pairing one content and one EAP teacher to observe each other’s class and give feedback from the

perspectives of content or language teaching, content teachers reportedly gained a deeper understanding of language issues that their students faced through the lens of EAP teachers. EAP teachers also benefited from the collaborative practice in which they obtained greater insights into the technical language used in the subject. This collaborative practice has been reported generally beneficial as participants viewed this practice as a way of professional development.

Similar attempts were also conducted in Chinese context, for example, Chen and Peng (2019) investigated a 5-day collaboration workshop pairing content and EAP teachers in a Chinese university and found that it significantly enhanced the confidence of Chinese content teachers in using English in the classroom and teaching content in English. In addition, Macaro and Tian (2020) found that content teachers generally commented positively to the experience of collaboration (pair and group work) with EAP teachers. These successful instances could be interpreted as the organised arrangement by the researchers with cooperative content and EAP teachers for participation. However, as also suggested by Lasagabaster (2018) in the research agenda of collaboration, it remains unknown what leads to teachers' high degree of collaboration. Therefore, more studies particularly on exploring teachers' beliefs about collaboration are warranted to understand factors influencing collaboration.

Some studies also reported outcome of less successful collaboration and revealed various reasons. Challenges related to the ineffectiveness of collaboration include the imbalance between content and EAP teachers in terms of their respective authority in the collaboration (Baldauf et al., 2013; Zacharias, 2013). Baldauf et al. (2013) noted that EAP teachers always play the role of 'gatekeepers' (p. 234) rather than planners when it comes to collaboration. To be more specific, EAP teachers traditionally act as assistants who help with EMI teachers with their challenges faced in EMI classroom while content teachers play a dominant role by providing their problems to EAP teachers and expecting guidance and feedback.

In addition, Davison (2006) noted that content teachers were so immersed in the discourse of their subject that it is not easy to recognise the language demands

of the curriculum. EAP teachers, on the other hand, struggled to emerge the subject content into EAP teaching and could easily get lost in direction and control in the collaboration with content teachers. As noted by Macaro et al. (2016), ‘professional stance seemed to play a large part in whether the collaboration was fruitful or not’ (p. 260). That is, the subordinate status of EAP teachers is unsupportive of a healthy collaboration between the two parties, and it may further marginalise EAP teachers within the university settings. Moreover, similar to the finding in Anglophone contexts (see section 3.5.1), Macaro (2018) reported that the teachers’ personality has a role to play in collaboration between content and EAP teachers.

Institutional support is rarely seen in many EMI contexts (Galloway et al., 2017; Rose et al., 2020). As Davison (2006) highlighted, one of the major impediments to development of collaboration is the lack of criteria for evaluating the effectiveness of collaborative teaching generally. Ghezali’s (2021) study in Algerian context revealed that collaboration was not monitored nor investigated at the institutional or university level, with some unstructured or informal collaborative practices taking place. Institutional leads who are lacking the awareness of the value of collaboration may also be accountable for the failure of collaboration (Li, 2021), as they are in charge of recognising staff’s efforts made for bettering EMI teaching. In order to maintain and sustain collaboration to realise its proposed benefits, more studies are therefore needed to unpack factors at the institutional level.

In summary, there are mixed evidence of the outcomes of collaboration between content and EAP teachers on EMI teaching and learning. The global trend of EMI at the tertiary level and the growing recognition of the value of collaboration between content and EAP teachers create ‘unprecedented opportunities for transforming, researching, and reflecting upon practice, for amending new policies, and for fostering professional development for stakeholders involved in the collaboration’ (Li, 2020, p. 510). In this regard, more studies of collaboration between content and EAP teachers in different EMI contexts should be undertaken to examine whether the proposed benefits of collaboration can be substantial. As noted by Zappa-Hollman (2018), it is necessary to have more

research in varied contexts to discover the nature of different forms of collaboration and factors that make it effective or less.

The next sections move to review relevant studies on teachers' PD and collaboration between content and EAP teachers to inform the research design of this study.

### **3.6 Research review of professional development programmes for content and/or EAP teachers**

After discussing issues related to PD and examining PD programmes for content and/or EAP teachers in section 3.4, the following section moves to review relevant studies on PD for content and/ or EAP teachers.

#### **3.6.1 Studies of professional development for content teachers**

In the review of relevant literature, a range of studies investigated the effectiveness of PD in EMI contexts through which teachers' perceptions towards PD were sought via a series of research instruments. To start with, some studies explored PD across EMI contexts, for example, O'Dowd (2018) conducted a survey on the EMI related PD and accreditation of content teachers at 70 European universities to gain an overview of current practices of EMI-related PD and participants' perceptions towards them. This large-scale study provided an overview of current practices in PD and accreditation of content teachers in 70 universities in European EMI contexts, revealing that 30% of the participating institutions had no EMI-related training courses available for content teachers and half of the PD only focused on language training. However, methodologically speaking, number of survey respondents at each university remained unknown, which may negatively affect the validity of the findings. In addition, survey was the only instrument used, follow-up interviews with teachers would have provided more depths regarding their lived experience of PD participation.

Another study exploring effectiveness of PD provision across EMI contexts was conducted by Bradford et al. (2022), who investigated teachers' perceptions towards PD using survey with content teachers in South Korea and Japan with

regards to EMI-related PD and certification. Specifically, 234 content teachers in five Korean universities and 92 content teachers in unknown numbers of Japanese universities completed the survey. It is noted that the sampled populations in each country were too different to make robust direct comparisons, which may raise validity issue of the findings of this study. This study also exists the similar limitation of O'Dowd's (2018) study, namely the lack of follow-up interviews for participants to elaborate on their views on PD.

The above studies were conducted on one continent (O'Dowd, 2018) or in several countries (Bradford et al., 2022), while there is one study at the international level using a survey on content teachers' perceptions towards EMI-related PD and certification (Macaro et al., 2020). 463 content teachers from Spain (151), China (133), Turkey (51), Mexico (34), Italy (30), Japan (20) and Brazil (5) and others (39) responded to the survey. It is a valuable study covering content teachers' perceptions from a wide range of countries and revealing that PD for content teachers is not a high priority in many HE institutions at the global level. However, like O'Dowd (2018), the unbalanced numbers of participants sampled from each country prevented the researchers from analysing responses with 'country' as a variable for comparison, which may negatively affect the validity of the findings.

Apart from cross-national studies discussed above, there are also studies exploring at the national level. For example, witnessing a paucity of research in Chinese HEIs regarding EMI PD programmes, Macaro and Han (2020) conducted a study with content teachers in Chinese universities in order to understand the characteristics of EMI-related PD and content teachers' perceptions towards PD. This study is claimed as a nation-wide level through survey ( $n = 133$ ) and semi-structured interviews ( $n = 12$ ). They found that teachers' attitudes towards EMI professional development and certification was generally positive, though PD had not been prioritised at the institutional level in most universities. The authors therefore concluded that there is a need for more institutional support for EMI teachers' PD at its design and implementation stages. Such efforts to have a systematic examination of PD at the national level should be appreciated. However, given the scale of Chinese universities (see section 1.1.1.1), this alleged national survey may not be representative of the overall picture of EMI-

related PD programmes in China, as it remains unknown what types of EM provisions were involved in this study. This may result in the criticism of sampling strategy and subsequent questions about validity of the findings.

In addition, comparative study (Curdt-Christiansen et al., 2021) is used to investigate EMI-related PD in different types of universities (i.e., key and non-key universities) in China using survey ( $n = 158$ ) and semi-structured interview ( $n = 9$ ). Content teachers' perceptions were examined specifically on what institutional support they need to bring successful content and language learning (the stated goal by the sampled universities). In order to understand their various PD needs, participants were chosen from different disciplinary programmes across universities. Nevertheless, the number of participants in each discipline remains unknown, making further comparisons of findings impossible.

Kim et al. (2021) conducted an exploratory study exploring the current state of EMI-related PD programmes and content teachers' perceptions on such programmes at three science and engineering Korean universities. Instruments include document analysis and survey ( $n = 117$ ) and follow-up interviews ( $n = 22$ ). Specifically, document analysis was utilised to examine the webpage of teaching centre where EMI-related PD was held as well as relevant policy documents related to EMI PD programmes at each university at the institutional level. The data generated from the interview and document analysis regarding the current state of PD was further compared and revealed a gap between the perceived needs of PD and the actual implantation of PD. The combination of objective and subjective insights thus shed light on the future design of PD to meet teachers' needs of PD. However, one limitation would be the sampling criteria that only one university type (science and engineering in this case) was involved, thus making it impossible to understand the situation of other university types such as comprehensive universities.

To address this limitation identified in the study discussed above (Kim et al., 2021), Park et al. (2022) therefore conducted a comparative study between two comprehensive universities and three science and engineering universities in South Korea. Using mixed-methods research with online survey with content

teachers ( $n = 245$ ) and follow-up interviews ( $n = 32$ ), the study aimed at gaining a more comprehensive picture of the current states of PD and content teachers' perception towards PD at different types of universities. However, the researchers (Park et al., 2022) did not future examine how EMI PD can be tweaked to be specifically implemented in diverse settings, which warrants a venue for further research.

There are also studies exploring the effectiveness of PD at single institutions. For instance, Chen and Peng (2018) conducted an exploratory study to examine a PD programme for content teachers at one Chinese university. Five participant teachers were interviewed to share their experience and perceptions after the programme. While the study revealed reportedly positive comments on PD, the syllabus of the PD programme and the profiles of participants regarding their disciplines remain unknown.

Another example is a multiple-approach qualitative study conducted in an Omani university (Alhassan et al., 2021) using interviews and classroom observations with experienced 12 content teachers from social sciences subjects, who are unstudied in the literature. The data from two datasets was further triangulated to understand content teachers' PD needs and challenges faced when teaching EMI. That is, the observational data was used to complement and validate the interview data, which strengthened the credibility of the findings of the study. It was revealed that these experienced content teachers were still confronted with linguistic and pedagogical challenges, therefore requiring more training in these two aspects. However, one limitation lies in the sampling strategy, of which the researchers used purposive sampling and only chose teachers with experience and expertise, which makes results less reflective in terms of PD needs and challenges faced by teachers with different experiences of EMI teaching.

It is found that aforementioned studies only focused on content teachers' perceptions towards PD in EMI contexts, while EAP teachers, another important stakeholder of EMI, were neglected regarding the provision of PD and their perceptions towards PD. Acknowledging that, Nieto Moreno de Diezmas and Fernández Barrera (2021) conducted a qualitative study through semi-structured interviews in a Spanish university to investigate both content and EAP teachers'

perceptions on training and challenges in EMI. Participants were three in-service content teachers, seven forthcoming content teachers and six language teachers, which allowed for a more comprehensive insight into EMI-related PD in the context. This study is one of the studies to date that explores both content and language teachers' perceptions towards PD in EMI contexts, which resonates with the importance and need of involving language teachers to the dialogue of PD in EMI contexts (Malmström & Zhou, 2025; Wang et al., 2025).

There are also studies solely exploring objective materials such as PD relevant documents through document analysis to understand the effectiveness of PD. For example, Chang (2023) conducted an exploratory qualitative study using document analysis to examine the effectiveness the current EMI-related PD provisions across Taiwanese HEIs. Specifically, 15 EMI-related PD courses and programmes were identified by reviewing relevant publicly accessible resources from the universities' websites, advertisements, and files regarding the programme aim and course plan. Data collected were further analysed in order to explore what constitutes EMI PD for content teachers in this context. Although this study provides a comprehensive review of EMI-related PD in a particular context, the findings of this study would have been more fruitful by exploring participants who have attended and who designed these PD provisions. The next section is to review PD studies conducted on EAP teachers.

### **3.6.2 Studies of professional development for EAP teachers**

Compared with content teachers, there are fewer PD studies on EAP teachers conducted in both Anglophone contexts and EMI contexts. In the UK context where EAP originated from, Fitzpatrick et al. (2022) conducted a mixed-methods research investigating PD opportunities for EAP teachers in UK HEIs and their perceptions on their expertise as well as PD opportunities using 116 questionnaires and 15 follow-up interviews. This study made efforts to give voice to EAP practitioners, which is often lacking in research in the field (Ding & Bruce, 2017). However, samples (115 out of 116) were experienced EAP teachers with over six-year experience of teaching EAP, while novice EAP teachers with less teaching experience may perhaps have different perceptions towards the

same questions. This therefore resulted in a limitation of this study in terms of sampling criteria.

In the literature to date, there is a scarcity of studies specifically investigating language teachers' perceptions on PD in EMI contexts. One example is Kaivanpanah et al.'s (2021) study conducted in an Iranian university. Using a mixed method approach of survey ( $n = 105$ ) and semi-interviews ( $n = 28$ ) with ESAP teachers, this study aimed at investigating ESAP teachers' perceptions about their needs of PD and challenges faced by ESAP teaching. Findings revealed a noticeable lack of EAP-specific PD for EAP teachers. In addition, collaboration with content teachers was required by a few teachers ( $n = 7$ ) who highlighted its importance in terms of selecting suitable materials and better understanding students' linguistic needs in content classes. One limitation of this study was the sampling criteria that only ESAP teachers were sampled. The findings of this study would be more holistic if EGAP teachers were involved.

To briefly sum up, a series of studies have been conducted to understand PD with regards to its effectiveness from the perspectives of content and/or EAP teachers mainly through interview instrument and survey, while a few of them (Chang, 2023; Kim et al., 2017) utilised document analysis of PD documents to provide an objective perspective to examine PD. Moreover, qualitative instruments are found mainly used to understand perceptions. Specifically, survey is used to reach a large proportion of participants and obtain some general understanding, while interview is a widely used tool to investigate teachers' perceptions by delving into what and how participants perceive PD opportunities at their institutions.

In addition, most studies examined above (Kaivanpanah et al., 2021) are case studies conducted in particular PD programme at single institutions. Noticeably, PD studies in EMI contexts are predominantly focused on content teachers, while EAP teachers working in EMI contexts have often been ignored in the literature. Excluding EAP teachers' perspectives limits our understanding of PD in EMI contexts, therefore warranting more research to investigate PD for both content and EAP teachers in EMI contexts. The next section will review studies on collaboration between content and EAP teachers.

### **3.7 Research review of collaboration studies of content and language teachers**

After discussing issues related to collaboration in section 3.5, the following section is to review relevant studies on collaboration between content and EAP teachers.

In the review of collaboration studies in Anglophone contexts, Zappa-Hollman's (2018) study conducted in a Canadian university explored perceptions of 13 content teachers and six EAP teachers who collaborated with one another over a semester. By conducting semi-structured interviews, this study revealed factors enabling and sustaining collaboration as well as indicators that serve as evidence of positive collaboration. However, it should be acknowledged that the participating teachers were voluntarily involved in collaboration, which means most of them had the motivation to actively experience the process. Therefore, to fully understand factors influencing collaboration between content and EAP teachers, further research is warranted to invite teachers with and without collaboration experience to share their perceptions.

The existing literature contains a few studies of collaboration between EAP teachers and content teachers in EMI contexts (e.g., Li & Ma, 2018; Macaro & Tian, 2020). In the recent literature, there are some efforts made by gathering a group of content and language teachers to collaborate with one another. For example, Macaro et al.'s (2016) study in a Turkish university used 'collaborative planning tool' (CPT) as an intervention with nine collaborating pairs (one content teacher and one language teacher in a pair) through pre- and post-intervention interviews. The successful and unsuccessful aspects of the intervention were further identified by the researchers from the interview data. However, the researchers did not disclose the details of the intervention, which may have provided more insights to the field by introducing how the intervention has been designed and implemented.

Another experiment of collaboration is conducted in a Chinese EMI context by Macaro and Tian (2020), which is a preliminary empirical study in Chinese

context. It was a small-scale study with limited participants (only two content and three EAP teachers) using interviews to investigate teachers' experience and their perceptions of the collaboration activities of co-designing EMI courses. While the findings revealed participants' generally positive attitudes towards the experience of collaboration, unfortunately the researchers did not further explore the reasons behind general positive attitudes from participants, which should have yielded insights into how collaborative practice can be facilitated on a broader and deeper level.

Similarly, a study conducted by Lu (2020) examines the impact of teacher collaboration on EMI teachers' professional development in a Taiwanese university. Specifically, six content teachers from different academic backgrounds and four language teachers participated in the study by jointly designing, developing and implementing an interdisciplinary EMI course. A range of instruments were used: classroom observation, interviews conducted after the course and document analysis with the course syllabus, lesson plans, teaching slides during the collaborative practices. Like the findings in Macaro and Tian (2020), content teachers felt more confident and positive after participating in teacher collaboration. However, the researchers did not explain the possible reasons behind it, nor did they introduce the detailed instructions of the training course.

In addition to studies above with a particular focus on the intervention of collaboration, some studies focused mainly on investigating teachers' perceptions towards collaboration. For example, Alhassan et al. (2022) particularly interviewed 10 content teachers from a business EMI programme on collaboration between EAP teachers in a business programme in a Sudanese university. Though generally optimism was reported by content teachers, limitations were obvious in this study. Firstly, EAP teachers were not included in this investigation, otherwise, their inclusion could have added another important perspective to the findings. Another limitation lies in the small sample size of a single discipline, which results in limited data obtained only from business subject teachers. Further research can therefore investigate content teachers from different disciplines to gain a richer picture of teachers' perceptions and needs of collaboration.

Another study conducted by Lu and Zou (2021) investigated 13 content teachers in a transnational university in China. Participants were interviewed to reflect on their collaboration with EAP teachers in the modules and their perceptions as such. However, similar to Alhassan et al. (2022) discussed above, the limitation in this study lies in the fact that content teachers' collaborating partners - EAP teachers were not included in the investigation. This warrants further research to investigate both content and language teachers' perceptions, as collaboration between content and EAP teachers cannot be facilitated and developed if one party's voices are left out.

In contrast to Alhassan et al. (2022), Ghezali's (2021) study in an Algerian university particularly investigated EAP teachers regarding their perceptions towards collaboration between content and EAP teachers after an intervention (co-designing an ESAP course for third year undergraduate students in business). In this study, seven business teachers and five ESAP teachers participated through teachers' pre-survey questionnaire, observations and focus group interviews. It is a preeminent example of exploring the collaboration practices from the perspective of EAP teachers. However, the findings of the study would be more complete if interviews were also conducted with content teachers, in this way, perceptions from both groups of teachers can be negotiated for better design of collaborative practices.

Combining studies discussed in this section, it is acknowledged that collaboration studies in EMI contexts is at an early stage, with small-scale interventions of collaborative practices, while the details of these practices were not fully revealed by the researchers (e.g., Macaro et al., 2016; Macaro & Tian, 2020). Also, studies reviewed above (i.e., Alhassan et al., 2022; Ghezali, 2021; Lu & Zou, 2021) predominantly focused on a single institution with relatively limited number of participants. With regards to perception studies, participants were either content teachers (Alhassan et al., 2022; Lu & Zou, 2021) or EAP teachers (Ghezali, 2021). Research solely exploring single perspective of teachers is not conducive to understanding the factors influencing the initiation of collaboration from the perspectives of different stakeholders of collaboration. As Zappa-Hollman (2018) highlighted, 'collaborations are historically, geographically,

socio-politically, and institutionally situated, and therefore each new context in which partnerships are examined has the potential to enhance our understanding on the topic' (p. 593). This suggests that there is not 'one-size-fits-all' approach or guidance on collaborative practices across different contexts. In this regard, more research examining collaboration practices in different formats in different contexts between content and EAP teachers should be carried out.

### **3.8 Chapter summary**

Chapter 3 begins by discussing EAP, including its definitions, key areas of research, and the challenges faced by EAP practitioners in both Anglophone and EMI contexts. This discussion helps situate EAP within broader contexts and emphasises its growing importance in EMI contexts. The following is a review of teachers' PD across various educational settings by outlining what it is, what it contains, what is lacking and how it is being evaluated. The results of the review were ultimately synthesised into a list of evaluation criteria to evaluate TPD in the context of this study. Furthermore, the chapter presents a focused discussion on collaboration between content and EAP teachers, a topic increasingly recognised for its potential for teachers' professional development and for enhancing EMI effectiveness. This review considers its current status, development, affordances, and the ongoing challenges that hinder its implementation. After that, research review of teachers' PD and collaboration between content and EAP teachers are provided to inform and justify the research design of this study, which is presented in the next chapter.

# Chapter 4: Methodology

## Overview

This chapter firstly highlights the rationale, aims and research questions of the study, and secondly demonstrates the research design and discuss research methods, followed by the specification of research instruments, profiles of research sites and participants. Data collection and data analysis procedure are also discussed. This section ends with ethics consideration, trustworthiness and limitations of the study.

### 4.1 Rationale of the study

As discussed in Chapter 3, this study is informed by linguistic challenges faced by students (see section 2.4.1) and the multifaceted challenges encountered by content and EAP teachers in EMI contexts (see sections 2.4.2 and 3.3). Despite scholarly calls for institutional support (Galloway & Ruegg, 2022; Lasagabaster, 2022) to help with these challenges, such support remains largely lacking, potentially compromising students' learning outcomes in EMI (McKinley & Rose, 2022). Moreover, research on PD in EMI has predominantly focused on content teachers, while EAP teachers have often been understudied (Galloway et al., 2024). Such oversight of EAP teachers is concerning given that their indispensable role of providing academic language support to students (Galloway & Rose, 2021; Li & Ma, 2020), which suggests a need for understanding their challenges and needs. To date, given that PD studies in EMI have only recently attracted scholarly attention, it remains unclear what constitutes effective PD to better support teaching practitioners in EMI contexts (Chang, 2023; Macaro & Han, 2020), which necessitates a systematic approach to understand PD opportunities for teachers in EMI contexts.

Specifically, to address the various challenges faced by content and EAP teachers in EMI, scholars (Galloway & Rose, 2021; Galloway & Ruegg, 2020; Lasagabaster, 2022; Ploettner, 2019) have called for bolstering collaboration between content and EAP teachers, normalising it as a PD practice. Although collaboration is viewed as a strategic approach that provides students with

much-needed academic support (Galloway et al., 2024), it remains lacking either in research or in practice (Lasagabaster, 2018; Wang et al., 2025). Compared to PD studies, there are even fewer collaborative studies in EMI contexts, leaving much unknown about what guides the practice of collaboration and how teachers perceive it.

To briefly sum up, the lack of extensive research on teachers' PD and collaboration in EMI contexts is problematic for many proposals made in relation to enhancing EMI teaching quality (e.g., Galloway & Ruegg, 2022; McKinley & Rose, 2022). Moreover, research review on collaboration studies in section 3.7 shows that participants were separately focused on content teachers or EAP teachers, with studies involving both groups remaining rare. In the absence of studies that involve both parties, it is challenging to understand what content and EAP teachers' views on collaboration which is intended to occur between two parties. Therefore, in this study, content teachers, EAP teachers and PD leads, who are the front-liners of EMI teaching, were approached to explore teachers' PD and collaboration. Furthermore, section 3.6 and 3.7 revealed that relevant studies of teachers' PD or collaboration (i.e., Alhassan et al., 2021; Chen & Peng, 2019; Ghezali, 2021; Lu & Zou, 2021; Nieto Moreno de Diezmas & Fernández Barrera, 2021) predominantly focused on a single institution with relatively limited number of participants. As noted by Akıncıoğlu (2022), teacher training can vary vastly even in the same context. Thus, single-institution studies may fail to capture this diversity of PD provision, leading to findings not being broadly reflective. Hence, teachers' PD and collaboration across different types of EMI provisions in a surging EMI context - China - is explored in this study.

## 4.2 Aims and research questions

Given above, this study aims to investigate PD opportunities and collaboration between content and EAP teachers in different types of EMI provisions (namely EMI university, EMI college and EMI programme) in China to provide a comprehensive picture of PD provisions and collaboration in Chinese EMI contexts. Therefore, with the ultimate goal of enhancing EMI teaching and learning in mind, the findings of this study are to provide research-informed insights into guidelines of teacher collaboration, the development of more

targeted PD, and successful and sustainable EMI policy implementation.

Collectively, this generated three research questions as follows:

1. What professional development opportunities exist for content and language teachers in EMI contexts in China?
2. What are stakeholders (content teachers, language teachers, PD leads)' perceptions towards current professional development opportunities?
3. What are stakeholders' perceptions towards collaboration between content and language teachers addressed in professional development opportunities?

### **4.3 Research design**

Research design is the overall plan for connecting the conceptual research problems to relevant and feasible empirical research (Asenahabi, 2019). It is an inquiry which provides unambiguous direction for procedures in a study (Creswell, 2017), and directs the logical sequence which connects the data (typically empirical data) to the research questions and their conclusions (Yin, 2009). The following is a discussion of the research paradigm and research methodology adopted in this study.

#### **4.3.1 Research paradigm**

To conduct research effectively, researchers need to identify a research paradigm that guides the whole research process. Research paradigm, described as different view about 'how the researcher 'sees the world and acts in it' (Denzin & Lincoln, 2018, p. 56), is defined as basic sets of beliefs that guide action (Creswell, 2017). This section provides the justification of research paradigm in relation to the research aims of this study (see section 4.2).

The three most common social science paradigms are positivism, interpretivism/constructivism and pragmatism (Creswell, 2009), each of them offers a different perspective on research and is characterised by different philosophical assumptions and research methods. Firstly, positivist paradigm refers to a paradigm that assumes an objective, singular reality that can be measured and

observed empirically (Johnson & Onwuegbuzie, 2004). By contrast, interpretivist/ constructivist paradigm assumes that reality is subjective and constructed by individuals based on their experiences and social interactions (Cohen et al., 2018; Coe, 2021).

#### *4.3.1.1 Pragmatist paradigm*

As discussed above, it can be seen that positivist paradigm and interpretivist/ constructivist paradigm are two extremes on a continuum. As noted by Johnson and Onwuegbuzie (2004), the positivist paradigm has been criticised for ignoring the reality constructed by individuals, and the interpretivist/constructivist paradigm has also been critiqued due to its lack of rigorous criteria to judge the quality of research conducted within the paradigm. Pragmatist paradigm, with its focus on practical results and applications in the real world to find effective solutions to problems (Kaushik & Walsh, 2019), seems to compensate for the concerns caused by aforementioned paradigms. That is, pragmatism is not limited to a single philosophical position but adopts a flexible approach embracing plurality of methods to address research questions (Creswell 2017; Creswell & Clark, 2011). It is often associated with mixed-method research (mixing quantitative and qualitative methods) (Creswell, 2017) or multi-method research (only using multiple quantitative or qualitative methods) (Creswell & Clark, 2011; Mik-Meyer, 2020), where the priority is given to the choice of research methods that are most likely to answer the research questions.

The following is to briefly justify the pragmatist paradigm in line with the research aims and questions as illustrated in section 4.2. Specifically, the aims of this study are twofold: to critically scrutinise the current state of PD opportunities for content and/or EAP teachers in Chinese EMI contexts, and to investigate teachers' perceptions towards PD opportunities and collaboration address in PD. Given that the whole study depends on both objective and subjective insights into teachers' PD and collaboration, pragmatism therefore provides an appropriate underpinning for addressing the research questions as it combines 'fact' and 'perception' questions. This study, therefore, is conducted within the pragmatist paradigm in order to benefit from the merits of multiple research methods (see below) (Creswell & Clark, 2011; Teddlie & Tashakkori,

2008) when addressing the research questions articulated above in section 4.2. Detailed justification of the adoption of research methodology and instruments is discussed below.

#### **4.3.2 Multi-method qualitative research**

In this study, qualitative research is chosen for the reasons as follows. As discussed in sections 2.3 and 3.3, TPD for content teachers and especially for EAP teachers in Chinese EMI contexts is relatively understudied. Additionally, a lot of TPD opportunities are not documented in the relevant literature, necessitating an endeavour for investigation with suitable research approaches. Usually this means that a phenomenon needs to be explored and understood because little research has been done on it or because it involves an understudied sample (Creswell & Poth, 2017). In this vein, there merits a lot more to explore with regards to the research questions (see section 4.2) in the context of this study. Additionally, there is a lack of perception studies from the perspective of teachers (Jablonkai & Hou, 2021) on PD opportunities (also see section 2.3), thus meriting a qualitative approach that seeks to listen to content teachers, EAP teachers and PD leads working in EMI contexts and build an understanding based on what is heard from the stakeholders.

In addition, to understand different research questions (see section 4.2), multiple qualitative research approaches have been adopted in this study, which is multi-method research (Creswell, 2017). In contrast to mixed methods research which is more recognised for intermixing both quantitative and qualitative research methods (Cohen et al., 2018), multi-method research is defined as research that combines methods *within* either qualitatively or quantitatively based studies (Creswell, 2017). More specifically, multi-method qualitative research refers to two or more qualitative methods (e.g., interviews, observations and documents) adopted by the researchers to study a research question or phenomenon (Mik-Meyer; 2020; Silverman, 2020).

Although multi-method qualitative research has been critiqued for its additional data collection and analysis in terms of resources and time (Kaushik & Walsh, 2019), it is very useful for gaining a more fully developed understanding of a

phenomenon or a subject matter compared to a single-method research design (Denzin & Lincoln, 2005; Flick, 2007). Moreover, the quality of the research can be strengthened by using different qualitative methods, which allow different perspectives and nuances of phenomena or complex entities to be captured (Justesen & Mik-Meyer, 2012). Hence, in this study, the choice of combination of multiple qualitative research methods rests on the research questions to be addressed (see section 4.2), which conforms to the pragmatist research paradigm (see section 4.3.1.1).

The following is to justify how multi-method qualitative research is adopted in relation to research questions (see section 4.2). As discussed in sections 3.6 and 3.7, the majority of relevant qualitative studies reviewed only employed one single research instrument (e.g., Chang, 2023; Chen & Peng, 2019). And these authors have acknowledged in their studies that using single research instrument may perhaps cause harm to the credibility of the studies (see section 4.9). This study, firstly, investigated the current state of TPD opportunities (RQ1) through the review of PD relevant documents of each participating institutions, which was supplemented by interview data reporting on the current state of TPD and collaboration in PD. As argued by Bryman (2008), if documentation is used as a means of understanding the organisations or events, data from other sources may also be required to support the analysis of the documentation. Secondly, interviews were employed to investigate teachers' perceptions towards PD opportunities and collaboration addressed in PD (RQ2 and RQ3). These two instruments are fully discussed in section 4.4.

Put together, it is useful to have the combination of different qualitative research methods under the multi-method qualitative research, in which different datasets are used to answer the research inquiry (see section 4.2).

#### **4.4 Research instruments**

Two instruments are utilised in this study, consisting of document analysis and semi-structured interviews. Specifically, document analysis, supplemented by interview, was employed to respond to RQ1 regarding the current state of PD. Interview was solely adopted to address RQ2 and RQ3 in terms of perception

questions towards PD and collaboration in PD. Detailed procedures are fully discussed as follows.

#### 4.4.1 Document analysis

To address RQ1 regarding the current state of PD opportunities for content and/or EAP teachers in Chinese EMI contexts, instruments used are PD documents collected from each participating institutions' websites as well as relevant interview data reporting the current of PD provisions as supplementary data. As noted by Bowen (2009), organisational and institutional documents have been staple resources in qualitative research for many years. Documents can be represented by policy and procedure guidelines, diaries, letters, meetings reports, programme evaluations, annual reports, news posts from the media, and textbooks (Mayan, 2023).

Methodologically speaking, research instruments mainly used for exploring teachers' PD opportunities in the current literature are surveys and/or interviews within the participating institutions (see sections 3.6 and 3.7). And it should be acknowledged that most teachers' PD opportunities are not documented in the research literature (Lasagabaster, 2022), and PD documents such as programme descriptions have been mostly neglected for data collection. However, as shown in studies (e.g., Chang, 2023; Kim et al., 2021) adopting document analysis to understand PD opportunities, a good avenue of valuable data of PD was found from PD documents.

Admittedly, it should be noted that publicly available PD documents might some limitations. To start with, there exist certain administrative constraints when accessing internal information (e.g., data for paid courses are not for sharing) (see section 4.6). In addition, the promotional nature of PD documents displayed on the websites might raise concerns on its usefulness. For example, below shows a description of missions of PD provided at an EMI university (anonymised), in which embellished words were used to describe the effectiveness of its PD. However, whether these missions written in documents are realised in practice requires participating teachers' evaluation.

## Mission

Centre for Teaching and Learning (CTL) collaborates with colleagues and graduate students across the University to help instructors excel in their teaching, and to support student learning. The Centre is dedicated to personalising instructors' professional development by offering a variety of programs, services, and resources. Instructors have great opportunities to connect with colleagues, explore teaching practices and pedagogies, access to the current and emerging technologies, and apply and assess different instructional strategies in classes. The CTL is committed to enhance the culture of teaching and learning on campus, and further, the quality of education at ■ ■

Figure 4.4.1-1 Screenshot of Mission of professional development at an EMI university (anonymised)

However, this can be addressed by several rounds of careful examination of documents collected to extract useful information for further analysis. Overall, document analysis could still provide a rich database of PD relevant information. Therefore, in this study, a thorough content analysis of documents was conducted (see section 4.7.1), which can help understand the current state of PD opportunities and collaboration organised in PD (RQ1). PD-related documents, with the supplement of semi-structured interviews with teachers and PD leads, served as the primary resources to answer RQ1.

To enhance the transparency regarding the composition of the PD corpus, Table 4.4.1-1 below summarises the documents collected from each participating institution. As noted above, the PD corpus consists of publicly available PD-related documents, including institutional PD policies, workshop introductions, training guidelines, teaching development reports. In total, 17 documents were gathered across 13 institutions, amounting to approximately 17,300 words. All collected documents were then analysed and synthesised under each institution into a table in Appendix 3. While the corpus does not capture internal or confidential PD materials due to administrative reasons, it nevertheless provides a robust indication of how PD is proposed, framed, prioritised, and communicated institutionally.

Institution	PD provision	Types of documents	Number of documents	Words per document (Approx.)	Total words per institution

U1	U1 All PD	Training guideline	1	1,500	4,000
	U1 CT PD	Training guideline	1	800	
	U1 LT PD	Training guideline	1	1,200	
	U1 PD	Workshop introduction	1	500	
U2	U2 PD	Workshop introduction	1	1,100	1,100
U3	U3 PD	Workshop introduction	1	800	800
U4	U4 PD	Institutional PD policy; workshop introduction	2	1,500	3,000
U5	U5 PD	Workshop introduction	1	600	600
U6	U6 PD	Workshop introduction	1	1,000	1,000
U7	U7 PD	Workshop introduction	1	800	800
JC1	JC1 PD	Workshop introduction	1	500	500
JC2	JC2 PD	Workshop introduction	1	800	800
JC3	JC3 PD	Workshop introduction	1	500	500
P1	E1 CT PD	Training guideline	1	1,800	1,800
P2	E2 CT PD	Training guideline; teaching development reports	2	1,200	2,400
P3					

Table 4.4.1-1 Summary of PD corpus of each PD provision

#### 4.4.2 Interview

The interview is the most commonly applied qualitative research instrument (Dörnyei, 2007). Interview of qualitative research is described as the attempt ‘to understand the world from the subjects’ point of view, to unfold the meaning of their experience, to uncover their lived world’ (Brinkmann & Kvale, 2015, p. 3).

More specifically, interview a powerful tool to explore issues in depth, to see how and why people structure their ideas in their own ways as well as how and why they make connections between ideas, beliefs, opinions, and behaviours (Hochschild, 2009). The following is to discuss the choice of semi-structured interview and the construction of the interview used in this study.

#### ***4.4.2.1 Semi-structured interview***

The qualitative instrument such as interview involves obtaining a comprehensive picture of what happens in a specific setting and involves exploratory description and analysis (Fraenkel & Wallen, 2000). There are different types of interviews ranging from structured, semi-structured interviews and non-structured interviews. Specifically, structured interviews employ a set of fixed and pre-determined questions to ask all participants in a standardised order, which is often used in quantitative studies such as surveys. Although it might be suitable for large-scale data collection in an organised manner, its rigidity limits potential capture of unexpected insights from the participants (Delve & Limpaecher, 2023). By contrast, unstructured interviews adopt open-ended questions that are not predefined, which allows to explore unanticipated topics with rich qualitative data collected. Unstructured interviews are therefore often used in ethnography and narrative inquiries (Whitaker & Fitzpatrick, 2021). However, its limitations are obvious, such as the risk of irrelevance to the researched topics and potential bias from the participants.

Given that, semi-structured interview, a compromise between structured and non-structured interviews, allows for individual accounts of events and developments. Thus, semi-structured interview is viewed as ‘outstanding sources of data that help the scholar understand the local context better’ (Willis, 2008, p. 205). Semi-structured interview is adopted in this study also because the strategic flexibility of this instrument enables pop-up topics related to PD and collaboration to be raised by interviewees during the interviews. As noted by Cohen et al. (2018), in the semi-structured interviews, themes and questions are given, while the questions are open-ended and the wording and sequence may be tailored with each interviewee and the responses given, with prompts and probes. Specifically, a structural protocol for the interview was developed, with

topics or main issues being listed, and providing interviewers with some flexibility to expand on the issues in order to more fully explore relevant issues that may arise during the interview (Freebody, 2003). The construction of the interview of this study is discussed in the next section.

#### *4.4.2.2 Construction of interview*

The instrumentation of the interview starts from a question pool, selecting question items and putting them under different themes, sequencing them logically, then piloting the instrument tool (Creswell & Poth, 2017). In other words, a preliminary interview schedule is modified and developed into the interview guide for use based on the feedback received in the piloting stage. Good quality interview questions should be ‘unambiguous, one-question questions, non-leading and culturally sensitive and ethically informed’ (Lankshear & Knobel, 2004, p. 202).

To better understand teachers’ perceptions of professional development and collaboration between content and language teachers (RQ2 and RQ3), two semi-structured interview guides were respectively designed. An interview guide is ‘a script, which structures the course of the interview more or less tightly’ (Brinkmann & Kvale, 2015, p. 156). That is, what the interview guide covers may vary, ranging from a few relevant topics to a detailed series of carefully worded questions. For semi-structured interview, the guide includes an outline of topics to be covered, with suggested questions depending on interviewee’s instant response to certain questions (Cohen et al., 2018; Mayan, 2023).

In this study, the semi-structured interview guides contained main questions and follow-up sub-questions. The main questions were created based on the main content of the research questions (see section 4.2) while sub-questions were gradually emerged as different aspects of the research questions. In this study, the interview schedule was semi-structured, with spaces allowing interviewees to extend and explain their perceptions towards PD and collaboration through ‘why’ questions. For example, ‘Would you like to take part in professional development at your institution? Why or why not?’. Such interview questions gave participants an opportunity to ‘discuss their interpretations of the world in

which they live, and to express how they regard situations from their own point of view' (Cohen et al., 2007, p. 347).

More specifically, to familiarise the participants, warm-up questions were firstly asked such as their background information of their educational background and teaching experience of EMI/EAP. Three groups of questions were asked by the order of the predetermined themes based on three research questions. The following were the sub-questions targeting research questions about the current state of professional development and collaboration at their institutions and their views on them. The sub-questions were intended to enhance the overall flow of the interview process and to obtain more precise and detailed answers from the participants. For example, if the participant has experience of collaboration, collaboration-related questions such as 'how would you evaluate the collaboration activity?' will be asked. Otherwise, participants with no collaboration experience will be asked questions such as 'will you take part in any collaboration with content/language teachers in the future?'.

As shown in the Appendix 7 of the interview sample, there are two stages of the interview. In stage one, participants are asked some narrative questions for the sake of setting the 'tone and create initial rapport' (Dörnyei, 2007, p. 137) with the interviewer. The interview is then move to stage two: prompts to ask about participants' perceptions towards PD and collaboration provided in their institutions. Prompts are created based on the key themes of the research questions - professional development and collaboration. Specifically, a brief introduction about the study is presented before questions, followed by questions regarding the current state of PD, then perceptions towards PD. The following are questions related to collaboration (current state and perceptions towards it). A closing question is put at the end of the interview to ask participants whether they would like to add anything that was not covered in the interview.

#### **4.5 Pilot study**

This section elaborates on the procedure of the pilot study including the changes of question items in the interview based on participants' feedback (see Appendix 6 and Appendix 7). Questions below were asked when conducting the pilot study:

- Content coverage (Did anything need to be added or deleted in the interview?)
- Content clarity (Was the wording appropriate? Was the content clear or ambiguous?)
- Content structure (How was the flow/order of the question items?)
- Others (if any)

The feedback from the researcher's supervisors and participants (i.e., 2 CTs, 2 LTs and 2 PD leads) in the pilot study was then collected for further reflection and decision on the final version. There were some modifications made as a result of the pilot study (see Table 4.5-1).

Section	Questi- on no.	Before	Changes made
Intro	N/A	... language teachers are those who teach English for Academic Purposes (EAP) to students in EMI contexts	... language teachers are those who teach English for Academic Purposes (EAP) (including English for General Academic Purposes (EGAP) and/or English for Specific Academic Purposes (ESAP)) to students in EMI contexts
I. Background information	N/A	... what EMI/EAP experience you had before taking up the current job	... what EMI/ELT (English language teaching) experience you had before taking up the current job
II. Questions of the study	2-1	what is/ what are the professional development provision(s)?	what is/was it/ what are/were the professional development provision(s)?

II. Questions of the study	2-1-1	How do you feel about these PD opportunities?	How did you find the experience of these PD opportunities? what are your reflections on the experience?
II. Questions of the study	5-1	For CT: What characteristics/ skills are important for content teachers who teach in EMI programmes in your context?	Remained
II. Questions of the study	5-2	For LT: What characteristics/ skills are important for language teachers who teach language-related courses to EMI students in your context?	Remained
II. Questions of the study	8-1	What is/ what are form(s) of collaboration?	what is/was it/ what are/were form(s) of collaboration?
II. Questions of the study	11-1	For CT: Do you know about any language teacher at your institution?	For CT: To what extent are you familiar with the work of language teachers at your institution?
II. Questions of the study	11-2	For LT: Do you know about any content teacher at your institution?	For LT: To what extent are you familiar with the work of content teachers at your institution?

Table 4.5-1 Modifications of question items in the interview

As shown in Table 4.5-1, firstly, clarification of the terminology in the introduction of the interview was made. An example is the description of language teachers, where requires the clarification by specifying the branches of EAP (i.e., EGAP and ESAP). The revised version is made: ‘... language teachers are those who teach English for Academic Purposes (EAP) (including English for General Academic Purposes (EGAP) and/or English for Specific Academic Purposes (ESAP)) to students in EMI contexts.

Secondly, wording of particular questions was revised. In the *Background information*, participants were asked to share their previous experience related to EMI and/or English Language teaching, so more detailed profiles can be captured. The original phrase was ‘... what EMI/EAP experience you had before taking up the current job?’, where one supervisor pointed out that language teachers may have various English language teaching experience such as general English and EAP (EGAP and ESAP). Nevertheless, all language teacher pilot participants (2/2) still reported their whole teaching experience starting from general English teaching (if any) to EAP based on the original wording. Therefore, ‘EAP’ was changed to the umbrella term ‘ELT’ to better reflect their career paths throughout, thus avoiding further confusion in the main study.

The next was asking what PD opportunities are provided in the participants’ institutions. One supervisor suggested adding past tense in case some PD opportunities have happened in the past. Then the revision is made ‘what is/was it/ what are/were the professional development provision(s)?’. Same revision strategy was applied to question 8-1 of collaboration, namely, ‘what is/was it/ what are/were form(s) of collaboration?’.

Moreover, participants were asked to share their reflections on their experience related to PD opportunities. The original wording of 2-1-1 ‘How do you feel about these PD opportunities?’ was criticised being ambiguous as the feeling can be vague. To make it clear, the question was revised to ‘How did you find the experience of these PD opportunities? what are your reflections on the experience?’, which enabled participants to share their reflection on PD provisions with their related experience.

To avoid questions only leading to ‘yes/no’ answers, 11-1 and 11-2 were changed from ‘Do you know about any language teacher at your institution?’ ‘Do you know about any content teacher at your institution?’ to ‘To what extent are you familiar with the work of language teachers at your institution?’ and ‘To what extent are you familiar with the work of content teachers at your institution?’. In this sense, participants are able to share their understanding of what the role of another party (i.e., content teacher or language teacher).

Lastly, the coverage of the interview questions was adjusted. According to the feedback, there was a debate on whether questions 5-1 and 5-2 should be remained or deleted. One supervisor thought this question was not linked to the corresponding research question (see section 4.2) and it should be deleted afterwards. While pilot participants agreed on remaining the question as there seemed to be a tendency that what content teacher/ language teacher should look like (5-1 and 5-2) resonated with what PD opportunities should be provided (4-1 and 4-2) in their answers.

As a consequence, the interview for the main study (see Appendix 7) was finalised after reflecting the feedback gained at the pilot study stage. To sum up, the pilot study was carried out to examine the appropriateness and effectiveness of the interview questions to be well-prepared to the main study. Specifically, the pilot study allowed for gaining some knowledge of the research context and making modifications based on the feedback received during the period, thus enhancing the rigour of this qualitative research.

#### 4.6 Data collection

As shown in Table 4.6-1, the data collection procedure took place from April 2023 until June 2024. A concurrent approach was adopted by collecting PD-related documents and contacting participants for interview after the permission for research has been approved at each participating institution. The detailed sampling procedure is discussed in section 4.6.1.

Stage	Date	Action	No. of participants
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Pilot study		February to March 2023	Piloting interview protocol and revising based on participant's feedback	8 (including the researcher's 2 supervisors, 2 CTs, 2 EAPTs and 2 PD leads)
Main study	PD-related document collection	April 2023	Asking admin offices at each sample institution and external training bodies for the permission of the use of PD-related documents	N/A
		June 2023	Collecting PD documents at sample institutions	16 PD provisions in 13 institutions (7 EMI universities, 3 EMI colleges and 3 EMI programmes)
	Interview	May 2023	Asking admin offices at each sampled institution for the permission of interviewing teachers and PD leads	
		June 2023 to August 2024	Contacting possible interview participants through their emails in staff profile webpage	
		August 2023 to June 2024	Arranging online interviews through Zoom with participants	20 CTs, 20 EAPTs and 5 PD leads from 13 institutions

Table 4.6-1 Timeline for data collection

#### 4.6.1 Sampling

The following sections discuss sampling principle, sampling procedure and sample size of the study.

#### *4.6.1.1 Sampling principle*

Before discussing the sampling principle used in this study, it should be acknowledged that there are two main methods of sampling: probability (also known as a random sample) and non-probability sampling (also known as a purposeful sample) (Cohen et al., 2018). Distinct differences between these two sampling techniques are: in a probability sample the chances of members of the wider population being selected into the sample are known, while in a non-probability sample, the chances of members of the wider population being selected into the sample are unknown (Cohen et al., 2018). Moreover, in the probability sample, every member of the wider population has an equal chance of being included in the sample, whereas in the non-probability sample, some members of broader population are included while others are excluded in the sample.

A series of non-probability sampling strategy is used in this study. Namely purposive sampling and snowball sampling (Browne, 2005; Cohen et al., 2018) and maximum variation sampling (Flick, 2009). As noted by Bekele and Ago (2022), in the purposive sampling technique, participants are not being randomly selected, as the goal is to sample research participants strategically, so that the selected participants are relevant to the research questions that are being asked (see section 4.2).

In this study, in phase one, purposive sampling was employed to identify content teachers, EAP teachers and PD leads on the staff profile pages at each participating university. An invitation email was sent to each potential participant to ask their willingness to participate in this study. In phase two, based on the responses of participants gained in phase one, maximum variation sampling and snowball sampling were used in order to further screen out participants for the formal interview for the purpose of presenting a relatively holistic picture of teachers in different types of EMI provisions in Chinese EMI contexts. Specifically, maximum variation sampling was used with the purpose of

representing diverse cases and fully describing multiple perspectives about the issues under exploration (Bekele & Ago, 2022). This helps ensure that the research results can better capture the complexity and diversity of the studied phenomena (Flick, 2009). In practice, efforts were made to recruit teachers with various teaching experiences related to lengths of teaching. For content teachers, teachers from different disciplines are recruited. While recruitment for language teachers involves those who teach EGAP and/or ESAP.

Snowball sampling was further used by asking extant participants to promote the invitation of the study to their colleagues who are content teachers/ language teaches/ PD leads. Specifically, in snowball sampling, when a certain number of individuals who have the characteristics of the study participated, they are then used as informants to identify, or reach out with others who are also qualified by the sampling criteria (Cohen et al., 2018). This method is particularly useful for sampling a population where access is difficult and where an outsider researcher has difficulty in gaining access to certain individuals. As Noy (2008) noted, 'Snowball sampling is essentially social' (p. 332), as it often relies on strong interpersonal relations, known contacts, so in snowball sampling, interpersonal relations feature very high (Browne, 2005). It is possible that participants who might be initially uncooperative become cooperative after their peer group members approached them. The following provides a detailed account of the sampling procedure.

#### *4.6.1.2 Sampling procedure*

As discussed in section 3.6, previous related studies in EMI contexts exploring teachers' PD opportunities were mainly conducted in one single institution, and researchers are mostly part of those PD programmes (e.g., Chen & Peng, 2019; Guarda & Helm, 2017; Margic & Vodopija-Krstanovic, 2018; Ploettner, 2019). Although this is a qualitative study and was not intended to generalise its findings, different types of EMI provisions are included in this study to gain a comprehensive picture of the current state of PD opportunities for teachers in the EMI contexts in China. Therefore, three main types of EMI provisions in China were included in the sample of this study (see section 1.1.1.1), namely, EMI universities, EMI joint colleges, and EMI programmes. For anonymity

consideration, they are further labelled as 'U' for EMI university type, 'JC' for EMI joint college type and 'P' for EMI programme type in this study.

As discussed in section 1.1.1.1 regarding three different types of EMI provisions in China, there are 10 EMI universities, over 80 EMI colleges and 2,000 programmes on offer in Chinese HEIs based on the latest available statics. In this study, all 10 EMI universities were contacted to ask permission for research. While 10 EMI joint colleges and 10 EMI programmes listed on the official list of *the Chinese-foreign cooperative educational institutions and projects list* (MOE, 2023) were selected based on probability sampling principle for contact (see below). Some primary information revealed from EMI programme type is that due to a relatively smaller proportion of EMI programmes based in traditional CMI universities, there is no or very limited informal internal PD offered to teachers. Some EMI programme type institutions reported that they have sought external training bodies (i.e., teachers' PD by British Council, Oxford EMI Group) based on their own circumstances. The sampling procedure is discussed as follows.

Firstly, for the collection of PD relevant documents, each institution's website was accessed for the first rough review, and it is found that only EMI universities have relatively complete webpages of teachers' professional development, while EMI college and EMI programme type have no such information. In addition, institutions on the collaboration list of these two external training bodies (British Council, n.d.; Oxford EMI, n.d.) were further put into contact with the admin officers. In addition, admin officers at all sampled institutions and the external training bodies were contacted to request whether teachers' PD documents not displayed on the websites can be shared (see Table 4.6-1 above).

Secondly, Interview invitation emails were sent to admin officers at each sampled institution. Specifically, the administrators at three EMI universities explicitly declined the research invitation (both the research on their PD websites and invitation of interviewing the staff). As a result, 7 EMI universities (i.e., U1, U2, U3, U4, U5, U6, U7) were included for further interview invitation. No admin help was available at each sampled institution, it is perhaps due to some admin constrains. Therefore, profiles of content and EAP teachers as well

as PD leads on each sampled institution' webpages were reviewed, their contacts were then collected for interview invitation.

As a result, certain numbers of participants at each sampled institution agreed to participate in interviews (see interviewees' profiles in Appendix 2). Same recruiting technique was applied to inviting content teachers and EAP teachers and PD leads (if any) in EMI joint college and EMI programme types for interview sessions. Snowball sampling was used at this stage to reach as many possible participants as possible (see section 4.6.1.1). Consequently, in total, 40 teachers (20 CTs and 20 EAPTs) and 5 PD leads from 7 EMI universities, 3 joint colleges and 3 EMI programmes confirmed the interview invitation (see Appendix 2).

Table 4.6.1.2-1 below shows the profiles of participating institutions. Specifically, EMI universities sampled in this study are all comprehensive university which provide a range of Sciences and Liberal Arts subjects to students. EMI colleges and programmes sampled are either comprehensive and Science or engineering oriented, which reflects the disciplinary emphasis of EMI in Chinese EMI contexts. As shown in Table 4.6.1.2-1, PD for EMI university and programme types were documented, with EMI universities receiving in-house PD provided at their institutions and EMI programmes receiving PD provided external training bodies (British Council and Oxford EMI). Other PD information from EMI colleges was accessed through the interviewees reporting the current state of PD provisions at their institutions. Data were then undertaken content analysis (see section 4.7.1) and results are presented in Chapter 5.1.

EMI types	Label	PD documents	Main subject
EMI university	U1	Yes	Comprehensive
	U2	Yes	Comprehensive
	U3	Yes	Comprehensive
	U4	Yes	Comprehensive
	U5	Yes	Comprehensive
	U6	Yes	Comprehensive
	U7	Yes	Comprehensive

EMI joint college	JC1	No	Science and engineering
	JC2	No	Comprehensive
	JC3	No	Science and engineering
EMI programme	P1 - Receiving external PD courses (Oxford EMI)	Yes	Science and engineering
	P2 - Receiving external PD courses (British Council)	Yes	Comprehensive
	P3 - Receiving external PD courses (British Council)	Yes	Science and engineering

Table 4.6.1.2-1 Profiles of participating institutions

#### *4.6.1.3 Sample size*

There is no clear-cut answer as to what a qualified sample size should look like, as long as it fits the purposes of the research (Cohen et al., 2018; Lichtman, 2013; Malterud et al., 2015). Determination of sample size in quality research is affected by a variety of factors, including the research topic, research questions, research methods, theoretical framework, research population's structure and access to participants, resources and timeframe of the study (Rusu Mocănaşu, 2020). Considering all of these, it is sensible to orient towards a minimal size on the basis of a 'reasonable' coverage of the studied occurrence (Patton, 2015, p. 248). In this study, sample size is set at 30 in total for the following reasons.

On the one hand, for methodological consideration, it presents the intrinsic determining factors of research, to which researchers should attach the greatest importance each time they assess sample size's sufficiency - appropriateness (Flick, 2009). In other words, the sample size is considered as sufficient when it can properly achieve the purpose of the study. Considering the interview-based qualitative research within academic settings, qualitative methodologists (Adler & Adler, 2012; Bryman, 2008) suggest orientating towards a moderate number of 30 subjects. Moreover, the practical parameters extrinsic to the study such as

accessibility to the research's population need to be considered (Saunders et al., 2003). It was especially the case of this study, as some institutions rejected to participate, and administrative coordination was generally unavailable, which both brought inconvenience in finding, establishing and maintaining contacts with potential participants for interview.

As a consequence, in relation to the sampling principle (see section 4.6.1.1 above), this study determined the number of participants at 30 with a relatively balanced number of content and EAP teachers. This resulted in a total of 20 content teachers and 20 EAP teachers and 5 PD leads interviewed. The interviews were conducted in English or Chinese based on participants' preferences. Their profiles can be found in Appendix 2.

## **4.7 Data analysis**

This section is to discuss different data analysis approaches and procedures when addressing different research questions.

### **4.7.1 Content analysis for RQ1**

In this study, with its advantage of processing extensive textual data such as documents (Bowen, 2009; Cohen et al., 2018), content analysis is used to analyse PD documents and relevant interview data reporting the current state of teachers' PD and collaboration. In addition, content analysis is widely used in social science research for exploring complex phenomena (Delve & Limpaecher, 2023; Selvi, 2020), as it allows for systematically classifying and interpreting the data in a theory-driven manner (Creswell, 2017). Therefore, with content analysis, the fact question (RQ1) on the current state of PD opportunities can be better understood from various perspectives according to the predetermined codes (factors identified in the list of evaluation criteria in section 3.4.3.4). The detailed data analysis approach is discussed in section 4.7.3.

### **4.7.2 Thematic analysis for RQ2 and RQ3**

A qualitative approach of thematic analysis was chosen for perception questions RQ2 and RQ3 as the method of data analysis. Generally, thematic analysis is the most widely used qualitative approach to analysing interviews as it is used for ‘identifying, analysing, and reporting patterns (themes) within the data’ (Braun & Clarke, 2006, p. 79). Thematic analysis is particularly beneficial when the research question aims to explore perceptions, as thematic analysis lends itself to in-depth interviews where interviewees provide comprehensive accounts of their perceptions or experiences. Therefore, thematic analysis is suitable to address perception questions (RQ2 and RQ3) in this study by investigating the interview data from a data-driven perspective. Data was being coded primarily inductive, meaning that the code and themes were generated from the data rather than being pre-determined by existing theories or frameworks (Thomas, 2006). In doing so, close reading and line-by-line coding were conducted to capture meanings and initial interpretive ideas. However, the analysis is not entirely inductive, deductive manner was also involved, informed by key concepts drawn from the literature review of teachers’ professional development and collaboration (see Chapter 2 and 3). These concepts guided attention to issues related to the research question (e.g., the role of teachers, institutional positioning). The flexible combination of inductive and deductive approaches enabled the analysis to maintain its foundation in the participants’ reflections while also connecting important topics within established academic debates, therefore supporting the identification of both expected and novel insights (Taylor & Gibbs, 2010).

Moreover, there is also an attempt made to increase the rigor of this study by ensuring the results are grounded in the actual data in an inductive manner (Delve & Limpaecher, 2023). According to Braun and Clarke (2006), theme is what captures the key idea of the data relevant to particular research question, and that represents some degree of patterned assembly or meaning in the dataset. In this sense, perception questions RQ2 and RQ3 could be addressed through thematic analysis procedure (see section 4.7.3) conducted with the relevant interview data.

#### 4.7.3 Data analysis approaches

The data analysis tool of this study is NVivo 14 version, which is a software package which has the ability to import and code textual data for qualitative data analysis. As noted by Ozkan (2004), Nvivo is ‘a powerful way to do sophisticated data coding and it supports several ways to build theories, either local or more general’ (p. 594). By using NVivo, the raw data from different datasets (i.e., documents and interviews) can be synthesised systematically into data and be ready for further data analysis. The procedures of data analysis for different RQs are discussed as follows.

As mentioned in section 4.4.1, to critically analyse current TPD in Chinese EMI contexts, content analysis was employed to address RQ1 by carefully examining certain aspects of PD provisions based on the list of evaluation criteria created in this study (see section 3.4.3.4). Specifically, content analysis was conducted in a theory-driven manner for data analysis of RQ1, in which relevant data in the documents and interviews regarding a set of codes (i.e., items in the list of evaluation criteria) were captured. That is, the predetermined set of codes were then applied to the data in a top-down approach to make meaning. Since the codes were pre-determined prior to actual data analysis, theory-driven content analysis provides a structured approach of analysing data and it may be less prone to researcher bias (Cohen et al., 2018). As a result, data gathered under each evaluation item of the list of evaluation criteria was proceeded with several rounds of consistency and accuracy checks (Creswell, 2017) to ensure the preparation of result presentation in Chapter 5.

For Rq2 and RQ3, the data collected through interviews regarding perception questions was analysed through data familiarisation, data coding, and theme development and revision (Braun & Clarke, 2006) (see a coding sample in Appendix 5). Specifically, each step is unpacked fully as follows.

Firstly, familiarisation with data. Specifically, preparing and organising the data. Note-taking is the first step for the interview data, each interview manuscript was listened several times for transcription (Brinkmann & Kvale, 2015). Interviews conducted other than English (i.e., Chinese) were directly translated into English verbatim with several rounds of checking and proofreading.

Secondly, data coding. The transcripts and audio recordings were imported into the NVivo 14 and prepared for coding. The coding procedure is specifically discussed as follows. Coding was undertaken by a data-driven manner followed with a focus on identifying patterns of meaning. Working through the data, more categories and sub-categories were developed and undergone careful checks for several rounds. Through this process, data is re-read and re-coded in an iterative way for several rounds in case related data is missing (Creswell, 2017). Several key topics were generated inductively from the data. As highlighted by Braun and Clarke (2006, p. 86): ‘Analysis is typically a recursive process, with movement back and forth between different phases’. Importantly, the new or different responses were then reviewed to clarify the meaning of these categories and were redefined and further clarified. Short descriptions were attached where definitions needed.

Thirdly, theme development. At this stage, coded nodes on NVivo 14 were reviewed repeatedly to identify significant broader patterns of meaning (potential themes). Afterwards, the frequency of each prominent topic was recorded and reviewed to gain insights and see topic frequency with the aid of *the frequency inquires* in NVivo 14. As noted by Rubin and Rubin (2005), ‘qualitative analysis is not about mere counting or providing numeric summaries’ (p. 202). Therefore, such quantified information was only used to seeing which topic is more statistically salient than one another then to understand which are prominent topics. In addition, it sheds light on their relevance and the meaning they attach (Delve & Limpaecher, 2023), which helps inductively structure the coding scheme and identifying high-level themes. This leads to a more ‘categorical, analytic and theoretical level of coding’ (Gibbs, 2007, p. 42), which is important for codebook building. After carrying out double checking, the initial codes, namely the prominent topics that emerge from the data, were then categorised under a smaller number of themes (Robson, 2011) into the coding hierarchies. Basic descriptions were then revised and readjusted to provide an overall framework for creating the codebook for RQ2 and RQ3, which can be found in Table 5.2-1 in section 5.2 and Table 5.3-1 in section 5.3.

#### 4.8 Ethics consideration

This project has been approved by the College of Social Sciences Ethics Committee at the University of Glasgow. Prior to the commencement of the study, the ethical dimensions of the research have been carefully considered, and the relevant ethical approval form was subsequently completed. Regarding the interviews, consent was obtained from each interviewee through a consent form emailed with the Participant Information Sheet (also called the plain language statement) (see Appendix 8) prior to the interview sessions. The consent form included information concerning the purpose of the study, the length of the interview session, the use and storage of the data, the confidentiality of data, and the option to withdraw at any point of the study without any justification (see Appendix 9 for the consent form).

#### **4.9 Trustworthiness of the study**

Trustworthiness is concerned in this study to ensure the rigour of this qualitative study. This section discusses the trustworthiness issues in relation to Lincoln and Guba's (1985) framework of trustworthiness, including four key criteria, namely credibility, transferability, dependability, and confirmability.

Firstly, to achieve credibility, member-checking method (Creswell & Miller, 2000) was adopted during data analysis procedure. Specifically, after the interview transcribing period, transcriptions (including those translated from Chinese to English) were sent to interviewees to confirm the accuracy with what they reported in the interview sessions. Member-checking method therefore allowed to identify any misunderstandings or misinterpretations that may occurred in the interviews. Interviewees thus all checked the transcriptions and sent back their feedback (if any), which helped increase the credibility of this study.

Secondly, transferability was supported through measures such as providing detailed, contextualised accounts for the research context (see section 1.1) and participants demographics (see section 5.2 and Appendix 2), which allowed the readers to have a comprehensive understanding of the background information of the study, thus allowing them to access the applicability of the findings as well as the relevance of findings to other similar contexts.

Thirdly, dependability of this study was maintained by an auditing approach as suggested by Lincoln and Guba (1985). Specifically, an audit trail of all phases of the research process was documented, including research question formulation and adjustment, sampling decisions of institutions and interview participants (see timeframe in section 4.6), changes in interview protocols (see pilot study in section 4.5), interview transcripts and interpretations, data analysis decisions, coding decisions, presentation of results and findings. All process records were checked and advised by the researcher's two supervisors throughout the study.

Lastly, confirmability was ensured by reflexivity and peer debriefing (Brinkman & Kvale, 2018), which helped minimise the researcher bias and ensure that findings were shaped by the data. Specifically, actions such as continuous self-reflection by documenting possible personal biases, assumptions and their potential impacts on the research process have been taken. Concerns and problems raised at different stages of this study were regularly discussed with the researcher' supervisors for insights and suggestions.

#### **4.10 Researcher positionality and reflexivity**

As a postgraduate student preparing to enter the field of EMI teaching in China, my interest in this study stems from both personal academic experience and the broader educational developments in the country. Specifically, I approached this study with a dual perspective: as an outsider to the participant teachers' current teaching experiences and as an emerging insider within the EMI teaching community in China.

During my undergraduate studies, I took several EMI courses as I was in an advanced Business English programme with some courses taught in English. At that time, I witnessed firsthand the challenges EMI presented for both students and teachers (content and EAP teachers). In recent years, I have observed the rapid expansion of EMI programmes across Chinese HEIs, which sparked my curiosity about how teachers adapt and grow professionally in response to these changes. Although I have no direct teaching experience in EMI contexts yet, I have engaged extensively with EMI literature, which has shaped my preliminary

understanding of the opportunities and complexities associated with EMI teaching. Thus, I approached this study as a future EMI practitioner, seeking to better understand teachers' professional development.

My positionality in this study, as both an outsider and an emerging insider, presents both strengths and limitations. My outsider positionality allowed me to conduct the study with openness and curiosity without personal previous understanding of any specific teaching approaches. In the meanwhile, my position as an emerging insider provided a strong motivation to listen attentively and learn from the participants' lived experiences of professional development and also collaborative practices. However, I recognise that my lack of direct classroom experience may also bring some personal bias that may undermine credible interpretation of data. To address this, I kept field notes, which played a central role in supporting transparency and critical reflexivity throughout the research process. Specifically, fieldnotes were used to document descriptive contextual details (i.e., institutional settings) and my reflections during and after data collection of PD documents and interviews, as well as the interpretations and assumptions that emerged during this process. Also, fieldnotes enabled to make my interpretation of data (e.g., assumptions about the intentionality of institutional PD design) visible during later coding phrases and theme refinement, which was helpful for discussing the data analysis process with supervisors. In addition, member checks with participants during data analysis (see section 4.9) were also conducted to make sure what is interpreted is aligned with what is conveyed by interviewees. These actions supported a balanced, ethically grounded interpretation of the data and positioned me to present participants' voices and insights into professional development and collaborative practices in EMI contexts in China.

#### **4.11 Summary of the chapter**

This chapter firstly elaborates on the rationale, aims and research questions of the study, followed by a detailed account of the research design including research paradigm, research methods and instruments adopted. The following is pilot study, data collection and data analysis procedures. Ethics and

trustworthiness issues are also presented before research positionality and summary of the chapter. The next chapter is to discuss the results of the study.

# Chapter 5: Results

## Overview

In this chapter, the results are presented under each research question. For RQ1, content analysis of PD documents and interview data regarding the current state of PD provisions and collaboration between content and EAP teachers are presented under section 5.1. For RQ2 and RQ3, the thematic framework is firstly created, followed by results by thematic analysis of interview data regarding stakeholders' perceptions towards PD provisions and collaboration addressed in PD (see sections 5.2 and 5.3). The chapter concludes with a holistic summary at the end.

### **5.1 What professional development opportunities exist for content and language teachers in EMI contexts in China?**

Before responding to RQ1, basic introduction of TPD regarding formats identified is firstly specified, followed by the presentation of TPD in relation to various evaluation criteria (see section 3.4.3.4). As discussed previously in section 4.7.1, the list of evaluation criteria (Table 3.4.3.4-1) generated in section 3.4.3.4 served as pre-figured codes of the content analysis to critically evaluate the current provisions of TPD found in the participating institutions ( $n = 13$ ) in this study.

For interview participants, as shown in Appendix 2, content teachers in different types of EMI institutions are labelled as follows, for example, 'U1-C1' refers to content teacher 1 at EMI university 1, 'JC1- C1' refers to content teacher 1 at EMI college 1, and 'P1-C1' refers to content teacher 1 at EMI programme 1. For the consideration of readability issues, EAP teachers are all labelled as 'LT' in Chapter 5 and 6. More specifically, EGAP teachers are labelled as 'LG' and ESAP teachers as 'LS'. For example, EGAP teacher 1 and ESAP teacher 1 at EMI university are respectively labelled as 'U1-LG1' and 'U1-LS1'. Same rule is applied to PD leads, in which PD lead 1 at EMI university 1 is labelled as U1-PD1.

Various types of PD opportunities in the participating institutions have been identified from PD documents and interviews, which have been synthesised in Appendix 3 and detailed under each evaluation criteria. Taking individual certified courses and general PD formats in each institution as the units of PD, there are 16 PD provisions on offer at 13 participating institutions. Specifically, as shown in Appendix 3, in-house certified courses respectively for content or EAP teachers at EMI universities are labelled as Ux CT PD or Ux LT PD, while in-house certified courses for all teaching practitioners is labelled as Ux All PD. General PD formats for both groups of teachers were found in EMI university and EMI college types and therefore labelled as Ux PD, JCx PD. In addition, certified courses by external training bodies are labelled as Ex CT PD or Ex LT PD. Specifically, E1 refers to Oxford EMI' PD course and E2 refers to British Council's PD course.

Regarding the formats of PD opportunities (see Figure 5.1-1), workshop series is the most common format of TPD (10 out of 16). Other PD formats include course series (i.e., U1 all PD; U1 CT PD; U1 LT PD; E1 CT PD; E2 CT PD; E2 LT PD), and symposia and conferences, led primarily by internal PD trainers and in some cases involved invited experts (i.e., U1, U2, U4), Moreover, classroom observation by peers or trainers were provided mainly for newly recruited teachers (e.g., U1, U4).

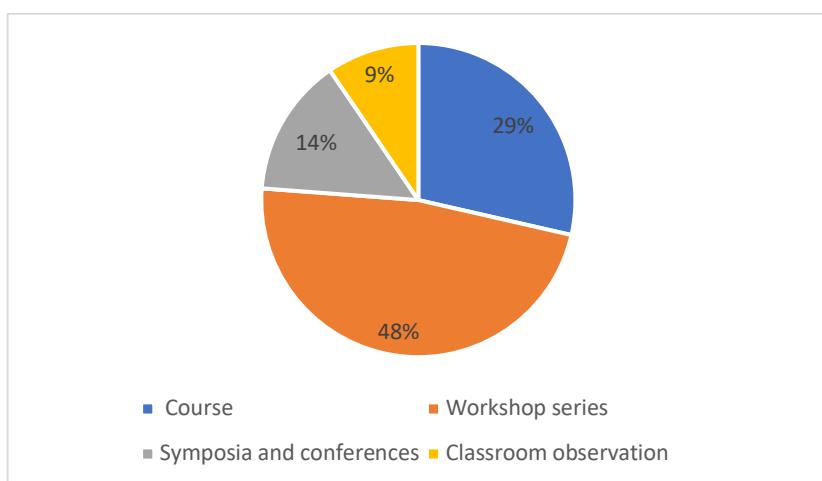


Figure 5.1-1 Formats of professional development in participating institutions

As for target audience of different PD provisions, it is found that workshop series at participating institutions are claimed to offer for all academic staff regardless of their subjects, while certificated PD courses (i.e., E1 CT PD, E2 CT PD, E2 LT PD) are offered for different groups of audience (i.e., content teachers and EAP teachers). External training bodies claimed to offer tailored PD content upon request. The following is to discuss PD opportunities based on list of evaluation criteria of TPD (see Table 3.4.3.4-1 in section 3.4.3.4) in turn.

### **5.1.1 Structural factors of professional development provisions**

The following is to review the current PD provisions of participating institutions through the evaluation criteria categorised as structural factors and professional development objectives identified in section 3.4.3.4.

#### *5.1.1.1 Professional development trainers*

As specified above, there are 16 PD provisions identified at 13 participating institutions. Firstly, there are four certified courses at U1, namely trainers of U1 PD all Ts, U1 CT PD, U1 LT PD and U1 PD. Profiles of PD trainers were found publicly available on U1's webpage. Specifically, U1 PD all Ts is organised by U1-PD2 (one of the interviewees of this study) affiliated at the PD unit at U1, an American with a master's degree in education and extensive teaching experience as a language teacher in many educational contexts. Moreover, it is found that two certified courses (i.e., U1 CT PD and U1 LT PD) are currently managed and run by an English language teaching (ELT) specialist who is a teaching fellow at U1's PD unit. The PD lead is from the UK, holding a master's degree in Applied Linguistics and has over 30 years of teaching experience in various HE contexts, including UK contexts and a range of EMI contexts. Guest speakers of seminars in U1 PD from UK universities were also involved to give some lectures in certified PD courses at U1 (i.e., U1 LT PD), all of whom come from native English-speaking countries and have doctorates in education or linguistics.

There are also some workshops in CT PD delivered by both language specialist (i.e., one foreign EAP lecturer) and content teachers (i.e., local Chinese Engineering professors) at U1. In addition, it is found that PD opportunities at U6

were mainly led by a local (Chinese) staff working at the Centre for Teaching and Learning. With a masters' degree of education and technology from an American university, she is responsible for organising and designing PD workshops for all staff at U6.

For institutions which invited external speakers for workshop series, speakers' profiles were not specified. For example, EAP teachers at U1 reported that: 'some of them were outside professors from different universities who had come to give general EAP or general teaching workshops' (U1-LG5), and 'another topic is on how to write for publications. This was again an external speaker coming to the university or in some cases attending online' (U1-LS2). Similarly, at another EMI university (U2), invited speakers were also involved for some workshop presentations, though guest speakers' profiles were not specified regarding their educational backgrounds, experience and nationalities. Such absence of information of invited speakers may be explained by the random and occasional nature of invited speakers' sessions.

For EMI programme types (i.e., P1, P2, P3), PD opportunities were provided by certified PD courses by two external training bodies, one of which offered PD for content teacher in P1 (E1 CT PD), and another offered PD for content teachers (E2 CT PD) and EAP teachers (E2 LT PD) respectively in P2 and P3. In E1 CT PD, PD trainers are stated as 'experts in English language teaching with rich experience and a solid theoretical foundation'. In E2 CT PD, it is specified in the documents that trainers for content teachers are 'with a strong academic background and extensive experience in teacher training' by meeting a range of requirements: 'Master's degree in TESOL or DELTA Certificate (or equivalent), over 10 years of teaching experience in different cultural contexts, rich experience in teacher training and relevant experience in EMI courses in the higher education field'. The requirements are also applied to trainers of E2 LT PD. P3-C2 who have attended the CT PD sessions confirmed the qualification of the trainers.

It is worth noting that CT and/or LT PD trainers of external training bodies are all identified as ELT experts. Although the requirements did not explicitly indicate the 'native English speaker' characteristics of trainers, it has been

found on the trainers' profiles displayed on the websites that they all have been educated in universities in English-speaking countries and have various teaching experience in both English speaking and non-English speaking contexts.

It can be concluded from the above that certified PD courses were all delivered in English by ELT specialists, whereas only one (U1 CT PD) of them involved some content specialists in certain sessions. This suggests that most PD provisions were taught by ELT specialists with a linguistics education background, highlighting the absence of the involvement of content teachers in the delivery of PD for CT. Among all PD provisions, 7 out of 16 clearly specified the profiles of trainers regarding their educational background and teaching experience, while the rest remained unknown. It can be assumed that PD provisions were mainly led by foreign staff who are predominately NES. Local PD leads or NNES PD trainers of certified courses who have clear background profiles on the website are predominantly found to be educated in universities in English-speaking countries.

#### ***5.1.1.2 Mode of assessment***

Among the 16 providers, over half of them ( $n = 9$ ) specified the mode of assessment when PD completed, ranging from teachers conducting demo lessons to submitting post-course reports. As identified from the PD documents, assessment or feedback were either made by peer teachers or PD trainers. For example, in EMI universities, '[p]articipants need to submit a teaching analysis or a statement of teaching philosophy to [the PD unit] for review' (U2 PD), '[m]entors can offer guidance and feedback to mentees about their teaching practices' (U4 PD), and 'participants design and deliver three mini-lessons and receive verbal, written, and video feedback from their peers' (U6 PD). While only one EMI college (JC2) specified the assessment method: 'new teachers have to do demo lessons reviewed by the dean of their schools' (JC2-C2). Those statements reveal that teachers' pedagogical abilities were the focus of assessment in in-house types of PD.

More advanced and systematic assessment methods have been identified in external certified PD courses. For example, E1 CT PD is claimed to 'provide

comprehensive post-course feedback on a recorded class for each participant’. That is, participants have ‘the opportunity to receive detailed feedback on their own EMI teaching after the course has finished’. By doing so, teachers are required to record a video of them teaching a class and send to the PD trainers to analyse and provide detailed feedback. As added by P1-C2, trainers of E1 CT PD provide subject specific feedback: ‘Each teacher recorded a short segment of his or her lecture and sent it to the instructor, who gave practical advice on how to teach International Law and how to interact with students’. In E2 LT PD, in addition to feedback by peers and trainers, teachers were also asked to self-reflect their teaching practices: ‘You will receive feedback from your peers and your trainers and then reflect upon your own techniques’.

Put together, external PD courses tended to offer more advanced and targeted assessment than in-house PD programmes. In reviewed PD documents, assessment or feedback mainly focused upon teachers’ generic pedagogical abilities, while one external certified PD courses (E1 CT PD) provides subject-specific feedback on teaching practices. This finding suggests that the possible lack of involvement of content specialists in the development of assessment methods of teachers’ PD in many of the PD provisions reviewed in this study.

#### ***5.1.1.3 Certification***

Certified courses are offered at some institutions, specifically, U1 has established internal-only PD courses for all academic staff (i.e., U1 PD all Ts), while PD courses respectively for content teachers and EAP teachers (i.e., U1 CT PD and U1 LT PD) are available for internal teachers and teachers from external institutions. There are two EMI universities (U2 and U7) offering certificate upon teachers’ completion on in-house PD workshop series.

Apart from that, certified courses provided by external training bodies are primarily targeted for teachers in EMI programmes whose affiliated universities do not offer PD. For example, P1 asked Ox EMI group for external training PD for content teachers (i.e., E1 CT PD), P2 and P3 has external training course series provided by British Council for content teachers and EAP teachers (i.e., E2 CT PD, E2 LT PD). Compared to internal certificates, the certificates of these two

external training courses seem to have wider recognition by virtue of the number of universities collaborating with them. The difference in recognition may further influence the perceived value of PD and also teachers' motivation to participate.

#### *5.1.1.4 Relevance of teachers' needs*

Based on the documents and interviews, few PD provisions ( $n = 5$ ) have specified the issue of relevance of PD to teachers' needs. In other words, the majority of PD opportunities are generic to all staff. Specifically, content teachers at JC2 and P2 reported the lack of PD training specific to EMI teaching, let alone PD content targeting their subjects: '... there is no PD specifically for EMI teaching' (JC2-C2), and 'Of course, there is no special training for specific subjects' (P2-C2). Nonetheless, some themed workshops were created based on the observation of PD leads, for example, U1-PD2 noticed some teachers' needs of publishing academic paper: 'We (PD leads) noticed that some teachers are in need of publishing their work. So we created a blended learning approach to support staff in engaging in the scholarship of learning and teaching'.

At an EMI college (JC1), relevance of teachers' needs in PD is reflected by the flexibility of certain percentages of in their work contract: '... part of my contract at [the joint university in the UK] is a 10 % scholarship component. We are expected to attend conferences, attend CPD (continuous professional development) sessions based on obviously our interests. I have attended sessions on curriculum development, which was my interest and need of teaching' (JC1-LS4). That is, teachers with certain scholarship component in contract are given more autonomy in choosing PD resources inside and outside of their institutions based on their practical needs of PD (also see section 5.2.2.1 below).

As noted in section 3.4.3.4, relevance of PD is conceptualised to be associated with disciplinary subjects taught by teachers. In other words, teachers are more engaged in PD if the PD content is more related to their disciplines. In this sense, the relevance of teachers' needs seems to be catered more in certified PD courses external training bodies with their claimed tailored content in PD to suit teachers' needs. For instance, as stated in E2 LT PD document: 'We can

provide universities and colleges with professional and personalised teacher development solutions, including English language proficiency enhancement, communicative pedagogy enhancement, academic English... The module content can be tailored and combined for use - flexibility of learning content'. This suggests that the personalised PD content could make it more in line with teachers' practical PD needs, which perhaps is achieved by the need analysis conducted prior to the PD courses, as documented in the working pattern in E2 LT PD document:

Working pattern: Needs analysis - curriculum content design - curriculum development - training implementation - follow-up guidance

With regards to needs analysis for knowing about teachers' PD needs in advance, it has been found in certified courses as well, such as U1 PD all Ts ('conducting needs analysis with different schools to promote the advancement of teaching and learning') and E1 CT PD ('Pre-Course: the training body will carry out a needs-analysis of all participants'). These all stressed the importance of knowing teachers' needs before initiating PD sessions by collecting and analysing participating teachers' needs through needs analysis.

#### ***5.1.1.5 Sufficiency***

Sufficiency is found to be reflected by the number of types of PD activities claimed in PD documents. For example, 'workshops with various themes' (U1 PD all Ts), 'training sessions, classroom observations, feedback workshops and peer teaching' (U1 LT PD), 'invited guest speakers, seminars, and peer observations' (U4 PD), and 'external teaching recourses at joint university for abundant teaching and learning materials, online resources, case studies and pedagogical projects' (U2 PD). While institutions offer a range of PD activities, it is unclear whether this diversity alone ensures adequacy from the participants' perspective, which is further explored in interview data (see section 5.2.1.2).

#### ***5.1.1.6 Mode of delivery***

Some PD provisions (7 out of 16) clearly stated the mode of delivery of their PD provisions, ranging from in-person to online, while the rest PD provisions did not offer relevant information. During the pandemic, mode of delivery was primarily online: 'We do have a lot of CPD sessions that used to be very much on site, but we moved it entirely to online during Covid, but continued online after because of the ease of access' (U1-PD2). P1 PD also adopted online delivery of PD sessions through Zoom during pandemic period: 'EMI courses are highly interactive online, which makes the courses both convenient online and realistic offline'. The online delivery of PD during pandemic indeed enabled teachers to receive PD regardless of the location and time constraints.

However, it is found in the PD documents and some interviewees that although the data collection (year 2023) took place after pandemic, some in-house and external PD provisions are still provided online for many reasons, such as for the ease of invited speakers and PD trainers. For example, some invited speakers' sessions were provided online at U1: '... external speakers come to the university or in some cases presented online' (U1-LS2). E2 CT PD was the only one explicitly stated the hybrid format in mode of delivery: 'It provides flexible training modes according to different needs, such as face-to-face courses, online courses, blended study', which provides a large extent of flexibility for participating teachers to choose the mode of delivery that works best for them and take self-spaced training according to their time schedule. While flexibility is a clear benefit, further data would be needed to evaluate whether online delivery affects the quality or engagement of PD.

#### ***5.1.1.7 Duration***

It is found that in-house workshops usually last for one hour at each time. Specifications of duration are stated by certified PD courses, which were mainly presented in an intensive time schedule, ranging from 2 days (U1 CT PD) to 2 weeks (U1 LT PD, E1 CT PD). The most typical duration reported was one week (E1 CT PD, E2 CT PD, U5 PD). Specifically, E1 CT PD provides one-week and two-week PD sessions for options. Detailed duration of course plan can be planned by request, which suggests the bespoke nature of the courses by E1 CT PD. Rather

than offering a pre-developed lesson plan, the PD trainer can tailor the length and content of the course based on the requirements of participants.

#### ***5.1.1.8 Up-to-date professional development content***

Among the relevant data, up-to-date PD content has been claimed to be available at three institutions. For example, U6-C1 reported that some workshops and seminars were designed by the trainers with ‘some latest information of the heated topics in educational fields’, which may give updated insights on pedagogy for teachers. Similarly, content in the U1 PD all Ts is reviewed and adjusted with the latest findings of educational fields on a yearly basis, as reported by U1-PD2 who is one of the PD trainers of this certified course: ‘For designing the detailed course content, every time we do something new’. In the document data, only E1 CT PD explicitly stated that ‘The course content is based on current international research into EMI and feedback from our own extensive international experience’. Although no specific example was given, this somehow stresses the importance of taking example by the updated research-based evidence and there adjusting and updating teaching philosophy and practice.

#### ***5.1.1.9 Sustainability***

Sustainability, different from duration, is reflected by the perspective of frequency. It remains unclear on the effect of weekly PD workshop series and intensive 2-week PD courses. As shown in the PD documents, workshops normally last one to three hours and take place on a regularly basis, ranging from weekly to annually. Wording such as ‘constant support’ (U1 PD, U4 PD), ‘on-going support’ (U6 PD) were used to indicate the sustainability of the in-house PD provision. While for external certified courses which are normally intensive and short-term, sustainability is reflected from the post-course support service where teachers can receive ongoing follow-up support: ‘Creating a Community of Practice among the course participants to allow them to continue to share ideas and techniques after course completion’ (E1 CT PD). These contrasting approaches show that sustainability can be achieved either through structural regularity or by fostering long-term engagement communities.

### **5.1.1.10 Local adaptability**

Among 16 PD provisions, only four certified PD courses explicitly stated that the design of PD content took local factors into account. At U1, specifically, who completed U1 All PD is awarded with a local certification of Fellowship of HEA (Higher Education Academy) (a certificate originally issued by the UK universities), which shows international recognition for academic staff in Higher Education. U1-PD2, as one of the PD designers, confirmed that a range of PD content in U1 All PD is ‘context specific’ by considering the local education policies, university culture and students’ composition. Whereas in U1 CT PD, some workshops are claimed to be delivered by teaching staff based on their experience in the local contexts, which may offer insights for teachers regarding the local teaching practices. In U1 LT PD, the course is stated to be ‘reflective and practical’ as it looks very specifically at how teachers can apply their new ideas to their own teaching contexts. That is, teachers can pick up certain teaching methods from the course by reflecting on the appropriateness with their own teaching contexts.

For external PD course, E2 CT PD is found to stress the local adaptability of PD by claiming that: ‘Our practical experience in more than 100 countries allows us to combine local conditions with global expertise, integrate the best resources in the UK and around the world to provide our partners with development projects at home and abroad, provide teacher development programs tailored to different educational regions and backgrounds, and conduct effective project quality supervision’. Moreover, it also included ‘discussion of teaching behaviour in different teaching contexts’ (E2 CT PD). Collectively, the PD content is informed by local and global knowledge of EMI teaching, allowing teachers to compare and locate what is most suitable for their teaching practices.

### **5.1.2 Professional development objectives**

Among 16 PD provisions in 13 participating institutions, Figure 5.1.2-1 below displays what PD objective has been reflected among the participating institutions. The most commonly found PD objective was developing pedagogical

skills, followed by teachers' collaboration, English language skills, intercultural communication skills. Whereas developing specialised content knowledge and academic research skills were found least covered in PD objectives.

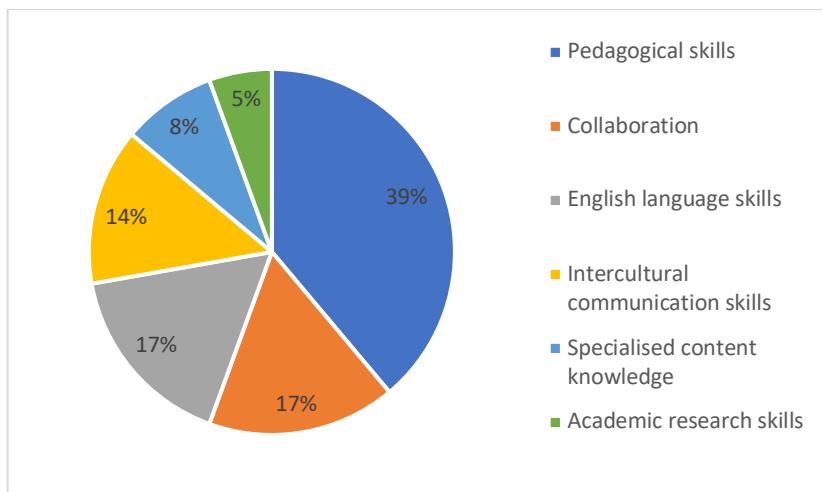


Figure 5.1.2-1 Proportion of PD objective among the participating institutions

### ***5.1.2.1 Pedagogical skills***

Pedagogical skills development has been mentioned most frequently as the PD objective in participating institutions (see Appendix 3). Specifically, for CT PD, the wording appeared as 'helping the teachers to improve their knowledge, skills and competence of teaching in English' (U1 CT PD), 'Focus on how to successfully teach their academic subject in English' (E1 CT PD), and 'general teaching ability of the subject teachers' (E2 CT PD). For PD for EAP teachers, wording appeared as 'insights of teaching language skills' (U1 LT PD), 'pedagogy in EAP' and 'improve teachers' academic English teaching ability' (E2 LT PD). For PD for all staff, wording appeared as 'pedagogical support' and 'develops and enhances teachers' teaching skills' (U1 PD all Ts), 'training for teaching' (JC1-C2), 'workshops and seminars for introducing pedagogical skills for staff' (U3-C1), 'learning about different pedagogy' (JC1-LS3), and 'workshops on different kinds of teaching techniques' (U6-LS1).

### ***5.1.2.2 Teachers' collaboration***

The following learning objective in PD frequently mentioned is collaboration. As found in the PD documents, collaboration was presented opportunity for interaction among staff in U1 PD all Ts as '[the certificate] provides staff with the opportunity to interact with other teaching staff at [U1] and reflect on your teaching practice'. At U6, interaction was established through workshops which served as a platform for teachers to gather and exchange ideas, 'Instructors have great opportunities to connect with colleagues, explore teaching practices and pedagogies', and 'aims to promote communication and collaboration among teachers'. While at U3, collaboration was reflected by a peer observation scheme that 'The Open Classroom Initiative (OCI) aims to create a safe and collaborative environment for teaching staff to enhance their practices through peer observation'. Similar collaboration is found in U4 PD document: 'A peer mentorship programme: observing all new faculty'.

However, these initiatives did not clearly reveal whether the collaboration is between content and language teachers, except for U1 CT PD document which clearly stated content teachers collaborating with language teachers: 'Collaborating with institutional language experts'. Also, reflected by U1-PD1, some collaborative practices were encouraged by witnessing the importance of ESAP to students: 'I also endeavour to set up greater communication between the school of languages and the school of sciences. Because it is my belief that especially for year-two students who are in EAP for specifics subjects, their curriculum and learning outcomes should be better if content and language teachers can work together with the curriculum design, assessment and stuff'.

Specific formats of collaboration between content and language teachers organised in PD have been identified from the interview data (see Table 5.1.2.2-1). It is found that formats of collaboration were mainly from EMI university and EMI college types of provision, whereas U1, with more instances of collaborative practices, seemed to put more emphasis on such collaboration practices compared to other institutions. Also, collaboration between content and language teachers organised in PD are mainly manifested in the form of co-discussing and designing the teaching materials for EAP courses (U1, JC1), followed by interdisciplinary sharing meeting (U1, U4) and collaborative project of CT and LT (JC1) and training programme with CT and LT (JC2). Other less

formal formats are some interdisciplinary knowledge sharing sessions hosted by PD leads (JC1).

Institution	Format	Selected references in the interview
U1	Co-designing teaching materials for ESAP courses	'In the (ESAP) module, (content) teachers and (EAP) tutors were asked by the programme directors to collaborate with each other with regards to the tasks for designing the speaking and writing exams for the EAP courses. So we needed to be on the same page' (U1-LS2)
U1	Community of practice platform - interdisciplinary sharing of ideas	'We have faculty-wide community of practice (CoP) where we might suggest a topic such as 'Pedagogy for teaching critical thinking'. Now in the CoP we are inviting speakers from most schools to come and share their ideas. So there is interdisciplinary sharing of ideas and knowledge exchange. And we have had these events over the years, so it is quite often recursive' (U1 - PD2)
U1	Community of practice platform - Academic reading circle	'Another collaborative endeavour is I started the academic reading circle where I suggest reading an education-based research article each week, and then we (all attended teachers) discuss that, and how that might influence our practices and so on. And again, that is open to people from any discipline. So I would say most collaboration between the language school and the other departments in terms of professional development happens slightly organically through these events' (U1 - PD2)
U4	Occasional meetings of CT and LT	'There is one thing that my university tries to promote is interdisciplinary (meeting). They have tried to get professors from different departments, because they are trying to break

		down the walls between different disciplines' (U4-LS1)
JC1	Co-discussing EAP curriculum development	'We have some meetings organised by some of the programme directors. Once, a team of five or six subject teachers were sent over to work with four or five EAP teachers. We discussed the work like what was their content teaching look like, and what do they want from us regarding language support? So I think that was one example of collaboration' (JC1-LS1)
JC1	Collaborative project of creating mathematics corpus	'We are currently doing a joint scholarship project with mathematics content teachers collecting vocabulary and technical terms in mathematics based on a corpus analysis of the recorded mathematics lectures at the moment' (JC1-LS2)  'And essentially we are helping him (mathematic lecturer) to identify vocabulary that the students are likely to come across and perhaps find difficult. Either because the words are technical or because they might be confusing with a technical meaning' (JC1-LS2)
JC2	Training programme for CT and LT working in local campus and joint university	'We (PD leads) have been organising a training programme in summer for the subject lecturers and EAP teachers both in the local campus in China and [the joint university in Ireland]. That is very good in terms of the collaboration by gathering teachers from both sides (content and EAP) and also locations (the local and foreign university)' (JC2-PD2)

Table 5.1.2.2-1 Formats of collaboration between content and EAP teachers in professional development

#### ***5.1.2.3 English language skills***

English language skills development is third frequently mentioned learning objective in PD, which is mainly indicated in certified PD documents and targeted for content teachers. For example, ‘Topics covered: Language’ (E1 CT PD), ‘language development resources for teachers’ (U1 CT PD), ‘Enhance the English level and teaching ability of professional teachers’ and ‘Improve the English proficiency of the subject teachers’ (E2 CT PD). Besides that, one PD lead also mentioned English language development at JC3: ‘Internal sessions of English language training in TPD’ (JC3-PD1). This suggests that while pedagogy and collaboration are prioritised, language support for content teachers was also recognised in certified PD.

#### ***5.1.2.4 Intercultural communication skills***

The following learning objective is developing intercultural communication skills, which has been mainly indicated from PD documents and PD leads’ interviews. On the one hand, in PD documents, the wording appeared as ‘Develop more effective interaction techniques’ (E1 CT PD), ‘The courses focus on effective communication skills’ (C1 CT PD), ‘... also for individuals looking to enhance their communication soft skills for career development’ (U6 PD). On the other hand, U1-PD2 reflected how he introduced intercultural concept in the PD for all teachers at U1: ‘In a transnational university, there was almost no Chinese content into what we delivered. So I went through a lot of resources of Chinese thinking about learning and teaching and eventually used the *Lunyu* - Confucius analects’. This shows that efforts of designing PD opportunities following the principle of the local culture.

#### ***5.1.2.5 Specialised content knowledge***

Relatively least mentioned learning objective is specialised content knowledge. As shown in one LT PD document: ‘... the importance of discipline-specific text analysis and discuss how to do this with our students’ (U1 LT PD). It can be assumed that the involvement of specialised content knowledge is more targeted for ESAP teachers who are responsible for making EAP more relevant to students’

subjects. However, no PD content was found to provide specialised content knowledge for content teachers, although U1 CT PD and U6 also indicated the importance of developing content teachers' specialised content knowledge, no further information was given. Such absence may be explained by the difficulty of providing PD content of various subjects due to limited financial and personnel resources provided by the institutions.

#### *5.1.2.6 Academic research skills*

Developing academic research skills has been found at U1 All PD and JC1 PD. Specifically, conducting academic research is counted as one important indicator of staff's performance at U1, as reflected by U1-LS4: 'Doing research is as part of our performance criteria, we are evaluated on a yearly basis in terms of our teaching, researching and social service. For some colleagues such as EAP teachers who are probably not skilled at doing research, it may be challenging for them. Now at the university level, especially at the school level, we do have some training sessions or research methods, specifically for teachers who need more support in this area.' It is also mentioned by U1-PD2 that some training supports are available for staff for committing their publication duties: 'We also notice that some teachers were required to publish their work. So we created some workshop sessions to support staff in engaging in the scholarship of learning and teaching'.

To sum up, a range of evaluation criteria are used to analyse the current TPD provisions (16 PD provisions in 13 participating institutions) for content and/or EAP teachers. Firstly, about the types of PD opportunities, most institutions (10 out of 13) have provided workshop series with a range of PD objectives covering developing pedagogical skills, followed by teachers' collaboration and English language skills. Specifically, PD workshop series led by internal staff is the most common type of in-house PD provision, followed by lecturers delivered by invited expert, and classroom observation by peers and/or trainers. Secondly, PD provisions at EMI universities and EMI colleges are generic perhaps because they are provided for all academic staff. Whereas some EMI universities have offered certified PD courses particularly for content or EAP teachers, and external teachers are welcome for participation.

Thirdly, certified CT PD and LT PD have some overlapping PD objectives (i.e., pedagogical skills and collaboration), while CT PD have an extra emphasis on developing English language skills. Fourth, in EMI programme type, in-house training is not available, and teachers are encouraged to take certified PD courses led by external training bodies. In particular, a major absence of discipline-specific PD content in PD objectives has been identified. Moreover, there are some differences identified between within in-house certified PD courses and their external counterpart with regards to duration, entry requirements, mode of delivery, and local adaptability of PD.

Furthermore, it should be acknowledged that the absence (noted as 'N/A' in Appendix 3) under certain evaluation items does not necessarily ascertain that those PD opportunities are lacking or unqualified in those aspects, rather, it only implies that they have not been documented in the PD documents or in the interviews. The next research question will explore how different stakeholders perceive PD opportunities through interviews.

## **5.2 What are stakeholders (content teachers, language teachers, PD leads)' perceptions towards current professional development opportunities?**

Firstly, demographical information of interviewees is provided in Appendix 2. As discussed in section 4.6.1.1 on sampling principle, teachers at all three types of EMI provisions were invited in this study with the purpose of providing a holistic picture of teachers' PD opportunities in Chinese EMI contexts. Based on the sample, there are 20 CT, 20 LT and 5 PD leads invited to the interview sessions, among which 24 (8 CT, 14 LT, 2 PD leads) from EMI universities, 13 (6 CT, 4 LT, 3 PD leads) from EMI colleges and 8 (6 CT, 2 LT, 0 PD lead) from EMI programmes (see Figure 5.2-1).

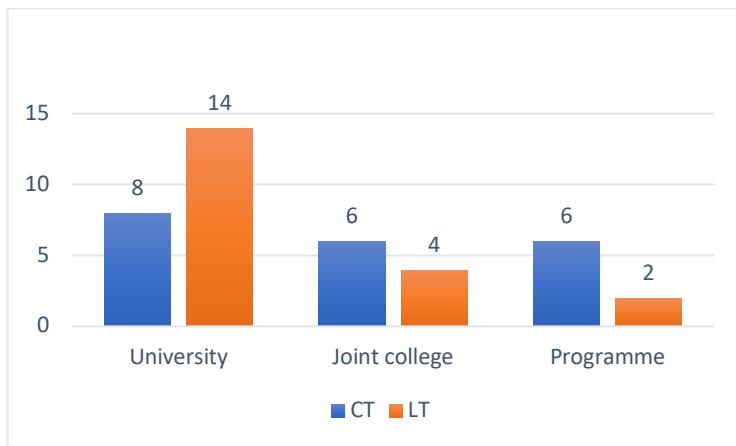


Figure 5.2-1 Numbers of interviewees in each EMI type of provision

As for interviewees' nationalities, the majority of them are from China (14 CT and 9 LT), followed by UK (3 CT and 8 LT), Canada (1 CT and 1 LT), USA (1 CT and 1 LT), Japan (1 CT) and Serbia (1 LT) (see Figure 5.2-2).

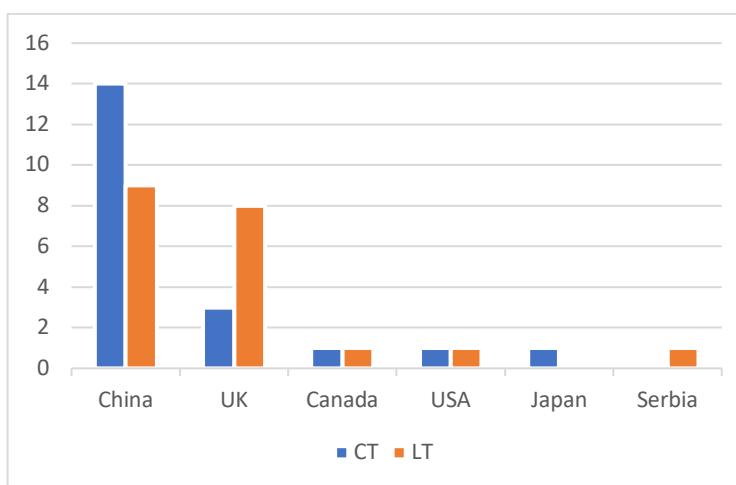


Figure 5.2-2 Nationality of interviewees

Through the thematic analysis (see section 4.7.2), stakeholders' (i.e., content teachers, EAP teachers, and PD leads) perceptions towards current PD provisions were divided into three main themes: teachers' evaluation of PD, factors that facilitate or inhibit PD implementation, and teachers' PD needs. These main themes of RQ2 are followed with various sub-themes and categories identified (see Table 5.2-1). As noted in section 4.7.3, the presentation of the order themes in this chapter was based on the coding frequency and the richness of data under each theme, specifically the number of times each theme, sub-

theme and categories were referenced by the interviewees - as shown in the hierarchy chart (see an example in Appendix 4). That is, in RQ2, participants had the most reflections on their evaluation of PD, followed by factors that facilitate or inhibit PD, and then their PD needs. In Table 5.2.1, themes, sub-themes and categories were all labelled with section numbers in which each theme was introduced. A transcript with the coding sample of thematic analysis is provided in Appendix 5.

Research question	Theme	Sub-theme	Category
5.2 What are stakeholders (content teachers, language teachers, PD leads)' perceptions towards current professional development opportunities?	5.2.1 Teachers' evaluation of PD	5.2.1.1 Relevance of teachers' needs	Subject specificity
		5.2.1.2 Sufficiency of PD	Teaching experience
		5.2.1.3 Sustainability of PD	
		5.2.1.4 Localised PD content	
		5.2.1.5 Up-to-date PD content	
		5.2.1.6 Practicability of PD knowledge to practice	
	5.2.2 Factors that facilitate or inhibit PD	5.2.2.1 Institutional factor	Leadership issue
			Organisation of PD activities
			Autonomy given for PD choice
			Incentive of PD participation
			Availability of qualified PD trainer
	5.2.3 Teachers' PD needs	5.2.3.1 Pedagogical skills	Teachers' awareness of the importance of PD
			Teachers' time schedule
	5.2.3 Teachers' PD needs	5.2.3.2 Specialised content knowledge	
		5.2.3.3 Intercultural communication skills	

		5.2.3.4 English language skills	
		5.2.3.5 Collaboration between content and language teachers	
		5.2.3.6 Academic research skills	

Table 5.2-1 Emerging themes, sub-themes and categories (with section numbers) for RQ2

In the following sections, interview results of RQ2 are unpacked in relation to three themes followed by their sub-themes and categories (if any) (see an overview presented in Figure 5.2-3). Specifically, the numbers of coding entries by interviewees are attached behind as a reference to determine the order to present each theme and/or sub-theme. However, it should be acknowledged that numbers of references are not necessarily linked with their importance in a statistical way due to the qualitative nature of this study (see section 4.2.2). As noted by Buetow (2010), both frequency and qualitative importance should be taken into consideration when presenting the results of thematic analysis. That is, a theme may appear infrequently yet be significant, it is the interpretation that matters more. Therefore, the purpose of presenting the counts of entries behind each theme and/or sub-theme is to simply demonstrate how the sampled participants engaged with the research questions. As discussed in section 4.6.1.2 on sample size, only PD leads ( $n = 5$ ) took the interview, which was much less compared with the numbers of CT ( $n = 20$ ) and LT ( $n = 20$ ). Therefore, data of PD leads is regarded as supplementary data, and discussed with the main interview dataset by CT and LT whenever available and relevant. These results will begin by how teachers evaluate their current PD experience.

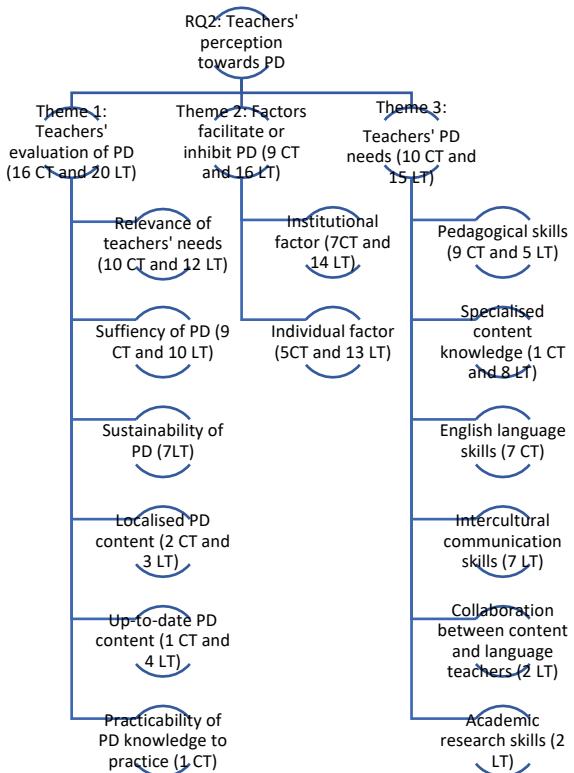


Figure 5.2-3 Themes and sub-themes of RQ2

It is worth noting that pre-figured themes (i.e., aspects for evaluating TPD) drawn from the literature initially structured to answer RQ1 regarding the current state of TPD (see section 5.1). However, certain themes (e.g., relevance to teachers' needs; sufficiency of PD; sustainability of PD; up-to-date PD content) were also emerged inductively in section 5.2, where analysis was primarily driven by interviewees' reflections (see section 4.7.2). The recurrence of similar sub-headings (as sub-themes) across both sections therefore highlights conceptual overlap, demonstrating that issues framed theoretically in section 5.1 were also strongly represented in participants' accounts. This overlap enhances credibility (see section 4.9), supporting the view that findings are both empirically grounded and conceptually robust.

### 5.2.1 Teachers' evaluation of professional development

As shown in Figure 5.2-3, the most salient theme of RQ2 is teachers' evaluation of PD, which was conceptualised by a range of aspects categorised as sub-themes (with varying salience), namely, *relevance of PD to teachers' needs*,

*sufficiency of PD, sustainability of PD, localised PD content, up-to-date PD content and practicality of PD knowledge.* Each is discussed in turn below.

#### ***5.2.1.1 Relevance of professional development to teachers' needs***

The first sub-theme is *the relevance of PD to teacher's needs*, which has been further divided into two categories, namely *teachers' subject specificity* and their *teaching experience*.

##### ***Subject specificity***

Firstly, *the relevance of PD* is understood by the teachers that from the perspective of subject specificity. For example, content teachers (n = 6) among three types of EMI provisions reflected PD in their institutions has little or no relevance to EMI teaching: 'there is no one specifically for EMI teaching' (JC1-C2), 'It is probably difficult for that development unit to really suit the [PD] courses to pursue the training opportunities according to the staff's needs. I only find a few are relevant to me' (U1-C1). Furthermore, content teachers reported that the PD is less relevant to specific subjects they teach, as reflected by P2-C2: 'Of course, there is no special training for specific subjects', 'Not training available for our subject'. Similarly, in EMI university type: 'There indeed provides some workshops of pedagogy, but not relevant to my subject' (U3-C2).

Similarly, EAP teachers (n = 7) reported that PD content tended to be as generic as possible so as to apply to all academic staff across different departments. Complaints have been identified in different participating institutions, for example: 'I think the professional development is currently offered to all staff. There is not so many offered for EAP or offered through our own division' (U4-LS1). As a consequence, teachers may 'not be able to learn useful and practical things through those training' (P1-L2). It is worrying that in a long run, teachers may end up losing enthusiasm to participate in those generic PD sessions with no particular target audience: 'I think the PD workshop is just a kind of routine activity, and the quality is really questionable sometimes' (U6-LS1).

To briefly sum up, it is found that in-house PD provisions are generally offered for all academic staff regardless of their subjects, though some provided at least specific branch of PD such as pedagogy training for content teachers. Teachers generally have negative comments complaints on the PD if it has little or no relevance to their subject needs, which confirms the findings from PD documents that most PD are currently generic to all staff (see section 5.1.1.4). Hence, it is suggested to design PD for different teacher cohorts, at least starting with offering PD for content and EAP teachers respectively.

### ***Teaching experience***

Apart from subject specificity in relation to relevance of PD, it is also found that some teachers ( $n = 8$ ) especially EAP teachers ( $n = 6$ ) associated the relevance of the PD with their needs in terms of their teaching experience. On the one hand, novice teachers<sup>1</sup> who entered the workforce in EMI contexts generally identified their preferred types of PD, including ‘paired mentor’ (P2-LG1) and ‘classroom observation’ (U7-LS1), which are ways to quickly familiarise with the new environment with the help of senior colleagues or PD trainers. More specifically, novice teachers have requested pre-service training, given that most of the current PD provisions are provided for in-service teachers. For example, P2-LG2 who has been teaching EAP for one semester reported that ‘I have not heard of any in-service PD in my university. At present, I feel that it is necessary for our programme to have a pre-service PD training. Although I can ask some experienced teachers, they have very few points to offer. If we had a systematic training before class, I think it will be better for the new teachers to not struggle so much’ (P2-LG2).

On the other hand, like novice teachers, experienced teachers<sup>2</sup> also complained about the current PD being not suitable for them and thought current PD is more beneficial for teachers who are newly recruited to EMI contexts: ‘I think less experienced colleagues can probably learn a lot from the professional development here. But for more experienced colleagues and those who have

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<sup>1</sup> Novice teachers in this study refer to teachers who have been teaching EMI or EAP for less than two years.

<sup>2</sup> Experienced teachers in this study refer to teacher who have been teaching EMI or EAP for two years and above.

already done the certificate (U1 All PD), we need something more EAP focused, something more relevant and deeper' (U1-LG1). Some EGAP teacher also shared their wishes of more advanced PD content for senior teachers: 'For me, as a senior lecturer, as somebody who has got more experience, I need more structured and developed workshops and materials that is more appropriate to my level of expertise'. In addition, it is believed that different themes of PD should be available for teachers according to their teaching experience: 'You (PD trainers) have to differentiate both the levels and materials of the workshops' (U1-LG3). Likewise, ESAP teachers have similar comments: '[current PD provisions] tend to be more for the lower-level lecturers who may not have much experience. So, there is not quite enough professional development opportunities for senior lecturers at the university' (U1-LS1). U1-LG1 tried to explain this difference by his discovery of the educational background of newly recruited teachers and experienced teachers nowadays:

They (novice teacher) usually come from a more academic background, rather than I who only have a master's degree but have been teaching for decades. ..... they (novice teachers) normally hold a doctorate degree, but they may have had limited opportunities to put their knowledge into practice in the classroom. So those are two different extreme ends of the spectrum that they have huge amount of academic knowledge but limited experience in the classroom compared to experienced teachers' years of English teaching experience in the classroom.

He concluded that teachers with different teaching experience require different PD, but how to address this issue still remain unknown: 'You cannot say that they would have the same professional development needs. It is quite difficult to design any professional development that is going to cater to teachers who have got such huge difference in their experience. So I guess for some teachers, it was quite useful. But for others, it was less useful'.

In sum, the relevance of PD to teachers' subject specificity and teaching experience should be taken into consideration when further designing PD content for different teacher cohorts.

### ***5.2. 1.2 Sufficiency of professional development***

The second sub-theme *sufficiency of PD* has been mentioned in 19 teachers' interview (9 CT and 10 LT). Generally, teachers showed a negative attitude towards the sufficiency of current PD provisions, which seemed to contrast with the description in PD documents regarding the sufficiency of PD (see section 5.1.1.5). Teachers who were negative about the current amount of PD reflected that: 'I feel like a lot (PD) is needed' (JC3-C2), 'There is little support' (P1-C2), and 'It is not enough PD' (P3-C2). Facing such lack of PD in their institutions, some teachers therefore tended to rely on their previous overseas study experience as the guideline of their teaching practices. As reflected by P1-C2: '... there is basically no special training..... I can only say that it depends on my past experience. Because I have been abroad for a long time, then my English level is good, at least not too bad, and then my professional knowledge of the subject is relatively rich'. This is also resonated with another teacher who had to find any PD by himself: 'Any professional development I have done has been through my own' (U3-LG1). In addition, heavily negative comment was raised in interviews with staff at U3 which did not seem to prepare PD for its staff: 'Haha... (smiled sarcastically) If there are opportunities, they are not well known. That is all I can say' (U3-LG2).

Some teachers in EMI programme type have explained why PD is lacking in their institutions: 'Here, EMI courses are only introduced to a few subjects in this university' (P1-C1), suggesting that EMI programmes are implemented in a very small scale, therefore it has gained very limited institutional attention in terms of providing staff' training needs, though external training PD courses were an alternative (see section 5.1).

Despite a number of negative comments above, there are some general good comments on the amount of PD, for example, 'For EGAP, I feel currently the opportunities we have been given are sufficient' (U7-LG1). Moreover, the diversity of PD activities was also recognised: 'There is certainly a lot of opportunities for us to self-engage with other people working in the same field and to share ideas' (JC1-LS1), which suggest that the more diverse the training

opportunities, the more flexibility teachers have in choosing PD they need, and the more likely they may feel satisfied with the PD.

It can be seen that teachers' perceptions towards the sufficiency of PD are mainly negative, though a few good comments exist. Also, it is noted that institutions of EMI college and programme types may receive more complaints on the amount of PD provided compared with EMI university type, which may be explained by the role of EMI perceived by institutional leads in different types of EMI provisions.

### ***5.2.1.3 Sustainability of professional development***

*Sustainability of PD* that teachers perceive refers to whether ongoing support for teachers is available. Only EAP teachers in EMI university ( $n = 4$ ) and EMI college type ( $n = 3$ ) commented on this aspect. For example, an ESAP teacher at JC1 reflected that: 'There are constantly things [PD] going on, whether workshops or seminars. Every week, there are many things that you could get involved in' (JC1-LS2). However, it is worth noting that some teachers may lost their interest in participating in PD sessions as they think they have gained enough pedagogical expertise during years of teaching. As U7-LS1 shared: 'When I was familiar with the working environment for two or three years, I was already familiar with a lot of things. So as time goes on, I think it (PD) may be less and less meaningful'.

However, some teachers clearly acknowledged the importance of updating their teaching practices throughout their careers: 'I think it is quite important to have ongoing professional development to raise potential issues and potential approaches towards teaching and towards assessing students' (U1-LS2). The mixed understanding of sustainability of PD indicate that some teachers may have simplified understanding of the rapidly evolving nature of education nowadays. Nonetheless, teachers may accumulate various teaching practices naturally as their years of teaching increase. In this regard, PD trainers should think of the issue of sustainability in PD that how to engage teachers with PD they need at different stages of their careers (also see Teaching experience in section 5.2.1.1).

PD leads were also aware of the importance of keeping PD constant. For example, comments include: 'I think ongoing training is essential..... Continual professional development is really important as well' (JC2-P1), 'I think the key for the support is it needs to be constant' (U1-PD2). Moreover, some planning should be made in advance to ensure the sustainability of PD. JC3-PD1 gave an example of PD being forced to suspend in 2020 due to the emergence of COVID-19: 'I guess it (keeping PD constant) is a bit difficult because of Covid at that time. The last time we did a face-to-face professional development session was in the autumn of 2019. And the PD just came back to normal this year (2023)'. When confronted with unforeseen issues, possible solutions could be providing flexible mode of delivery such as online training. And it is also very important for leaders at the institutional level to monitor the PD and take action to maintain it.

#### *5.2.1.4 Localised professional development content*

*Localised PD content*, mentioned by a few teachers (2 CT and 3 LT), refers to whether PD content is contextually appropriate to the local context (also see section 5.1.1.10). Particularly, foreign EAP teachers reflected that they have attended PD sessions with a particular theme of the local educational context. For instance, at U1 which is a transnational university adopting EMI, one teacher shared that: 'There was a PD module about transnational education, followed by teachers' reflection on it. I remember I was really struggled with it, because I did not really understand what transnational education was when I just arrived in China' (U1-LG1). Such introductory sessions of the local context seem to be very helpful for teachers who enter into a new EMI context. Teachers who have worked in different EMI contexts were clearly aware of the necessity of localised PD, for example: 'I have worked in a lot of the other EMI contexts and each of them was different' (U1-LS1).

Furthermore, some teachers understood the context-specific characteristic of certain EMI contexts in terms of local students and assessment methods. For example, JC1-C1 who have been working and studying overseas for five years reflected his limited knowledge of Chinese educational system when retuning to China for work: 'It is also good to learn about the context of the students that

you are dealing with'. Similarly, EAP teacher U1-LS2 from Serbia also resonated the importance of learning about how EMI is operationalised in the local context: 'The context would still make a difference for the type of assessment and the type of feedback that is needed. I would say even assessment needs to take context into consideration'. Those references indicate the necessity of offering more localised PD so as to help teachers who are lacking local understanding to smoothly familiarise with EMI contexts they are working in.

### ***5.2.1.5 Up-to-date professional development content***

Teachers (1 CT and 4 LT) commented on whether PD they received is up to date. Good examples include: 'Workshops and seminars for academic staff to get some latest information of the heated topics in educational fields' (U6-C1). While the issue of out-of-date PD is also identified: '... occasionally we do discover issues where (PD) documentation is not being kept up to date. Training has not been provided in time' (U1-LS2). The teacher described the consequence of this as 'fall in between cracks', as it calls for an ongoing effort made by the PD trainers who 'have very limited amount of time for that (designing and updating PD content)'. This perhaps results from a range of duties assigned for them, such as 'meetings, administrative tasks, curriculum development, assessment, and various other tasks' (U1-LS2). This relates to the leadership issue (discussed in section 5.2.2.1) regarding PD trainers' responsibility of maintaining PD.

Teachers also recognised the need of up-to-date PD content with the desire of learning new educational policies as well as innovative pedagogies and technologies used in teaching. For instance, 'It can help teachers better understand some of the latest methods of teaching in classroom, including how to achieve better results, and how to make better use of the better environment to adapt students' (P1-LG1), 'What I learned in my teacher training 18 years ago does not apply to anything in nowadays' classroom, especially in terms technology' (U1-LG1), and 'It is good to learn about a few more up to date practices and policies' (U1-LS1).

It is found from the references that some institutions have paid heed to provide up-to-date PD content. By bridging latest research findings and teaching

practices, more try-outs of research-informed practices would therefore be encouraged at the classroom level. Achieving this should be in line with sustainability (see above) and leadership (see below), and the practicality of PD knowledge in practice, which is discussed in the next section.

#### ***5.2.1.6 Practicality of professional development knowledge***

One content teacher reflected on *the practicality of PD knowledge*, which resonated with three PD leads. It is found that the teacher used ‘practical’ to describe that what he learnt from the PD can be transferred to the teaching practice later on: ‘In my opinion, the topics covered in the course is very practical, and I might try to teach my students with some new teaching methods’ (JC1-C2). One PD lead also used ‘practical’ when commenting on PD: ‘Many of the sessions are quite practical’ (JC3-PD1). Another PD lead pointed out that PD should not only teach theory, but also guide the actual practice: ‘[trainers] are not just lecturing the theory, but more importantly showing how it applies in the real teaching practice’ (U1-PD2). By doing so, teachers are more likely to take in what they have learnt in PD and try out in their practices, as reflected by U1-PD1: ‘The teachers who engage with it [PD] and follow the processes are inspired to make changes to their practice’.

To sum up, teachers’ interviews reflected a range of aspects when evaluating the current PD opportunities, and some aspects (e.g., *relevance of teachers’ needs, sufficiency, sustainability, and up-to-date PD content*) have overlapped with the evaluation criteria (see section 5.1.1), which provides both objective and subjective insights into refinement of the design and implementation of PD. These views reinforce the idea that PD impact is closely tied to the immediate applicability of what is taught.

#### **5.2.2 Factors that facilitate or inhibit professional development**

The second theme of RQ2 relates to factors that facilitate or inhibit PD implementation (see Figure 5.2-3). Two sub-themes (i.e., institutional factor and individual factor) were further generated from the interview, which are discussed in turn below.

### *5.2.2.1 Institutional factor*

A number of categories were identified to understand institutional factors that may facilitate or inhibit teachers' PD (with varying salience), namely, *leadership issues, organisation of PD activities, autonomy given for PD choice, incentives of PD participation and availability of qualified PD trainers*.

#### *Leadership issues*

*Leadership* is understood by teachers (5 CT and 4 LT) in relation to the initiation of PD by several aspects. Firstly, a teacher (JC1-C2) reported that PD is counted as a component in their annual performance review, from which the PD lead can trace how many PD opportunities teachers have on a yearly basis. Similarly, PD lead at JC3 echoed with this point: 'I do not think we have a very formal evaluation system (to review teachers' PD participation), I guess it is something that we should do more'. By building on a formal review system, teachers' PD participation record can be checked on a regular basis. It is also a good way to show the institutional attention of PD for teachers, otherwise it is easily for teachers to underrate the value and use of PD offered in their institutions, as described by U1-LG1: 'It would just give a wrong impression and wrong sense that our professional development is not valued or not prioritised by the institution'. U1-PD1 resonated with this and admitted that PD can be easily 'vocal support' if there is no leadership involved.

In addition, it is also found that the stability of leadership is also important for maintaining PD. U3-LG2 shared an example of changing leadership at his institution: 'There was a leadership change. I think it was a significant ongoing reshuffle at the top, and all these things (including PD) got shelved'. This shows that a stable leadership at the institutional level is fundamental to keeping the operation of educational events. This suggests that visible, stable, and accountable leadership is key to sustaining meaningful PD.

#### *Organisation of professional development activities*

Teachers (8 LT and 1 CT) put forward opinions and suggestions on *the organisation of PD activities* from various aspects, namely, *ways PD is organised, scheduling, and publicity of PD*. Firstly, some teachers complained about the unsystematic organisation of PD provisions: ‘The PD is organised very sporadically’ (P3-C2), ‘It just grabs a random theme every time, so I felt that it was not very organised’ (U7-LS1).

Secondly, regarding scheduling, comments were mainly constructive: ‘[the PD provisions] have to offer a lot of different things at different times to attract audiences. And I know that is hard in an institutional setting where resources are limited’ (U1-LG3). It is also found that PD sessions being recorded may provide the opportunities for teachers to further review and for unattended teachers to get involved, as reflected by U4-LG1: ‘Some of them (PD sessions) do not have the recording afterwards, I think that would be a little issue here’. Teachers witnessed the difficulty of gathering all staff to participate PD according to everyone’s different schedule: ‘Any big school will have the problem..... You rarely have a time when all teachers are available at the same time in a workday’ (U1-LG3), ‘It is more difficult from a practical point of view to get everybody together for professional development’ (U1-LG1), those quotes again shed light on the necessity of more flexible mode of delivery of PD with sessions being recorded as many as possible for further review and self-paced learning by teachers. It is suggested that the PD trainers should take the leadership to make PD more accessible to teachers: ‘It is the chair who should record the presentations, and then upload online for more sharing. So even if some teachers do not attend them, they can watch them afterwards’ (U1-LG2).

There is also an issue associated with the publicity of PD: ‘Probably the biggest issue is not knowing about options for professional development. If these things are not shared amongst colleagues, we do not always know that it is an option’ (U1-LS1), which suggests the importance of advertising of PD among staff. U1-LS1 shared one possible way to increase the publicity of PD among campus through the means of sending out an exclusive email with PD opportunities or creating a promotion board on the webpage. By doing so, teachers can easily navigate PD opportunities available and suitable for them (if any).

### *Autonomy given for professional development choice*

*Autonomy given for PD choice* was mentioned by EAP teachers (n = 6) in the interviews. It is found that in some participants' work contract allocated a certain proportion for teachers to choose PD they need. For example, as shared by JC1-LS3: 'In my contract, there is a 10% scholarship component, teachers in my institution are expected to attend continuous professional development sessions based on their needs..... There is a lot of autonomy given for choosing what PD I need'. With the allocated autonomy in PD, teachers are self-driven to choose PD opportunities based on their actual needs.

Similarly, teachers at U1 also reported on the autonomy of PD choice in their contract: 'So 20% of the work allocation is for professional development (in my contract). It could be like attending conferences or conducting research. And I think it (the percentage) varies from department to department, depending on the qualifications of the teachers and also be the needs of the departments' (U1-LG1). It is important for teachers to have such 'some independence and choice over the type of professional development that they need' (U1-LS2). In this sense, rather than attending mandatory PD sessions, teachers with such contracts can not only be choose PD they need, but their efforts put in participating in PD are also counted towards workload in contract, thus encouraging teachers to participate in PD if necessary.

### *Incentives of professional development participation*

Teachers (n = 4) reported the lack of tangible incentives of PD participation and showed their preference of PD being accredited, so that their efforts invested in PD can be recognised widely. It seems that the current PD provisions do not focus on making incentives for teachers, more often, teachers' PD participation was ignored by the leads. For example, as reflected by U1-LG1: 'EAP teachers often cannot see tangible reward for attending professional development. As it does not always lead to a clear qualification'. Teachers also questioned whether the current PD can be properly recognised due to its scope of application: 'I doubt how recognised this qualification is. It is kind of piecemeal and bitty..... I

might think how employers are going to recognise these qualifications that I got, which is not very established or widely recognised' (P1-C1).

Moreover, teachers linked the extent of accreditation of PD with their future career path. For example: 'If the professional development programme could provide me with the international recognised certificate of certain training for my future career, I think that would be great to have a certificate not only just authorised here but also internationally recognised' (U4-LG1). The aspiration of PD to be certified and widely recognised reflects the strategic thinking of teachers regarding their career paths and professional mobility. As such, it is recommended for institutions to invest in structured and certified courses to authenticate teachers' efforts and promote their long-term professional development.

#### *Availability of qualified PD trainers*

Few comments from teachers ( $n = 4$ ) were made on whether institutions are equipped with qualified PD trainers. The numbers of PD trainers were reported limited in U1: 'Training leads are very limited' (U1-LG3). The qualification of PD trainers was also questioned by teachers: 'To be honest, I do not think the majority of the (PD) trainers here have got the experience themselves..... I think maybe there are only one or two colleagues who actually have experience of running these EAP courses themselves' (U1-LG1). One teacher gave his understanding of qualified PD trainers: 'It is very hard to make a real PD expert. PD experts refer to those who not only have the rich teaching experience but also having theoretical background in certain areas. They can design tailored training content from a critical perspective to the context of our teaching practices' (U6-LS1). Therefore, becoming a qualified PD trainer requires various competencies, which makes it difficult for institutions to have such candidates providing quality-assured PD content.

##### *5.2.2.2 Individual factor*

In addition to various institutional level factors influencing PD, a range of institutional factors (with varying salience) that may facilitate or inhibit

teachers' PD were also identified, including *teachers' time schedule* and *teachers' awareness of the importance of PD*.

### ***Teachers' time schedule***

*Teachers' time schedule* has been mentioned recurrently (3 CT and 11 LT) as the main reason inhibiting teachers to participate in PD, references include 'no time', 'lack of time', and 'clashes in schedule'. Firstly, it is found that EAP teachers are overwhelmed with intensive teaching hours assigned every week. For example, as reflected by U3-LG2: 'Probably the problem is the time, people (EAP teacher) are teaching 18 hours a week plus marking assignments. So people do not really have much spare time for other commitments. It seems to be more geared up for people who are subject teachers who have a significantly lower teaching load. It is just the way it is'. Conflict in time is perhaps also associated with the scheduling issue at the institutional level (see section 5.2.2.1.2). As JC1-LS1 shared that: 'There is no time, to be honest. So even when there are opportunities, you do not necessarily have time to in your timetable to actually attend things that you want to attend'. That is, even teachers have time and energies left for PD participation, they find that those opportunities do not fit in their working schedules. As a consequence, it may turn out to be a burden for teachers when attending PD opportunities: 'It may become burden for teachers' (P1-LG1).

On the other hand, content teachers who are believed to have less teaching hours are tasked with heavy researching duties under the *publish or perish culture* prevalent in universities. Content teachers are clearly aware of their researching duty and tend to prioritise this over other duties assigned for them (e.g., teaching and admin work). For example, P1-C2 commented that: 'We (content teachers) do not have time to attend PD, because our main tasks are doing scientific research and some teaching. We often have to spend more time on doing scientific research. So even if there is training, I will not go'. This revealed that scientific research is always valued the most in their performance review and career promotion, content teachers tend to take the expedites to have more academic outcomes to secure or promote their professional titles. As a content teacher reflected: 'In the university, assessment of (content) teachers

is often more focused on their ability of doing scientific research. The task of scientific research is actually very heavy. I doubt if there is anyone who has time to do this (PD)' (P2-C1). It should be noted that content teachers in EMI programme type are often those who have to teach different medium of instructions depending on the programmes. That is, they teach both EMI and CMI courses, as EMI programmes only make up a small proportion in the university (see section 1.1.1.1). Although content teachers are assigned certain workloads to teach through English, they still feel overwhelmed by different duties.

Moreover, some EAP teachers who have researching duties or interests in researching (also see section 5.2.3.6) also have difficulties of time management. For example, U7-LG1 reflected that: 'I am struggling with spending time in doing research during the teaching weeks'. As a consequence, both groups of teachers have very limited or no time participating in PD opportunities because of their heavily occupied working hours of researching duties for content teachers and teaching duties for EAP teachers.

#### *Teacher's awareness of the importance of professional development*

There is mixed evidence about *the awareness of the importance of PD* reported by 8 teachers (2 CT and 6 LT). Some teachers who have little or no awareness of the importance of PD tend to rely on their previous teaching experience and prefer not to attend PD. For example, P1-C1 claimed that: 'I basically do not need that (PD). I think based on my experience, I can handle the (EMI) course'. Similarly, EAP teachers heavily emphasised on their teaching experience: 'I have taught for a number of years, and I think the people who were hired along with me have about the same level of experience. We all have the experience'. Those quotes perhaps show teachers' simple understanding of what PD can bring to them.

Rather than solely counting on previous teaching experience, some open-minded teachers endorsed the importance of PD, and they are more likely to continue to participate in PD. For instance, as an EAP teacher (U1-LG1) commented,

I came to China few years ago, and it was a brand-new EMI environment for me. Then there were so many opportunities to exchange knowledge with other teachers that have got a different background to you. So if anyone says 'I am already qualified completely as an EAP teacher, I do not need any more training'. I think that is just a very closed mindset and they have not considered all the evolving nature of education. And they have not considered what they can learn from opening themselves to different contexts.

The quote shows that the teacher acknowledged the context-specific characteristic of certain educational contexts (also see section 5.2.1.4), and the need to catch up with the changes brought by the evolution of education (see section 5.2.1.3), which enables his involvement in relevant training.

Moreover, teachers with lifelong learning mindset seem more likely to continue to participate in PD. A content teacher commented that teachers with higher educational degrees are not necessarily good teachers: 'I think, lots of academics in higher education have got PhDs and tons of publications, but maybe they are not very good teachers' (U1-C1), which thereby suggests the necessity of PD of development teachers' pedagogical skills. It is resonated with PD leads: 'Some teachers are intensely arrogant, they think they know everything already, but they do not. I do not think having a master or doctorate degree makes you an expert in pedagogy. I think that comes from years of experience and reflection and scholarship, reading, writing and so on' (U1-PD2), suggesting that competence to teach is supposed to be learnt and accumulated by constant reflections of practices, not guaranteed as a by-product of certain educational degrees.

### **5.2.3 Teachers' professional development needs**

As shown in Table 5.2.1, the third theme of RQ2 refers to teachers' professional development needs (mentioned by 10 CT and 17 LT), which include various categories, namely *pedagogical skills, specialised content knowledge, intercultural skills, English language skills, collaboration between content and EAP teachers, and academic research skills*. All aspects were also identified in

PD documents as course objectives in participating institutions (see section 5.1.2).

### ***5.2.3.1 Pedagogical skills***

The most mentioned PD needs was pedagogical skills development, which was required mainly by content teachers (9 CT and 5 LT). For example, JC2-C1 expressed the eager to learn how to teacher students with varying English proficiency levels in one classroom: ‘I want to improve my ability of teaching through English. The English ability of the students in our programme is polarised’. Many content teachers acknowledged the student-centredness in EMI teaching, and they required to learn about how to increase the student’s engagement in their EMI courses. References include: ‘student-led lessons with more classroom interactions’ (JC1-C2), ‘It is quite important to motivate students’ interests in the EMI setting’ (U1-C1), and ‘make sure that students are engaged.’ (P1-C1).

More specifically, U1-C1 shared an example of her class with less motivated students and indicated the possible risk: ‘Currently I am struggling about how to motivate students. I feel that they are just learning for the purpose of getting that degree. For example, sometimes I ask a question, if nobody answers, then I may just answer myself. That could form a bad circle in a way’. In addition, it is reported by EAP teachers to have ‘more skills to boost and enhance the student engagement and motivation of students’ (U1-LG2). These quotes above suggest that if teachers are not equipped with pedagogical skills to cope with EMI teaching issues, it would be doubtful whether the quality of EMI teaching can be guaranteed in a long run.

More detailed pedagogical skills were also raised by teachers in terms of teaching international student cohorts (1CT and 3 LT), though local students (i.e., Chinese students) are the major group of students in the EMI contexts in China (see section 1.1.1.1). Teachers envisioned this as a necessary skill. For example, as shared by EAP teachers: ‘You have to be prepared for different situations you may deal with, such as international students coming from various cultures and nationalities’ (U1-LS1), and ‘In the future, if my classmates would

have more international students, I would say the good PD for me would be how to teach students from diverse culture backgrounds' (U4-LG1). In addition, it is indicated by U2-C2 that cultural sensitivity is important when teaching international students: 'I think raising lecturers' awareness to cultural differences can be useful'.

#### ***5.2.3.2 Specialised content knowledge***

Several teachers (1 CT and 8 LT) including ESAP teachers (n = 6) in particular required specialised content knowledge in their PD needs. For ESAP teachers, they expressed concerns on their lack of content knowledge of specific subjects that ESAP courses are equipped with (e.g., English for Engineering, English for Business). References include: 'We (ESAP teachers) do not know very much about the content side, I think more needs should be done on that' (JC1-LS1), 'It does help to have some disciplinary knowledge' (JC1-LS2), and 'Developing a deeper understanding of the disciplines' (JC1-LS3). It seems to be norm among ESAP teachers that they should at least be familiar with some fundamental knowledge of the specific subject of their ESAP courses. As reflected by U2-LS1: 'If we are talking about very specific English for academic purposes courses for music students, business students, or engineering students, then I think it is important to know the subject matter'. That is, students would find ESAP courses relevant to their studies if their ESAP teachers are familiar with how language is used in certain subjects.

U2-LS1, an ESAP teacher with a master's degree in TESOL, shared her positive experience of designing curriculum of EAP for music: 'For example, when I teach EAP to music students, I firstly think about what kind of environment they usually use English, such as how they interact with music related English materials. I need to know terms used in authentic music environments in order to teach the English class more effectively'. It seems that the best candidate of ESAP teacher should be EAP practitioners with another educational background other than language teaching. As resonated by U6-LS1: 'ESAP teachers should ideally understand both how to teach EAP as well as some basic disciplinary knowledge or the convention of oral and written communication in that specific discipline. For example, teachers with knowledge of biology or chemistry would

have more advantages compared with those colleagues who only know about TESOL'.

However, ESAP teachers are often in an 'awkward situation' described by U7-LS1 that in most cases, EAP teachers who are assigned to teach ESAP have to spare extra time looking for content materials by themselves: 'For example, when I teach ESAP for Business, but I may not be particularly familiar with this field. So I have to spend a lot of time learning about the field by reading the textbooks or going to some business lectures just like students'. In this sense, institutional support is supposed to be made for pre-service and also in-service ESAP teachers who have the needs for specialised content knowledge of certain subjects.

#### ***5.2.3.3 English language skills***

Developing *English language skills* was only required by content teachers ( $n = 7$ ) in their PD needs. Specifically, content teachers at EMI colleges and EMI programmes reported more on their inadequate English language proficiencies, as explained by P2-C2: 'I think there are not many teachers who can speak English fluently. I feel that it is because of our environment, where people are still used to communicate in Chinese', which reflects the fact that teachers who teach more than one medium of instruction may have more difficulties teaching through L2 (i.e., English) to students who are mainly L2 speakers of English. Therefore, teachers confessed that they still need training in developing their English: 'I still think that my English ability is insufficient' (JC1-C2), and 'I want to know how to explain complicated content in English to my students' (JC2-C1).

PD leads also acknowledged the needs to develop English proficiency for both content and EAP teachers (especially ESAP teachers). For instance, JC2-PD2 indicated that: 'There is a need of specific English language training for ESAP teachers in EMI contexts' based on her observation of ESAP teachers' teaching practices and therefore advocated the need of 'formal EAP training for staff'. Moreover, JC3-PD1 stressed the importance of constantly updating teachers' English proficiency: 'I think there is a danger that once teachers start teaching, they probably do not focus in on the language areas that they have difficulty with, so they may get stuck at their own level of proficiency'. She also showed

the awareness of varieties of English: ‘I think any international university is delivering EMI programmes. You are going to meet English speakers from a variety of countries, and very few speak without making errors. So what you really looking for is how people communicate through that language’. That is, it would be pointless to encourage or train staff to communicate in flawless English, but rather letting them acknowledge the function of language is to communicate in real environment where speakers speak various languages.

#### ***5.2.3.4 Intercultural communication skills***

Developing *intercultural communication skills* was found to be required primarily by EAP teachers (n = 7). Teachers indicated their needs of understanding more about their students in terms of educational and cultural backgrounds: ‘We should build on an awareness of students’ educational backgrounds’ (JC1-LS1), ‘I think teaching in EMI contexts requires a cultural awareness of the context you are teaching, and you should be very adaptable to the new culture. And you need strong interpersonal communication skills to interact with your students’ (JC1-LS3). In addition, the necessity of developing intercultural communication skills is also merited in teaching international students (see section 5.2.3.2).

In particular, foreign staff witnessed that they should change some of their teaching methods because of the cultural difference with the local students. For example, U1-LS1 reflected that: ‘It has been a challenge to some of the students who have not had a foreign teacher before, and they are not very willing to speak up. I think that is a very cultural thing..... I have changed a few of my teaching approaches because of that’. Also, U1-LG3 discovered that her ‘western communicative style teaching’ was not quite effective in the classroom with local students: ‘I was new to China, and at that time I had a very weak understanding of the approach to English language teaching in the new context. ..... So what I would love to see is more intercultural training if possible’.

It is found that this need is all raised by foreign staff (n = 7) who may have limited understanding of the local EMI context (i.e., Chinese context). With

these intercultural issues raised by teachers, suggestions such as ‘some support of understanding of the local context to teach students more effectively’ (U1-LS2) are made by teachers.

#### ***5.2.3.5 Collaboration between content and EAP teachers***

Only two EAP teachers indicated *collaboration between content and language teachers* in their PD need, it is perhaps associated with teachers’ limited knowledge of collaboration between CT and LT (also see section 5.3.2.2). For example, as reflected by JC1-LS3: ‘I would encourage collaboration, which is generally stemmed from networking like approaching engineering faculty (content teachers) and attending events. And you need to be open and willing to discuss things with engineering faculty’. The EAP teacher was aware of the value of how collaboration with content teachers that may bring to ESAP course, making the linguistic knowledge more relevant to the subject content course. Another example is shared by U1-LG3, while not specifically called for collaboration between content and EAP teachers, stressed the need for teachers working in international environment to be adaptable and open to connecting with others: ‘Teachers should have a very good adaptability and be trained to collaborate with different teachers, as we are in an international university’.

#### ***5.2.3.6 Academic research skills***

Two EAP teachers required academic research skills, although they were found to have no mandatory publishing duties. For example, U2-LG1, who had an education-related PhD and an EdD, considered that cultivating the ability of researching and publishing could be the pathways towards career development for EAP teachers: ‘My experience is if the EAP teachers are not researchers, then they will be stuck in teaching..... I think the university should offer some skills training like this for teachers who want to get promoted to be academics’. Another EAP teacher believed that researching skill should be mandatory for teachers in university settings: ‘Teacher should be good at researching. You (EAP teacher) need to acquire certain research of goals, not only because you need to teach the students about academic writing, how to do research in English, but also the teacher can be benefited from doing research. For example, the action

research. We can improve our teaching practice by doing that' (U7-LG1). This suggests that EAP teachers should understand the 'academic' side of EAP by knowing how to do academic research in English, and guide students through the process. Moreover, like content teachers who always have researching duties, EAP teachers can also conduct research such as action research based on teaching practices in their classroom, which is not only conducive to themselves as academics, but also helpful for innovating teaching approaches by practice.

To briefly sum up, stakeholders' perceptions towards PD were conceptualised into teachers' evaluation of PD, factors that facilitate or inhibit PD, and teachers' PD needs, presenting mixed perceptions. Taken together, stakeholders' perceptions towards professional development are shaped not just by their duties and experience, but also by the openness to institutional diversity and pedagogical change. These bottom-up insights can therefore inform the design and implementation of PD.

By reviewing how different PD needs were raised, it is worth noting that different groups of participants seemed to have different PD needs. For example, EAP teachers particularly ESAP teachers expressed a need for more training of specialised content knowledge, which highlighted the importance of providing differentiated PD provisions tailored to specific teaching cohorts. In contrast, only content teachers, particularly local Chinese ones, reported a need of English language training, which can be attributed to their limited EMI experience. Meanwhile, only EAP teachers, all from English-speaking countries, identified a need for training in intercultural communication skills. It is indeed an aspect needing more attention given the cultural difference between Anglophone and non-Anglophone contexts (see section 3.4.3).

Additionally, while very limited in numbers, there were exclusively EAP teachers who highlighted the need for more training of teachers' collaboration, confirming that teachers' collaboration has not officially recognised by the institutions (see section 3.5). Similarly, only two EAP teachers (both with PhD degrees) emphasised the need for training of academic research skills. It reveals that EAP teachers' PD needs are often overlooked compared to those of content teachers, as evidenced by the smaller number of PD provision (see section 5.1).

Additionally, their limited emphasis on academic research skills may stem from most EAP teachers holding master's degrees, with no research components required in their current roles.

### **5.3 What are stakeholders' perceptions towards how collaboration between content and language teachers is addressed in their professional development opportunities?**

To address RQ3, interviewees' perceptions towards how collaboration is addressed in PD are discussed with themes emerged from the thematic analysis (see *section 4.7.2*). Following the pattern indicated in section 5.2 regarding determining more salient themes than others (see Appendix 4), two main themes emerged, namely factors that facilitate or inhibit collaboration in PD and teachers' attitudes towards collaboration in PD, both of which are followed with various sub-themes identified (see Table 5.3-1).

Research question	Theme	Sub-theme	Category
5.3 What are stakeholders' perceptions towards how collaboration between content and language teachers is addressed in professional development opportunities?	5.3.1 Factors that facilitate or inhibit collaboration (in PD)	5.3.1.1 Institutional factors	Leadership issues Mechanism of collaboration Incentives of collaboration Resources of collaboration
		5.3.1.2 Individual factors	Teachers' awareness of collaboration Teachers' mutual understanding Teachers' time schedule Teachers' interpersonal relationship
	5.3.2 Teachers' attitudes towards collaboration between content and	5.3.2.1 Positive attitude	
		5.3.2.2 Wait-and-see attitude	

	language teachers (in PD)	5.3.2.3 Negative attitude	
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Table 5.3-1 Emerging themes, sub-themes and categories (with section numbers) for RQ3

The following is to present the results in relation to themes and their sub-themes attached with numbers of coding references (see an overview in Figure 5.3-1 below).

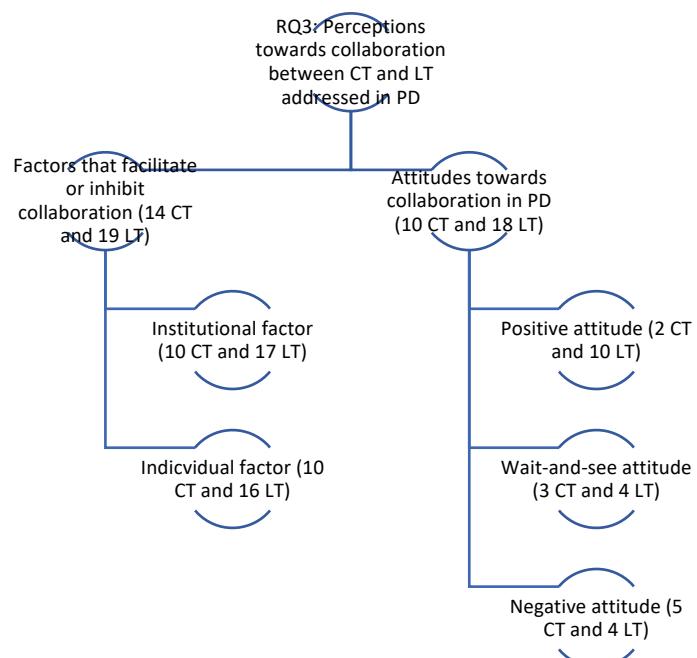


Figure 5.3-1 Themes and sub-themes of RQ3

### 5.3.1 Factors that facilitate or inhibit collaboration

To reflect on how collaboration is addressed in PD, a range of factors were identified based on teachers' interviews, which are further coded as categories under two sub-themes namely institutional factors and individual factors (see Table 5.3.1).

#### 5.3.1.1 *Institutional level factor*

As shown in Figure 5.3.1, teachers (10 CT and 17 LT) elaborated on a range of institutional factors (with varying salience) that may influence the initiation of collaboration between content and EAP teachers in PD, namely *leadership issues, mechanism of collaboration, incentives of collaboration and resources of collaboration*, each of them is discussed below.

### ***Leadership issues***

As shown in section 5.2.2.1 on factors that influence PD, leadership issues were again raised in the interview when participants reflected on factors that influence collaboration in PD. More than half of the teachers (10 CT and 12 LT) thought the institution is not ready for managing collaboration between content and EAP teachers in terms of various issues. Firstly, teachers discussed how the university structure may inhibit collaboration. Among the 13 participating institutions, EAP teachers are affiliated with faculty of Applied Linguistics (i.e., U1, U2, U3, U4, U5, U6, U7) or Foreign Studies (i.e., JC2, P1, P2, P3) under school of Humanities and Social Sciences, followed by independent language centres (i.e., JC1, JC3). The institutional affiliation of EAP teachers in participating universities points out diverse structural patterns, which have an impact on their views on collaboration with content teachers. For example, it is reported by an EGAP teacher that currently teachers at different departments in EMI settings are ‘working in their silos’ that ‘the chemistry faculty are together, the mathematics people are together’ (U1-LG3). Teachers are most likely working within their departments and as a result, ‘there is not much interaction between departments’.

Similarly, an ESAP teacher resonated with this point that how university is currently structured makes it difficult for teachers to have some collaboration beyond departments: ‘So sometimes this departmentalisation of different programmes at universities can create a bit of a barrier towards communication’ (U1-LS2). PD leads also casted doubt on the university structure: ‘If the structure keeps things apart rather than together, that can also be an issue’ (U1-PD2). Those quotes showed both teachers and PD leads have acknowledged the issue caused by the current university structure, rather than calling for its complete overthrow. This structural positioning often places EAP teachers outside

disciplinary faculties who deliver content courses, reinforcing organisational boundaries between language and content teaching. Such separation may affect how EAP teachers' expertise is perceived within EMI. When EAP teachers are institutionally distanced from EMI programmes, their roles are more likely to be regarded as auxiliary or service-oriented rather than an integral part of subject teaching and learning. This may lead to a lower academic status and reduced recognition of EAP teachers, especially when compared with content teachers who are embedded within disciplinary departments.

This leads to the discussion on how to facilitate collaboration of teachers from different departments. In this regard, U1-PD1 reflected that the difficulty may firstly lies in coordinating the leads at different departments:

There is a great deal of resistance among particularly leadership within both sides. An example is the dean of school of sciences and the associate dean of learning and teaching, they are not willing to criticise anything that each school does. I believe there is a professional courtesy of keeping the peace and not creating any discord between the departments. And then they do not want that collaboration to occur, because they feel it is stepping over the line of where responsibilities begin and end.

JC2-PD1 also reflected on how content and EAP teachers were arranged to work together in his institution: '[t]hey have a shared office for content and language teachers to informally discuss their courses and get the update of each other's courses'. However, it should be noted that it can be realised in EMI joint colleges, because it is a small college with a few EMI programmes affiliated with a CMI university (also see section 1.1.1.1 on different management modes across different types of EMI provision). By doing this, content teachers and EAP teachers could have a shared space for exchanging issues raised in the classroom and proposing collaborative practices by eliminating geographical limitation.

In addition, teachers also believed that certain educational practices such as collaboration should be proactively promoted by the top-down manner. As reflected by U2-C2: 'A bridge between different departments should be constructed by the leads of the institution, so teachers can help each other by

providing their expertise'. Also, U1-LS1 indicated that '[t]here needs to be more push from the management level in terms of giving more space for the collaboration to happen'. It is noted by teachers that from the institutional perspective, some top-down mandatory endeavours are required for some new educational practices to be put into practice.

Specifically, it is recommended that 'leads or deans can make some efforts such as deliberately organising teachers in some communication first between content and language teachers. It may be better to do it consciously' (P1-LG2). In this way, teachers may recognise the significance and urgency of such practices as they are endorsed at the policy level. Moreover, it should be clearly written in the relevant policy to ensure the sustainability of implementation, as U1-LG1 concerned that: 'If it is not embedded within policy, then it is likely to be shelved soon. And it is only going to be individual instances at the end'. This suggests that collaborative practices are at the risk of being side-lined if not endorsed at the policy level.

Leadership was also reflected in more specific ways. For example, if collaboration is normalised as a PD activity, there needs to be an adjustment to the current workload distribution of teachers (also see section 5.3.1.1.3). Teachers were quite cautious of managing their workloads. References such as: 'What is the workload for this? How is counted? We are really practical to our time' (U2-LG1), 'It is difficult to define a clear workload. For example, I provide extra language support for a content course, then I will be given two hours waived, but in fact I may have worked four hours including the preparation materials or attending content lectures. This kind of workload is inestimable, which means that it is not exactly the same as my workload that may reflect on the sheet' (U7-LS1).

Thus, it is understandable that why teachers were very careful of using their working hours, because as the workload is fixed, then hours for other duties are correspondingly reduced if collaboration is introduced (also see section 5.3.2.2 below). However, in some institutions where no workload is allocated to non-teaching practices, EAP teachers may have to do certain duties in their non-working time: 'Because we were quoted for teaching. Here we do not have the

workloads that put towards scholarship or research. So any kind of extra research or collaboration is kind of unpaid or you are doing it in your free time' (JC2-LG1). It is also the case for content teachers even though they are given certain workload to do research, still, they (e.g., U3-C1, JC1-C1, P1-C2) found it difficult to have more practices. Hence, it is the institution leads' responsibility to make adjustments to help teachers to try out collaboration.

### *Mechanism of collaboration*

Mechanism of collaboration refers to an effective operating system for collaboration to function properly. Teachers (4 CT and 3 LT) who raised this issue mainly indicated the current lack of mechanism of collaboration in their institutions. For example, U1-C1 shared a failed example of a collaborative practice due to the lack of the mechanism with detailed guideline: 'There used to be co-teaching courses jointly delivered by EAP teachers and content teachers. But it only lasted for a few semesters and has been shut down. I heard it was because the courses were separately delivered by EAP and content teachers at the end. There probably lacked a mechanism of working together and teachers also did not know how to do co-teaching'. This suggests that even collaboration can be initiated, efforts need to be made to ensure its effective functioning under a mechanism with holistic guidelines for teachers, which is currently lacking in the participating institutions.

Specifically, it is acknowledged the difficulty of establishing a collaboration mechanism in EMI programme provision type, which is also related to the issues of university structure (see section 5.3.1.1.1). As P1-C1 reflected: 'I am afraid it is very difficult to start up, unless the leads are determined to do so, but based on the EMI provision in my university, it seems even harder'. Therefore, leads at different types of EMI provisions should take into contextualised consideration to promote collaboration at their institutions.

### *Incentives of collaboration*

A few teachers (4 CT and 2 LT) also commented on *the incentives of collaboration*. To start with, reducing the originally allocated working hours is

regarded as an incentive for teachers, as shared by P2-C2: 'If I have more time allocated, I will try it (collaboration) sometime in the future'. In addition, monetary incentive and career promotion are also indicated by some teachers as possible incentives of collaboration: 'If it is related to the raise in salary or career promotion, then I will try' (JC2-C2), 'If it will help me with my career development, then yes' (JC1-LS2). Moreover, it is found that project-based collaborative practice is also preferred by teachers, as the experience accumulated from the practice is beneficial to teachers' professional development: 'Teachers need to be motivated to be rewarded for doing collaboration. For example, if journal articles could come out as a result of the collaboration process, that will be more helpful' (U1-C1).

Also, some teachers indicated that even if there are incentives provided, they still did not see the point of collaboration (also see *section 5.3.2.2* below). References include: 'I think teachers of both parties may lack the motivation to collaborate' (JC3-C2), 'I think you cannot force someone to collaborate' (JC1-LS2). This is also associated with the leadership issues (see *section 5.3.1.1.1*) in terms of making collaboration's value clear to teachers and empowering collaborative practices at the policy level. Moreover, it is important that teachers' efforts invested in collaboration should be recognised at the institutional level. For example: for those who have participated in certain collaboration practices, their efforts can be counted as 'an extra point added on the annual evaluation performance of teachers' (U1-C1), which may increase teachers' motivation.

### *Resources of collaboration*

*Recourses of collaboration* is understood by few teachers (2 CT and 4 LT) by human resources and financial resources which enable collaboration. In general, teachers noticed the 'staffing issue' (U7-LG1), 'expensive human resources' (U6-LS1), and 'no budget for collaboration' (U1-C1). Specifically, some pointed out that the leads' limited understanding of the importance of collaboration may account for the lack of resources of collaboration, as they do not see the point in investing: 'I also found that the leads at my university may not be the experts of this (collaboration), and maybe they have not been teaching for years' (JC2-

LG1), suggesting that there is a great need of qualified trainers to with the knowledge and practice experience to coordinate collaboration. And this is also reported by teachers: ‘There is no trainer of collaboration’ (U1-LG1), ‘maybe we do not have experts to guide such collaboration’ (U6-LS1).

The importance of collaboration coordinator has also been stressed: ‘[t]here should be a general and overarching coordinator at the top to make teachers to align with each other. Otherwise, it is really difficult to scale up to the university level’ (U2-LG1). That is, if collaboration is a goal that institutions want to promote and derive some effect from, someone has to be especially assigned to design the context-specific collaborative practices, coordinate collaborators, monitor the process and provide feedback. This is also related to the leadership issues and mechanism of collaboration (see above).

It can be seen that these institutional factors reported above are somehow intertwined with each other. The following is to discuss the individual level factors that were identified to influence collaboration between content and EAP teachers.

### ***5.3.1.2 Individual level factor***

A range of individual factors (with varying salience) have also been identified from the interview data (see Table 5.3.1), namely, *teachers' awareness of collaboration*, *teachers' mutual understanding*, *teachers' time schedule* and *teachers' interpersonal relationship*.

#### ***Teachers' awareness of collaboration***

It is found that teachers' awareness of collaboration is likely to influence their willingness to further collaborate with their counterparts (i.e., content teachers or EAP teachers). Moreover, their awareness of collaboration is conceptualised by teachers into several aspects. That is, teachers are likely to collaborate with their counterparts out of different reasons, each of them is discussed below.

#### **For the sake of better students' EMI experience**

Teachers (6 CT and 6 LT) believed that initiating more collaboration between content and EAP teachers is for the sake of students. It is found that some teachers believed that collaborating with counterparts allows them to gain some knowledge from another side, so that content and language can be better integrated and taught to students. References include: 'Everything we are doing is out for the students. EAP teachers have some expertise in something we (content teachers) are not good at. So when the students are L2 speakers of English, teachers collaborating together can be definitely helpful for students to improve their English and that will actually make our job easier' (JC1-C1), 'I would do that (collaboration) if I think it is going to benefit my students, because I can understand the language side better through this kind of collaboration' (U2-C2). In addition, teachers' collaboration can also benefit students in a less formal way through teachers' occasional conversation about students' issues, as reflected by JC1-LS3: 'I think I can ask any questions with engineering content teachers. And if I can, I will meet them frequently to ask them what else I can support students'.

PD leads also advocated that collaboration between content and EAP teachers would be beneficial for students as the subject content and EAP courses can be more relevant, as reflected by U1-PD1: 'I think it is very important, mainly because students need to become more familiar with the specific vocabulary and jargons of different subjects. So that they can comprehend the content better and engage with their discipline classes'. Consequently, the separation previously existed between content and EAP courses can be gradually reduced, and students can be more actively engaged with their studies as they get to know the function of EAP courses for their EMI studies. As U1-PD2 commented,

I think it (collaboration) is essential. That is a missing piece currently. Students need the meta cognition about how their academic English learning is essential for their academic work (content learning). Otherwise, the EAP content are not linked to what students need in their content courses, there will be a huge disconnect. Currently they do not necessarily link what they are doing in EAP class with what they are doing in a content class.

It can be seen that content and EAP teachers as well as PD leads are aware of the value of collaboration for the sake of students' better EMI study experience. By collaborating more with their counterparts, some misunderstandings from another side can be eliminated and a bridge can be built to dispel the disconnect between content and EAP courses.

### **For teachers' self-development**

Moreover, teachers (4 CT and 2 LT) thought that collaboration is generally conducive to their self-development as they appreciate the opportunities to learn from one another. For example, 'I think universities should build more of these opportunities and try to get different disciplines' teachers to interact with each other and learn more about each other' (JC3-C1). Teachers also witnessed the need of upgrading themselves: 'I think 'interdisciplinary' has become the buzzword in academia in recent years. We are all told that we have to try more things across disciplines. So we are not expected just to work in our own areas anymore. In principle, that is a good idea to collaborate. And I am in favour of that if it can add value to my professional development' (U2-C2). Teachers also regard collaboration as an opportunity to challenge themselves. For example, I enjoy the possibilities. I think it would work really well, a lot of great stuff will come out of it. I would happily work with content teachers' (U1-LG3), and 'I would like to have more challenges or to know new things. I will not refuse any possibility' (U4-LG1).

### ***Teachers' mutual understanding***

*Teachers' mutual understanding* especially regarding the roles of their counterparts (i.e., content or EAP teachers) has been found as a factor that may influence their willingness to collaborate. More specifically, teachers' understanding of EAP (as a subject) and teachers' understanding of content subject emerged as two categories, which are discussed below.

To start with, few teachers ( $n = 5$ ) indicated that collaboration requires bi-directional respect and understanding of teachers. For example, JC1-LS1

reflected that: 'I think it works both ways for an interchange of knowledge and could improve the overall provision of content as a result. We need to learn from the content lecturers, and they can also learn from us (EAP teachers)'. Likewise, U1-LG2 indicated a possible lack of understanding of each side: 'It could be that content teachers have little understanding of the strategies of teaching content in English, as well as EAP teachers may lack understanding of how language used in particular subjects. So more sharing between the two parties is highly recommended'. This point also resonated with one PD lead: 'I think it (collaboration) could be fantastic, but it needs investment from both sides, and they need to understand each other'. (JC3-PD1). The following is to discuss content and/or EAP teachers' understanding of their counterparts.

### **Teachers' understanding of EAP as a subject**

There is varying evidence showing content teachers' understanding of EAP by 6 CT and 8 LT. On the one hand, it is found that content teachers with some knowledge of EAP were more welcome of collaboration. For instance, as JC3-C2 reflected: 'I think it is very important. I think the core purpose of EAP is to teach students the academic skills they need in EMI study. If we (content teachers) do not know what their programme (EAP) is about, then the purpose of teaching EAP is unclear'. In addition, content teachers asked for support from the EAP side as they have acknowledged what benefits EAP could bring to the content courses. For example: 'When students have problems with how to make good presentation, then this is where EAP teachers can help' (U3-C1). It is also shared by one ESAP teacher: 'I think the engineering faculty are very open to collaboration, perhaps because they understand that students need extra language support in an EMI context. So there is definitely a willingness to collaborate with language teachers' (JC1-LS3).

On the other hand, some content teachers were found to have a negative attitude towards collaboration, which may be associated with their limited knowledge of EAP. As U2-C2 reflected: 'I think some content teachers are partly ignorant of what the EAP teachers do because of their (content teachers) misconception of EAP teachers'. Indeed, it is widely acknowledged that EMI's job is to mainly or solely teach content to students through English, but content

teachers may simply ignore their students' English issues as well as the function of EAP that better guiding students through the content learning through a second language (i.e., English) of students. Some content teachers also ignored that EAP teachers' efforts made in making EAP content more specific to subject content. For example, a content teachers commented: 'For EAP teachers, they may have a deep understanding of English. But when it comes to some professional terms in the subject, I believe they are not clear' (P1-C2).

Content teachers' lack of understanding of EAP was also observed by EAP teachers. For example, 'It is often unclear to subject teachers what role EAP exactly play in supporting their students, they (content teachers) often do not have a particularly clear idea about what sort of support EAP teachers are able to offer' (U1-LS2), and '... perhaps there is a lack of content teachers' understanding of how or what language support that I (EAP teacher) could provide' (JC1-LS3).

It is also found that content teachers' resistance of collaboration with EAP teachers may lie in their ego. As U2-C2 discovered that: 'I think the content lecturers see their job as teaching the content, and they normally have a PhD in their fields. I found that they are very unlikely to go to an EAP tutor who does not have a PhD for help due to a perception that 'I am an academic in my area'. I think that would be why they would not do that (collaboration)'. This leads to the discussion of the different status of EAP teachers and content teachers who usually have a higher degree like doctorate, which EAP teachers themselves have also noticed. Some reflected that EAP teachers are likely to make more efforts to promote collaboration between two parties. As U7-LG1 shared: 'It depends on how EMI instructors perceive the positioning of EAP, and whether they would like to communicate with EAP lectures. I think EAP teachers are always ready to collaborate'. Moreover, U6-LS1 shared her observation of the current situation of EAP teachers and how they want to escape from their current jobs to be more 'professional as an academic':

I do not want to put labels on us (EAP teachers), but at least some perceive EAP teachers as grassroots in the university setting. For example, I knew a content teacher who obtained her PhD in linguistics recently was

an EAP teachers few years ago. She works in the Education department (as a content teacher) saying goodbye to our school of language. Perhaps she thinks this (the school of language) is not a good environment for her career development, and now she can do more research and become an academic. So I have this reflection, it is necessary for us (EAP teachers) to find our own specialities and show our voice in especially in the academic community.

She also witnessed the ‘dilemma’ of EAP teachers being ‘trapped’ in teaching year after year without having working hours left to enhance their research abilities which is prioritised under *the publish or perish culture* in the universities. As a consequence, ‘For the majority of us (EAP teachers), we should accept the reality that we have to teach for many hours year by year. It is quite miserable, and accepting misery is also a part of our characteristics’ (U6-LS1).

This EAP teachers’ thought-provoking reflection further leads to the discussion of the recognition of teachers’ efforts made in their different roles, such as researching, teaching and so on (see section 5.3.2.1). PD leads also noted that EAP teachers’ lower position than content teachers, and casted doubt on the personnel structure in universities: ‘I do think that there has a problem that content lecturers often feel that they are in a higher position than the language teachers. They think that way because of how they are placed within the university system. Language teachers are not lecturers, they are titled as teachers. You know title is very important in education’ (JC3-PD1). U1-PD2 therefore encouraged EAP teachers to take the lead in educational practices such as collaboration to change their status in the university: ‘So we would hope all language teachers would take the lead (in collaboration) rather than just following content teachers and being their assistants, as least they should work with each other, not for one side’. By doing so, EAP teachers’ efforts made in teaching can be recognised by leads at the institutions, which may do good to improve their peripheral situation in the university (see section 3.2.3). It should be clear to both content and EAP teachers that collaboration is supposed to be carried out on the basis of the equal status of two sides.

### **Teachers’ understanding of content subject**

Teachers' understanding of content subject is dominantly reported from EAP teachers ( $n = 5$ ). It is found that EAP teachers generally showed a positive attitude towards collaboration and expressed their interest to know more about the subject content. Specifically, teachers indicated that the acquisition of content knowledge might help with their own EAP curriculum development. For example, 'I feel like it would be useful to speak with content teachers, as we (EAP teachers) cannot suddenly know all the vocabulary and knowledge in certain subjects' (JC2-LG1). Similarly, JC1-LS1 shared his experience of designing ESAP courses: 'It is hard when you get onto the vocabulary in the subject, then that is where you need collaboration with content specialists'.

In addition, EAP teachers realised what content teachers can offer by getting a closer look at content courses, for example: 'Only recently really when we (EAP teachers) got the recordings of maths lectures, and we started to really know something about the contents side and that was really useful to us' (JC1-LS1), and 'We (EAP teachers) need the subject experts to be able to help us because we need the subject knowledge to make our ESAP courses more relevant to the students' (JC1-LS2). These quotes show that ESAP teachers are perhaps more aware of the value of content to ESAP curriculum development and therefore welcome more conversation and collaboration with content teachers. Moreover, EAP teachers acknowledged that it is also good to accumulate experience by working with content teachers as their knowledge base is likely to broaden: 'I can gain multiple teaching experience gradually by working with engineering lecturers. It is a case of letting EAP teachers know how English is used in certain subjects' (JC1-LS3).

### ***Teachers' time schedule***

Several teachers (8 CT and 10 LT) reflected that their time schedule might inhibit them from collaborating with their counterparts. Teachers' time schedule was also found to be one factor influencing teachers' PD participation (see section 5.2.2.2.1). Again, content and EAP teachers reported their time schedule with heavy research work for the former and intensive teaching hours for the latter. Faced with heavy workload, teachers tend to be careful and pragmatic

when choosing PD opportunities and also collaboration practices. For example, as JC3-C1 confessed: 'I will be very pragmatic about the use of my time. I will give it a try, but I do not want to waste my time if there is does not work out'. P2-C1 similarly reflected that: 'Because our scientific research tasks are also heavy, and we do not have so much time to collaborate'.

Teachers whose work contract allocates a certain percentage of PD opportunities still expressed their concern of time issue, for example, JC1-LS2 shared his experience of a collaborating projects: 'We three EAP teacher did the collaborating project (mathematics corpus), which took 3 years for us to finish. And now it may take few years to examine its effect. If you see those who have no working hours allocated to such practices, they then have to use their extra time. So I think I am lucky somehow in this sense'. It can be seen that collaboration requires a large amount of time invested by collaborating teachers as well as constant institutional support (i.e., working hours distribution) to make some actual effect.

### *Teachers' interpersonal relationship*

Teachers (2 CT and 5 LT) also indicated that teachers' interpersonal relationship including their personal characteristics can be a factor influencing their willingness of collaboration. An ESAP teacher (U2-LS1) shared her good experience of collaborating with kind content colleagues for designing the ESAP curriculum: 'It is definitely very approachable based on my own experience. In the past month, I interviewed about five music faculty, and all of them responded my email and then talked with me about the subject matter. So I would say it has been a very smooth and easy process. I am super lucky to have very cooperative and supportive colleagues'. Similarly, JC1-LS2 reflected that: 'I think the engineering teachers are very open to collaborate with me if needed, because we have good relationship'.

However, teachers expressed that collaboration may be difficult to implement if collaborators are unfamiliar with each other, for example, 'If someone is working with someone he does not know well, he may not have much communication privately, even if you have meetings together' (P2-LG2). U2-LG1

also pointed out: 'I think many teachers will not be ready for that (collaboration). It is difficult to collaborate with someone you do not know'. JC3-PD1 added that: 'It would be very helpful if you have got the right interaction and you have people that feel comfortable with each other'. This suggests PD trainers to firstly create a warming atmosphere for possible collaborators to get to know each other, so they may find the most suitable partners for further collaboration.

It is also recommended that teachers from both sides can start with some informal conversation to break down the walls between disciplines. For example, 'I think it will be a good start for teachers to just know more about what is happening outside of their disciplines' (JC2-LG1). U2-C2 also gave an example: 'Once a month, teachers meet for an afternoon. We all just get together and talk. That was actually extremely useful for collaboration because you find out what people are doing. You start to get ideas, because you see the potential connection of your work with someone's, which you might never even have considered'.

To briefly sum up, to operate collaboration in PD, accompanied by institutional factors, individual factors should also be considered as teachers are the practitioners of collaborative practices. Teachers' perceptions towards how collaboration is addressed in PD would shed light on the future standardisation of collaboration in PD from the institutional and individual perspectives. If those factors identified above can be fully taken into account in the design and implementation process, then it is highly likely to achieve the value of collaboration as advocated by scholars.

### **5.3.2 Teachers' attitudes towards collaboration between content and language teachers in PD**

Apart from institutional and individual factors as main themes of RQ3, it is also found from the interview data that teachers showed mixed attitudes towards collaboration between content and EAP teachers in PD, with positive, wait-and-see, and negative attitudes coded as sub-themes (see Figure 5.3-1). Each is discussed as follows.

### **5.3.2.1 Positive attitude**

A notable divide in attitudes toward teacher collaboration was observed between EAP and content teachers, with half of the EAP teachers ( $n = 10$ ) and only two content teachers showing a positive attitude. Teachers who advocated collaboration between content and EAP teachers describe it as ‘good idea’, ‘great opportunity’ and ‘more (collaboration) should be done more’.

Specifically, teachers’ positive attitude would be explained by the awareness of the trend of interdisciplinary concept in teaching and researching in HEI contexts: ‘I think interdisciplinary has become the buzzword in academia in recent years. And we are all told that we have to do things across disciplines. So, we are not expected just to work in our own areas anymore’ (U2-C2).

Teachers also shared their optimism toward collaboration from the perspective of their roles, for example, an EAP teacher proposed that content teachers should be involved in collaboration to help EAP teachers especially ESAP teachers with issues such as how language is used in specific subjects: ‘I think it (collaboration) needs to be done. For example, I think it is necessary to invite some content teachers to help language teachers who are teaching ESAP for different disciplines’ (P2-LG2). Similarly, it resonated with another ESAP teacher who recognised the value of collaborating: ‘I would like to try to collaborate with them (content teachers) to make my EAP course as specific as possible’ (U1-LS1). Teachers also viewed collaboration in an optimistic light, believing that it is ultimately for the benefit of students (also see section 5.3.1.2), as reflected by U4-LG1: ‘I think it (collaboration) would be quite beneficial for the students in their own subjects and also maybe in their future employment’. This implies that collaboration between content and EAP teachers in scenarios described above allow content and language (i.e., English) to be more organically integrated in EMI teaching, thereby increasing students’ learning efficiency in EMI learning.

Teachers’ positive attitude was also found to stem from their past or on-going experience of collaborating with their counterparts. For example, an EAP teacher shared his on-going collaboration project with Mathematics lecturers

regarding creating a corpus list for Mathematics subject: 'It (the collaboration project) is going well so far..... the creation of the corpus list.....We were kind of blurring the lines for the students between what is that in Mathematics lesson and in English lesson, which is interesting' (JC1-LS2). Another teacher who was also in the project positively commented that: 'From my experience, the project has been very positive. It helped me build good professional relationships with various different faculty members' (JC1-LS3).

#### ***5.3.2.2 Wait-and-see attitude***

Few teachers (3 CT and 4 LT) chose to hold a neutral attitude towards collaboration, and reasons varied. Teachers who have no past experience of collaboration generally held a wait-and-see attitude. For example, although willing to try, some teachers were cautious about the outcome of collaboration: 'I think I will try to collaborate with EAP teachers. I would not exactly say no at this point. I need to see if it could make some sparks first, and if so, I will continue to do it. But if not, I will give up soon' (P1-C2). Similarly, U1-C1 expressed her concern considering how collaboration would take up teachers' original working hours: 'I think I am very pragmatic about my time and what I need to achieve within a working day'. Such attitude was also found to be associated with teachers' current roles, for example, a EGAP teacher held reservation towards working with content teachers: 'I have zero collaboration with content teachers due to the nature of me (EGAP) teaching to year-one students, therefore it does not require that sort of collaboration. But those who teach ESAP to year-two and year-three students obviously should work with content teachers' (U1-LG2).

#### ***5.3.2.3 Negative attitude***

There were also a few teachers (5 CT and 4 LT) showing negative attitudes towards collaboration between content and EAP teachers in PD. It could be explained by their unpleasant experience of collaboration which was implemented at a relative superficial level. For instance, U1-LS1 shared that: 'I do not think it is in-depth collaboration, it was very brief and general. You just know their (content teachers') needs through some regular meetings. Then there

is no follow-up to get feedback from the either side', which also points out the leadership issues in organising collaboration between content and EAP teachers (also see section 5.3.1.1.1). Moreover, in particular, content teachers who have no past experience of collaboration seemed to be more resistant to it, as reflected by how they described collaboration, such as 'I see no point doing it (collaboration)' (JC2-C2), 'I am not interested' (P2-C2). It is assumed that their attitude is associated with their awareness of collaboration (see section 5.3.1.2.1).

To sum up, teachers expressed mixed attitudes towards collaboration, with EAP teachers showing greater enthusiasm and engagement. Moreover, teachers' past experience of collaboration (successful or less successful or zero) is identified as a factor influencing their attitudes towards collaboration. More specifically, the positive influencing factors include the awareness of the trend of interdisciplinary concept, the importance of integrating subject content and EAP (mainly reflected by ESAP teachers), and also the recognition of the ultimate benefit that collaboration brings to students' academic success in EMI. In addition, teachers with no previous experience of collaboration tend to think about collaboration with a pragmatic attitude and take a range of aspects (e.g., time, workload distribution) into consideration before taking action.

#### **5.4 Chapter summary**

This study contributes to examining various of aspects of the PD opportunities for content and EAP teachers in Chinese EMI contexts through a self-built list of TPD evaluation criteria summarised by previous literature (see section 3.4.3.4). In addition, teachers' perceptions towards PD opportunities and how collaboration is address in PD are explored. Put together, this study provides both objective and subjective insights on the design and implementation of teachers' PD opportunities and the promotion of collaboration in PD.

Specifically, various formats of PD provisions and a few collaborative practices between content and EAP teachers in PD were identified from different types of EMI provisions (i.e., EMI university, EMI college and EMI programme). Pedagogical skills development was the most common PD objective revealed in the PD

documents, and it was confirmed by teachers as their most requested PD needs in the interview. In addition, teachers' collaboration was also covered frequently in PD objective, but did not necessarily indicate collaboration between content and EAP teachers, which has not been stressed by teachers in their PD needs either.

Some structural aspects in the evaluation criteria list namely *relevance of teachers' needs, sufficiency, sustainability, and up-to-date PD content* were also reflected in teachers' interviews when asked their perceptions towards PD opportunities. Such overlaps of aspects when evaluating TPD suggest that the design and implementation of PD should be informed by both objective and subjective insights. Moreover, language specialists are the main PD trainers in the PD opportunities found in participating institutions, which implies an absence of the involvement of content specialist in the delivery of PD.

The PD needs of teachers varied notably by groups. Local content teachers primarily requested more English language training, reflecting their commonly reported linguistic challenges in EMI. Meanwhile, foreign EAP teachers highlighted PD needs of specialised content knowledge and notably intercultural communication skills. Although fewer in number, EAP teachers were the sole group raising the need for more teachers' collaboration and academic research skills, suggesting the lack of institutional attention on specific PD needs from different teaching cohorts.

Teachers also made constrictive comments on the current PD provisions and how collaboration is addressed in PD, which provides insights from the institutional and individual perspectives for the further design and implementation of PD and collaboration in PD. To start with, bi-directional effort of PD implementation should be made by the PD leads and teachers to avoid the risk that PD opportunities do not cover the challenges and PD needs reflected by teachers. Also, the results showed that it is not an easy task to promote collaboration in PD. Teachers reflected that collaboration should be undertaken from a top-down manner and mandated at the policy level so as to make collaboration an important educational practice in PD. In the meanwhile, efforts should also be made to recognise and reward teachers' endeavours of collaboration. Issues such

as the differences of status of content and EAP teachers, awareness of collaboration and teachers' mutual understanding deserve particular attention in terms of creating a more equal and harmonious working environment among different teaching cohorts. To realise the value of collaboration advocated by scholars, it is also necessary to consider the qualification of collaboration coordinator and the refinement of guideline of collaborative practices.

# Chapter 6: Discussion

## Overview

This section is to discuss the main findings generated under each RQ in relation to previous literature, which aims at contributing to the existing body of studies regarding the understanding of teachers' professional development and collaboration between content and EAP teachers in EMI contexts.

### **6.1 What professional development opportunities exist for content and language teachers in EMI contexts in China?**

#### **6.1.1 English language specialists as main professional development trainers**

In the review of TPD provisions identified in this study, it is found that EMI PD trainers (in most participating institutions) are English language specialists. It is evidenced in PD documents describing PD trainers as those who with 'master's degree in Applied Linguistics' (U1 PD) or 'DELTA/ CELTA Certificate' (E2 CT PD, E2 LT PD). As reflected from PD documents (see section 5.1.1.1), English language specialists are responsible for the design and delivery of EMI teacher training, which is similar to Akıncıoğlu's (2024) finding in various EMI contexts. The dominance of English language specialists as PD trainers can be explained by the common (at least initial) over-emphasis on English language development in PD in EMI contexts (Deroey, 2023; Macaro & Aizawa, 2022). Indeed, developing English language skills is a recurring theme in PD for content teachers in the context of China (Macaro & Han, 2020). However, considering the complex dynamics of the situated practice of teachers in EMI that pose various challenges (Yuan & Qiu, 2024), it remains questionable that institutional leaders may lack an updated understanding of the broader range of skills teachers require other than the sole focus on developing English language skills.

Though very rare, content teachers were found to be involved in delivering training workshops for content teachers in one EMI university (U1 CT PD), which concurs with the finding of Macaro and Aizawa (2022) who indicated a marked absence of content teachers' involvement in the delivery of TPD for content

teachers. PD leads also recognised the imbalance: ‘Most PD trainers at my institution have backgrounds related to ELT and education’ (U1-PD1). Such lack is perhaps understandable given that ‘[t]he EMI research and development field has been appropriated by academics with an applied linguistics focus’ (Macaro & Aizawa, 2022, p. 1), in which EMI related issues are often conceptualised from the linguistic perspective. Macaro (2022) further described that content teachers are often excluded from EMI initiatives because ‘they do not own the EMI agenda but are merely passive consumers of it’ (p. 544). In this regard, it remains unknown how the dominance of English language specialists of PD trainers may impact the effectiveness or the inclusivity of PD for content teachers, thereby potentially marginalising the perspective of content teachers whose insights are essential for the holistic implementation of EMI (Macaro & Aizawa, 2024).

In line with scholars (Mirhosseini & De Costa, 2024; Yuksel et al., 2025) who called for transdisciplinary approach to understand EMI, other aspects beyond the linguistics-related knowledge that constitutes the capabilities of EMI PD trainers need to be confirmed by further research. In this respect, as discussed above, more content teachers should be recruited as EMI PD trainers. However, its feasibility should be taken into account from institutional and individual perspectives such as their roles in EMI and language awareness.

### **6.1.2 Predominance of L1 English-speaking professional development trainers and the need for localised professional development**

Another finding about PD trainers is that most of them are L1 English speakers (NES) in the participating institutions. Unlike Akıncıoğlu’s (2024) worldwide systematic review revealing that PD trainers generally are not L1 English speakers (NNES) in most cases, more than half of the PD trainers in this study (see detailed profiles in Appendix 3) in this study are L1 English speakers. Moreover, as shown in PD documents (see section 5.1.1.1), all PD trainers in the participating institutions hold a master’s or doctoral degree of Applied Linguistics or Education in English-speaking countries and have teaching experience of EMI or EAP in both English speaking and non-English speaking contexts.

This prevalence of NES trainers complicates the decolonisation of EMI (Sah & Fang, 2024) owing to the potential danger posted by the dominance of native-speakerism conveyed by NES PD trainers in EMI contexts. That is, what teachers being learnt in PD may have a subsequent impact on students' learning in EMI, which may reinforce certain norms initially imparted by the PD trainers. Here, this is not a complete denial of the fact that NES constituted the majority of PD trainers, but it should be noted that EMI has encountered challenges including the potential marginalisation of local languages and cultures under relevant language policies (Sah & Li, 2018).

Unfortunately, in the review of documents of the Ministry of Education of China and the participating institutions, no national or institutional policy mandates the nationality of PD trainers, which implies that institutions have certain autonomy to delegate who are deemed qualified to train teachers. Although PD trainers in this study possessed multiple teaching experience in various EMI contexts, it remains questionable whether teacher training may inadvertently promote native-speakerism - an ideology deeply rooted in people's attitudes, perceptions and lived experiences (Dong & Han, 2024). This is therefore worrying that it may continue to reinforce the notion of native-speakerism to the local EMI context (Mackenzie, 2022; Sah, 2022; Sah & Li, 2018; Song, 2021). As argued by Martinez and Fernandes' (2020) study in Brazilian EMI context, rather than looking outward for PD models of EMI, more inward facing PD should be created to combat the potential native-speakerism norm in EMI PD. As EMI continues to expand in China (Macaro & Han, 2022), to gain a deeper understanding of challenges and issues inhibiting EMI implementation, it would be reasonable to call for more localised version of EMI PD (see below) and reconsider who should be the PD trainers.

This study indicates a pressing need for context-sensitive approach of EMI PD, which resonates with calls made by scholars (Akıncıoğlu, 2024; Cheng, 2017; Galloway & Ruegg, 2022). It is also encouraged to establish more localised version of PD certificate. In the PD documents, only a few certified PD courses (U1 All PD, U1 CT PD, U1 LT PD and E2 CT PD) explicitly stated that local adaptability element when designing PD content (see section 5.1.1.10), while others remained unclear or vague in this regard. An example can be found in a

certified PD at U1 (U1 All PD), which is a local adaptation of Postgraduate Certificate (PGCert) - a globally recognised certification of teaching in HEIs. Those who completed the sessions are awarded as Fellowship of Higher Education Academy - a certificate originally issued by the UK universities. As one of the designers of the PGCert at U1, U1-PD2 elaborated on how he tweaked certain elements of the original PGCert to better suit local contexts by leveraging resources of Chinese thinking about learning and teaching (see section 5.1.1.10). In this way, teachers are more likely to absorb knowledge applicable to the local context than to learn PD content replicated directly from other contexts.

Another example of localising EMI PD is that participating teachers in U1 LT PD were also asked to be involved in activities such as teachers engaging in reflective practices (Farrell, 2020), in which they are prone to reflect on whether certain new pedagogies are contextually suitable for their classrooms in specific EMI contexts (see section 5.1.1.10). By doing so, teachers can compare and contrast what works best for their teaching practices in their contexts. Such consideration of contextual adaptability of PD should be given more attention by decision makers despite the current lacking resources of PD (Lasagabaster, 2018). As Bayar (2014) noted, there is no one-size-fits-all approach of teachers' PD. Hence, PD practices informed by other educational contexts should be locally adapted to ensure the relevance to the local context.

### **6.1.3 Lacking relevance of professional development to teachers' needs**

The relevance of PD to teachers' needs has been specified in only a small number of PD in the documents (four EMI universities and one EMI college) (see section 5.1.1.4), suggesting that PD opportunities are almost generic to all staff regardless of their disciplines. Consequently, it is risky that teachers' willingness of participation may gradually decrease due to the limited or no relevance to their subjects (Lasagabaster, 2022; Park et al., 2022). The finding is consistent with the caveat made by Bradford et al. (2022) that: '[n]ational contexts, disciplinary approaches, and personal factors all have an influence on the perspectives of professors in EMI programmes. A one-size-fits-all approach is unlikely to satisfy the diverse needs of EMI professors' (p. 13).

However, the general lack of relevance of PD may be justified by the difference in terms of institutional awareness, guideline, and resource investment in different types of EMI provisions. As maintained by Liao et al. (2025), EMI university type plays a leading role in EMI implementation in China with its relatively more complete policy and resources allocation (also see section 1.1.1.1). While EMI college and EMI programme type, at varying scales, are affiliated with CMI universities, which often provide limited institutional attention and disposable resources. In this sense, EMI PD is designed and implemented in vastly different ways across different types of EMI provision, which may consequently affect the actual outcomes of PD.

In this study, however, it is undeniable that there are some preliminary attempts to enhance the relevance of PD made by the PD leads identified in the documents (see section 5.1.1.4). For instance, PD leads created several themed workshops for teachers with different interests (U1 PD). Moreover, at JC1, given the general lack of PD provision within the institution, efforts were made to allocate certain percentages of scholarship for teachers to flexibly choose PD relevant to their needs, such as attending workshops and conferences outside of the institution. Furthermore, needs analysis employed in one EMI university (U1 PD all Ts) and external training bodies (E1 CT PD and E2 LT PD) has been recognised and favoured by teachers (see section 5.2.1.1), as it is an important tool for delving into teachers' needs prior to the PD courses (Jiang et al., 2020). By doing so, the PD content is likely to be more relevant to participating teachers' needs, thus increasing their engagement in PD (Garet et al., 2001; Lasagabaster, 2022).

#### **6.1.4 Pedagogical skills training as the main professional development objective**

As for PD objectives, pedagogical skills development seemed to feature heavily in PD for both content and EAP teachers across the participating institutions, which is in consonance with the previous studies carried out on content teachers (Bradford et al., 2022; Dafouz, 2018; Macaro et al., 2020; Park et al., 2022; Piquer-Píriz & Castellano-Risco, 2021; Wang et al., 2025) or EAP teachers (Jiang

et al., 2020; Pérez-Cañado, 2018) in various EMI contexts. It is found that pedagogical skills development is an institutionally imposed objective written in PD documents (see section 5.1.2.1), demonstrating its emerging emphasis at the policy level. Indeed, teaching subject content through English is a complex process, which is more than delivering the course solely (if not) in ‘good’ English (Akıncıoğlu, 2023, p. 148). Therefore, to ensure the teaching quality of EMI, teachers should be equipped with pedagogical skills when transitioning to teaching in EMI contexts (Galloway & Rose, 2022; Jiang et al., 2020). However, in line with Wang et al.’s (2025) review of PD for content teachers, this pedagogical emphasis in PD, while necessary, may remain insufficient if it is not accompanied by sustained support in language-aware, cultural, and psychological domains. Without such alignment, PD initiatives risk addressing surface-level teaching skills rather than the complex pedagogical and linguistic demands that characterise EMI classrooms.

In this study, the emphasis on pedagogy was shone through a range of pedagogical development activities identified in the interviews (see section 5.1.2.1). For example, in EMI university type specifically, inviting guest speakers lecturing theoretical aspects of EMI education, which has also been found in previous studies (e.g., Piquer-Píriz & Castellano-Risco, 2021). Moreover, concrete pedagogical skills were found in in-house PD sessions across types of EMI provision on engaging students in EMI courses through more interactive teaching, such as making eye contact (Dimova & Kling, 2018) and organising multimodal activities (Guarda & Helm, 2017; Morell, 2020). By doing so, teachers are more likely to constantly reflect on their own teaching practices.

#### **6.1.5 Limited yet emerging forms of collaboration between content and EAP teachers in professional development**

Teachers’ collaboration was frequently mentioned in the PD objective in the participating institutions. However, collaboration specifically between content and EAP teachers was explicitly documented in only one EMI university’s document (U1 CT PD) (‘Collaborating with institutional language experts’) and identified in interviews with teachers from a few EMI universities and EMI colleges (see section 5.1.2.2). The limited mentions revealed that collaboration

between content and EAP teachers has not been widely written in documents, nor has it been rigorously enforced at the practical level.

Specifically, teachers reported that many collaboration opportunities were prone to be individual efforts through ‘personal relationship’ with other teachers and their ‘awareness of the need of collaboration’. These findings are commensurate with scholars’ (Galloway et al., 2017; Galloway & Ruegg, 2022; Lasagabaster, 2018) claim about the current lack of institution-led collaboration between content and EAP teachers in EMI contexts, which is more initiated by teachers from a bottom-up perspective (Macaro & Tian, 2020; Wang et al., 2025). Such lack of collaboration may be explained by the lack of policy support in China, as no specific national policy or regulation has been allocated to teachers’ collaboration in the review of documents of the Ministry of Education in China. Wang et al.’s (2025) review identifies that teacher collaboration holds strong potential as a form of EMI teacher development, while its impact is currently limited by structural and institutional constraints. The authors argue that collaboration must move beyond informal or symbolic practices toward embedded, policy-supported mechanisms that recognise all collaborators’ expertise. Without policy support, it is unlikely to live up to the proposed value of collaboration as called by scholars (e.g., Galloway et al., 2024; Lasagabaster, 2018; Macaro & Tian, 2022). Meanwhile, individual factors should also be considered (fully discussed in section 6.2).

Although limited, some instances of collaboration between content and EAP teachers in professional development were identified in this study (see Table 5.1.2.2-1), many of which align with the proposals in the literature (e.g., Dafouz & Gray, 2022; Lasagabaster, 2018; Yuan, 2021; Wang et al., 2025), demonstrating gradual but tangible progress of collaboration at the practical level. Specifically, EAP teachers contributed linguistic and pedagogical expertise in the collaborative project of creating mathematics corpus with content teachers (Dafouz & Gray, 2022). Participating teachers of this project were generally in favour of the opportunity, as evidenced in the interview with one ESAP teacher: ‘From my experience, the project has been very positive. It helped me build good professional relationships with various different faculty members’ (JC1-LS2).

Additionally, collaborative practices in PD also manifested as training programmes at EMI university type for content and EAP teachers working in local and the joint university, CoP activities led by PD leads who intentionally organised content and EAP teachers for interdisciplinary knowledge sharing, and occasional meetings gathering both parties for the discussion curriculum design. Furthermore, examples of co-designing teaching materials for ESAP courses were identified, where two parties exchanged knowledge about pedagogic materials (Richards & Pun, 2022). Teachers involved in these practices generally demonstrated positivism (see section 5.1.2.2). Nonetheless, more research is warranted to investigate the ongoing impact of such collaboration on teachers' teaching practices.

Moreover, as shown in Figure 6.2-1, these collaborative practices identified in this study can be mapped onto Dudley-Evans's (2001) three-tier framework, namely 'co-operation', 'collaboration' to 'team-teaching' (p. 226). In this study, most examples align with the first two levels (co-operation and collaboration). Specifically, 'co-' includes occasional meetings, CoP activities, training programmes, while 'collaboration' is evident in co-discussing teaching materials and co-creating corpus of certain subjects. However, no 'team-teaching' has been identified in the study. The marked absence of team-teaching (Lasagabaster, 2018) indicates its practical difficulties existing in different HE contexts (Kaivanpanah et al., 2021; Perry & Stewart, 2005; Woodrow, 2018; Zappa- Hollman, 2018), including providing clear guidance of collaboration, clarifying roles of content and EAP teachers (see section 6.3), and ensuring both parties respect each other's expertise from their sides (Dudley-Evans, 2001).

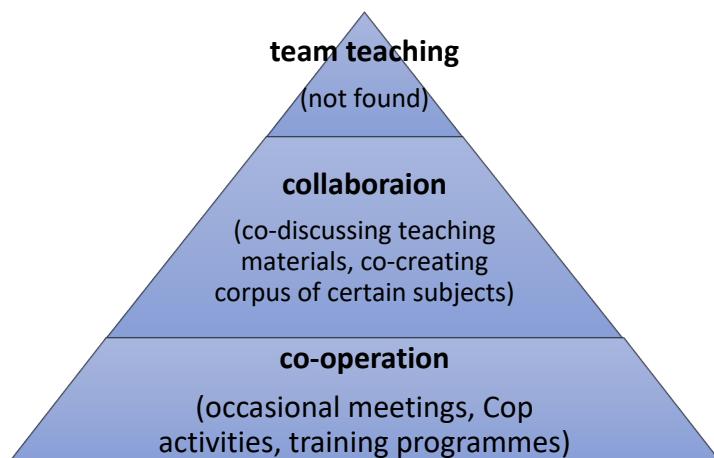


Figure 6.1.5-1 Dudley-Evans's (2001) framework in relation to collaboration between content and EAP teachers identified in this study

To briefly sum up, although some promising teacher collaboration exist, the overall amount remains limited. This aligns with previous literature (Galloway et al., 2024; Lasagabaster, 2018; Wang et al., 2025) that despite the various values of collaboration between content and EAP teachers, its implementation in EMI contexts continues to lag behind theoretical recommendations. This gap may hinder the potential benefits of collaboration in improving both teaching practices and student outcomes in EMI settings.

#### **6.1.6 Shifting institutional focus of professional development objectives: English proficiency no longer prioritised**

English language development was rarely featured in PD objectives in the participating institutions, which is vastly different from previous findings (Ball & Lindsay, 2013; Bradford, 2019; Deroey, 2023; Macaro et al., 2018; O'Dowd, 2018; Park et al., 2022) showing that English proficiency development being the primary or major PD objective for teachers working in EMI contexts. As scholars (Akıncıoğlu, 2024; Murphy et al., 2020) argued, such limited offerings of English language training in TPD are understandable as institutional leads may think teachers (both content and EAP teachers) are mainly linguistically qualified to teach in EMI programmes. Moreover, in order to ensure the homogeneity of English proficiency in the same training sessions, a range of entry requirement existed regarding participating teachers' English proficiency of taking (internal or external) TPD (Macaro & Aizawa, 2022), which also explains institutional leads' take-it-for-granted understanding of teachers' English proficiencies and therefore the de-emphasis of language proficiency training in TPD.

Furthermore, the limited emphasis of English language development in TPD identified in this study (see section 5.1.2.3) tends to challenge previous findings that training of language proficiency has been over underscored in PD for content teachers (Akıncıoğlu, 2024), suggesting a strategic shift at the institutional level that more aspects of TPD are gaining growing attention.

### **6.1.7 Intercultural communication skills training more emphasised in EMI university type**

Unlike aforementioned PD objectives that hold across different types of EMI provision, the training of intercultural communication skills has been only covered in PD in some EMI universities. This again indicates the differences of EMI university type against EMI college and programme type (Liao et al., 2025) in terms of the sophistication of PD provision. As reflected by one PD lead (U1-PD2) in the interview, institutional leads in EMI university type are more aware of the multicultural and multilingual composition of students and staff in EMI settings (Baker & Hüttner, 2018; Dafouz & Smit, 2020). Also, as shown in the PD documents, most EMI universities have PD provisions with an EMI focus (see section 5.1.1), which ensures that certain PD activities can be initiated and sustained. As noted by Liao et al. (2025), EMI university is regarded as the ‘pioneer’ (p. 11) of China’s HE system with its relatively advanced management mode and resources allocation, thereby providing insights for EMI college and EMI programme type in enriching their TPD. For example, in the regard of intercultural communication skills training, EMI college and EMI programme types can build up a bridge for teachers and students from different cultural and linguistic backgrounds (Jiang et al., 2020; Sánchez- García & Dafouz, 2020) to provide more culturally appropriate teaching content, which is also associated with the local adaptability of PD (see section 6.1.2).

### **6.1.8 Lacking specialised content knowledge training in professional development**

As with the finding of studies conducted on EAP teachers’ PD in the UK context (Campion, 2016) and in EMI context (Kaivanpanah et al., 2021), training of specialised content knowledge was relatively less mentioned in the PD objectives. This is also reflected by the general lack of relevance between PD and teachers’ disciplinary needs (see section 6.1.3). Specifically, as shown in the PD documents, such training has been only found in TPD for EAP teachers, while no instance for content teachers (despite requests from some of them). For EAP teachers’ PD, it can be implied that the training involving specialised content

knowledge is more targeted for ESAP teachers who are responsible for making EAP courses more relevant to students' specific subjects (Fitzpatrick, et al., 2022; Flowerdew, 2016). The current lack of specialised content knowledge training for them is not conducive to alleviating the significant challenges caused by the demand of transitioning from teaching EGP to teaching specialised EAP modules (Basturkmen, 2021; Campion, 2016). As noted by Bond (2020), the specialisation of EAP practitioners may most typically be achieved through experiential learning, or on-the-job experience, as there is a lack of targeted PD available for them.

While for content teachers' PD, such absence in TPD can be justified as teachers are responsible for possessing sufficient disciplinary knowledge for teaching certain subjects regardless of the language of instruction. Nonetheless, it may be recommended for them to receive some on-going training for iterating their knowledge base. In the meanwhile, though scholars have highlighted the need (Hakim, 2023; Macaro & Han, 2020; Yuan, 2019), it is challenging to provide PD content for teachers teaching different subjects.

To briefly sum up, the worrying absence of training of specialised content knowledge is identified across PD for content and EAP teachers, and it may be interpreted by the difficulty of providing PD content designed for teachers from various disciplines due to limited resources, staff, and materials provided by the institutions (Deroey, 2023; Jiang et al., 2020). However, it is hoped that more specialised content knowledge training would be available for novice content and EAP teachers, especially novice ESAP teachers (Campion, 2016).

#### **6.1.9 Astonishingly lacking academic research skills training in professional development**

The training of academic research skills was merely found in PD for content teachers in one EMI university and one EMI college (see section 5.1.2.6). However, in the interview, teachers in these institutions reflected that staff's academic output (i.e., publications and grants) is regarded as an indicator of their performance under the prevailing *publish or perish culture* within HEIs (Wang et al., 2024; Yuan et al., 2022) (fully discussed in section 6.2). In this

sense, academic research skills training is of great importance to staff's treatment and career promotion. Hence, the limited instances of research skills training identified in this study may be explained by the fact that most of the content teachers have doctoral degrees and they are already capable of conducting research (Murphy et al., 2020).

However, EAP teachers reported the absence of academic research skills training in despite of their articulated PD need of it in the interview (see 5.2.3.6). This somehow suggests that EAP teacher's needs are systematically overlooked in EMI contexts, which can be explained in relation to their marginalised position within universities (Cheng, 2016; Ding & Bruce, 2017; Tilakaratna, 2024). To demonstrate, reasons for EAP teachers' interests in academic research behind are multifold. Their interests of researching seemed to be associated with their identity construction. As evidenced in the interview, some EAP teachers showed some resistance towards how they are titled: 'EAP teachers are not researchers' or 'lecturers', therefore they 'will be stuck in teaching', which makes them inferior to content teachers who are always PhDs with research skills that are recognised by the institution.

In the review of teachers' profiles (see Appendix 2), similar to content teachers, EAP teachers are often titled as 'lecturers' and/or 'senior lecturers'. However, they still viewed themselves as 'teachers' or 'language tutor' who are rarely given the same privileges as other academics such as content teachers due to the way they are recognised within the university. This is consistent with previous findings in the UK context (Ding & Bruce, 2017; Taylor, 2024), where EAP teachers reflected that they are institutionally positioned as 'support service' providing students communication skills that are transferrable to their core disciplines such as STEM and Social Sciences.

An institutional factor that influences EAP teachers' interest in academic research skills can be attributed to the prevailing *publish or perish culture* in HEI contexts. Particularly, in China where is heavily featured with the publish or perish culture for realising the goal of internationalisation of higher education (Teng, 2024; Wang et al., 2024), teachers without research skills are difficult to survive and thrive. As a result, EAP teachers' lack of research skills continues to

distance them away from the centre within the university. EAP as a subject is also marginalised by universities that value other core disciplines (Tilakaratna, 2024), which attach more importance to other core disciplines based on the number of academic outputs. In this sense, more academic research skill training should be provided as strongly requested by EAP teachers. To this end, a scheme of workload allocation for scholarship writing (Webster, 2022) in an EAP setting can be referred to. The scheme showed that EAP practitioners' academic identity and agency in the institution have strengthened as scholarship writing become more normalised. Meanwhile, the institution's inclusive understanding of the difficulties brought about by academic research is also of great importance of helping EAP teachers overcome such challenges. In this regard, institutional leads play a vital role in recognising teachers' challenges and providing relevant support.

Overall, the *publish or perish culture* imposes different demands on different groups of teachers, which also requires institutional leads to develop more deeper understandings of the distinct needs of teachers and take more humanised measures to support them.

## **6.2 What are stakeholders (content teachers, language teachers, PD leads)' perceptions towards current professional development opportunities?**

### **6.2.1 Lacking relevance of professional development to teachers' needs to subject specificity and teaching experience**

In the interviews asking teachers' perception towards PD, the relevance of PD has been further categorised into subject specificity and teaching experience (see section 5.2.1.1). As with previous finding (Braford et al., 2022; Chang, 2023; Park et al., 2022), content teachers reported that PD was not specific to EMI teaching, let alone being relevant to subjects they taught. It is found that the issue of lacking relevance is more severe in EMI college and programme types compared to EMI university type, as reported by JC2-C2: '... there is no PD specifically for EMI teaching'. Teachers thus showed hesitation because of the less relevance to their needs: 'so I rather don't go, it is irrelevant to my situation' (JC2-C1). PD lead at EMI college type also acknowledged it and shared

their frustration with the lack of resources and support: '[w]e are only a college in a comprehensive university, and we are quite self-sufficient in terms of PD providing, but the outcome is unsatisfactory due to no personnel and financial support' (JC3-PD1). Possible reasons are discussed above in relation to the different management modes in different types of EMI provision (see section 6.1.7), in which EMI college type seemed to have less institutional investment and structured support system compared to EMI university type.

In addition, interviewees considered the issue of the relevance of PD with their teaching experience in EMI settings. The contrasting PD needs articulated by novice and experienced teachers were also identified. On the one hand, novice teachers (both content and EAP teachers) were found to have more issues with the current PD provision and asked more pre-service inductions and PD-led observation opportunities (see section 5.2.1.1). On the other hand, experienced teachers felt that the current PD content was more conducive to novice teachers as the content was generic and fundamental, indicating their need for more advanced or differentiated PD opportunities. Such difference has also been identified in Bocanegra-Valle and Basturkmen's (2019) needs analysis with both novice and experienced EAP teachers in Spanish universities, which calls for meeting the different PD needs of EAP practitioners at different career stages.

As a consequence, paradoxically, it seems that neither novice nor experienced teachers were satisfied with the current PD provisions. As noted by Akıncıoğlu (2024), teachers having varying levels of teaching experience makes the participant groups somewhat heterogeneous and complicated, which thus makes the PD provision challenging in meeting teachers' individual needs. Hence, it casts a caveat for PD leads that teachers at different career stages have different PD needs. A practical suggestion to address this paradox is to start establishing a tiered PD structure (foundational vs. advanced) to cater to teachers' different experience levels in EMI. Moreover, as Park et al. (2022) proposed, a forward-looking direction for refining PD is to develop more disciplinary customised PD content for teachers from various subjects.

Combining together, a tiered PD structure can be created with the vertical layer referring to teachers' different EMI teaching experience and the horizontal layer

different disciplines (starting from Arts and Science). However, this proposed multifaceted and stratified PD structure requires significant financial and personnel investments, and further research is needed to corroborate its feasibility.

### **6.2.2 Certification of professional development needing wider recognition**

It is found that novice content teachers and EAP teachers (in general) tend to place greater value on whether PD is certified and recognised at the national or international level. As evidenced in the interview, the value placed on certificate-bearing PD was particularly evident among content teachers with limited experience in EMI teaching and no EMI training experience. For example, U3-C1 with 2-year EMI teaching experience commented that: ‘I sincerely hope to get a certificate that can prove my efforts for the PD course ..... hopefully it can be recognised beyond my institution’. That is, wider accreditation of PD can better demonstrate teachers’ efforts and skills acquired in PD (Macaro & Han, 2022), and therefore enhance their international academic mobility (Curle et al., 2020) in the current competitive labour market of HEIs. This highlights the role of institutional authority in authenticating PD initiatives, which in turn legitimises the capabilities of teachers on a broader scale (Macaro et al., 2020).

In addition, both novice and experienced EAP teachers were particularly drawn to certification-bearing PD, citing motivations such as ‘better job opportunities’ and ‘wider recognition by the university and academics’. These perceptions are consistent with findings from studies conducted in Anglophone contexts (Ding & Bruce, 2017; Fitzpatrick et al., 2022). As one EAP teacher observed: ‘We EAP teachers seem to be ignored in the university..... taking certified courses may help us increase our reputation’ (U7-LG1). In the light of EAP practitioners feeling professionally undervalued compared to disciplinary faculty and feel marginalised within the university (see section 3.3), certified PD may empower EAP teachers to gain more respect from their institutions and increase their visibility within the universities. That is, certified PD can serve as a legitimising force and help EAP teachers position themselves more confidently within the academic hierarchy and more effectively advocate for their roles and contributions in the university environment.

Overall, although novice content teachers and EAP teachers in general regarded certificate-bearing PD as valuable, their underlying motivations varied. The intention of novice content teachers for certified PD can be justified given the general lack of pre-service PD (Murphy et al., 2020; Piquer-Píriz & Castellano-Risco, 2021). While EAP teachers appeared to view certified PD as a strategic means of gaining professional legitimacy and addressing the marginalised status of EAP teachers (Flowerdew, 2016; Hyland, 2012).

### **6.2.3 General critical views on the sufficiency of professional development**

Although a few teachers (primarily EAP teachers) commented favourably on the sufficiency of PD, teachers were generally critical of the amount of PD provisions in their institutions (see section 5.2.1.2), which aligns with previous studies (Ding & Campion, 2016; Fitzpatrick et al., 2022; Galloway & Ruegg, 2022; Park et al., 2022). Notably, it is found that the sufficiency of PD varied in different types of EMI provision, with EMI university providing the most and EMI programme the least. A possible reason contributing to the lack of PD mainly in EMI programmes and some EMI colleges appears to be the absence of formal PD mechanism within the university structure (Galloway & Ruegg, 2022). In response, teachers in under-resourced settings often relied on stopgap measures such as drawing on their previous overseas study experiences (O'Dowd, 2018) as teaching guideline and independently seeking PD opportunities. However, it remains questionable how suitable or effective if teachers solely rely on past experience, given the evolving nature of education over recent decades (Yuan & Qiu, 2024). In the long run, EMI programme type, being poorly supported, may get marginalised or even discontinued in the university. That is, teachers' challenges unaddressed may have a negative knock-on effect on students' learning outcome (McKinley & Rose, 2022), potentially leading to the programme closure due to the declining student enrolment.

While the interviews did not reveal whether teachers without overseas experience may encounter greater challenges of teaching in EMI, future research can be undertaken in this aspect. A deeper understanding of the diverse needs

of teachers can inform the refinement of the proposed tiered PD structure (see section 6.2.1) to ensure more equitable and targeted support for teachers.

#### **6.2.4 Mixed views on the sustainability of professional development**

Regarding the sustainability of PD, EAP teachers specifically reflected on it and showed a mixed feeling towards it (see section 5.2.1.3). As shown in the interview (see section 5.1.1.9), some teachers demonstrated an awareness of the importance of life-long learning, recognising the need to continually update their professional knowledge and skills. In contrast, others appeared to hold a more limited understanding of PD, overlooking the dynamic and rapidly evolving nature of education (Yuan & Qiu, 2024). However, reasons contributing such difference in teachers' awareness remain unclear in the study and may warrant further investigation to better understand factors that influence teachers' engagement with lifelong learning.

As noted by Macaro and Han (2020), teachers are increasingly expected to continuously update their knowledge and skills through ongoing PD opportunities, which further places additional demands on PD leads and institutional leads who are responsible for responding to bottom-up needs of teachers (Galloway & Ruegg, 2022). Indeed, no skillset can be mastered overnight and without a requirement to keep up with the times (Akıncıoğlu, 2024). Moreover, to ensure the sustainability of PD, contingency plans should be in place to withstand unpredictable disruptions, such as Covid 19, which may significantly affect the mode and accessibility of PD delivery.

To briefly sum up, teachers evaluated a range of aspects of current PD opportunities in relation to their PD needs based on their lived experience of situated practices. Their reflections of the current TPD provisions from a bottom-up perspective shed light on the refinement of the design and delivery of PD in the future.

#### **6.2.5 Institutional factors that facilitate or inhibit professional development**

A series of factors that influence professional development have been generated from the interviews with teachers and PD leads when asking their perceptions of the current TPD provisions, which were further categorised into institutional factors and individual factors. Relevant key findings are discussed below, which provide practical implications on the design and implementation of PD.

#### ***6.2.5.1 Leadership and institutional support of professional development***

Leadership has been identified as a key factor influencing the PD implementation. As outlined in section 5.2.2.1, participation of EMI-related PD is incorporated into teachers' annual performance reviews in a few institutions (mainly EMI university and college types). As such, teachers' efforts of attending PD can be systematically managed and better quantified by the institutional leads, indicating a higher level of institutional commitment to PD in these institutions. This once again reflects the differences in management modes across different types of EMI provision in China (Liao et al., 2025), with EMI universities and some EMI colleges employing more structured approaches to teachers' PD participation.

Moreover, teachers commented on the leadership issues in relation to the limited institutional PD support in the participating institutions (see section 5.2.1.2), which has been similarly reported in Galloway and Ruegg's (2022) study in China and Japan, where support mechanisms of PD were not equipped despite being considered necessary. PD leads in this study also admitted that PD can easily be lip service without leadership involvement. One PD lead commented that: 'I do not think we have a very formal evaluation system (to review teachers' PD participation), I guess it is something that we should do more' (JC3-PD1). This sentiment was echoed by an EAP teacher, who indicated the importance of institutional involvement in PD, otherwise, 'it would just give a wrong impression and wrong sense that our professional development is not valued or not prioritised by the institution' (U1-LG1). These perspectives suggest that the extent of institutional support of PD has a knock-on effect on teachers' awareness of importance of PD (see section 6.2.6). When PD is not systematically organised or visibly supported by leadership, teachers may undervalue its value and utility of PD. This is further evidenced by critical

comments regarding the misalignment between PD provisions and teachers' actual needs (see section 5.2.1.1). For instance, one content teachers observed: 'There are some training workshops provided for all teaching staff, and I was unsure about the outcome of them' (U3-C2).

As proposed by Akıncıoğlu (2024), under ideal conditions, support mechanism for teacher training should be endorsed in the institutional EMI policy and underpinned by robust quality assurance protocols. To this end, scholars have suggested some concrete and practical solutions for improving PD practices. Firstly, conducting needs analysis with teachers prior to the creation of PD is essential for ensuring relevance to teachers' needs (Pérez Cañado, 2020). Evidence of such practice have been identified in one EMI university and one EMI college and one external training body in the document (see section 5.1.1.4). Secondly, implementing post-course survey to gather participant feedback can help inform course improvement (Park et al., 2022). This approach, however, was observed only in one EMI college (see section 5.1.2.2). These examples suggest that while some EMI institutions are actually taking some actions in improving PD, the establishment of holistic support mechanisms remains at an early stage particularly within EMI college type and more notably within EMI programme type.

Essentially, the development of such mechanisms requires ongoing commitment from the decision makers. In contexts such as China where policy is often implemented from the top-down perspective (Jiang et al., 2019; Wu & Tsai, 2022), leadership plays a central role. It is imperative that leaders confront these challenges proactively, rather than adopting what Macaro (n.d.) refers to as *the Ostrich model* by burying their heads in the sand and ignoring issues in the hope that they will resolve themselves. A range of issues identified in the growing body of studies of EMI (see section 2.3) also push institutional leads to abandon the taken-for-granted understanding of EMI as merely a shift of language of medium (Lasagabaster, 2022). As noted by McKinley and Rose (2022), it is institutional leads' moral and ethical responsibility to properly devote resources and PD opportunities in ensuring students are adequately supported in EMI study.

#### ***6.2.5.2 Incentives of professional development participation***

Institutional leads should also recognise the importance of incentivising teachers' PD participation. Incentives such as certified PD, time flexibility and workload reduction were noted by teachers and align with findings from previous findings (Bradford et al., 2022; Long, 2017). However, other forms of incentives such monetary bonus and promotional opportunities commonly reported in the literature (Chen & Peng, 2019; Deroey, 2023) were not found in the participating institutions. These can be taken into consideration when providing incentives of encouraging PD participation.

Currently, there appears to be limited institutional focus on incentivising PD participation. In particular, teachers from EMI college and programme types reported that their PD participation was often ignored by the institutional leads, which may further undermine their motivation to participate. The lack of institutional support may be explained by the varying scale of EMI provisions across different types of EMI provisions (Liao et al., 2025). In other words, EMI universities with all programmes taught in EMI fashion are generally better equipped to provide overall PD systems compared to EMI colleges and EMI programmes where EMI is provided in a smaller scale (see section 1.1.1.1).

#### **6.2.6 Individual factors that facilitate or inhibit professional development**

##### ***6.2.6.1 Teachers' working schedule and different duties***

Teachers' busy working schedule emerged as the key individual factor inhibiting their PD participation, which echoes previous study findings (Akıncıoğlu, 2024; Piquer-Píriz & Castellano-Risco, 2021). Specifically, as evidenced in the interview (see section 5.2.2.2.1), EAP teachers particularly reported being overwhelmed by the intensive teaching and marking responsibilities (Ding & Bruce, 2017), leaving very limited time to engage in PD. While content teachers who are often assigned less teaching hours reported being heavily tasked with researching duties. One content teacher reflected: 'We (content teachers) do not have time to attend PD, because our main tasks are doing scientific research and some teaching. We often have to spend more time on doing scientific

research. So even if there is training, I will not go' (JC2-C2). It seems reasonable in light of the *publish or perish culture* prevalent in Chinese universities (Feng, 2024; Li & Ma, 2020; Teng, 2024), where the quantity and quality of academic remain crucial metrics for teachers' career promotion (Bowles & Murphy, 2020). Consequently, content teachers often prioritise research output over other duties, including teaching and administrative duties, further limiting their engagement for PD.

Overall, time constraints were reflected differently by content teachers and EAP teachers, as the former is pressured by intensive teaching hours and the latter is overwhelmed by researching duty. Nevertheless, both challenges ultimately result in low attendance of PD. One potential solution lies in the provision of more flexible modes of PD delivery, supported by appropriate incentives or institutional recognition (see section 6.2.5), to accommodate diverse professional demands and thus encourage PD participation.

#### ***6.2.6.2 Differences between content and EAP teachers in work contracts and academic identity***

The differences in work contracts between content and EAP teachers warrant examination, particularly in relation to their treatment and recognition within universities. In the study, the differences in work contract appeared to lead to the differing institutional status held by two groups of teachers (see section 5.2.2.2). Content teachers are typically affiliated with core academic departments within the university and enjoy greater disciplinary legitimacy (Tilakaratna, 2024). By contrast, EAP teachers often hold teaching-only contracts and are positioned administratively within non-academic units such as language centres. This administrative marginalisation often results in the erosion of EAP teachers' academic identities (Taylor, 2024).

Some EAP teachers are therefore actively seeking to improve their inferior institutional standing. For example, an ESAP teacher (U6-LS1) shared an observation of her EAP colleague who, motivated to be seen as 'professional as an academic', transformed into a content teacher by pursuing a PhD degree and acquiring academic research skills (see section 5.3.1.2). This highlighted

perceived privilege associated with content teachers, whose research expertise aligns with the priorities of the prevailing *publish or perish culture* in Chinese universities (Feng, 2024; Teng, 2024).

In light of this, it is not surprising to see that some EAP teachers required training on academic research skills (see section 5.2.3.6) with the hope of strengthening their professional identity and combating their current imbalanced status compared to content teachers (Airey, 2012; McKinley, 2019; Werther et al., 2014). It raises broader questions about whether staff's different duties (i.e., teaching, researching) are properly recognised by the institutional leads. In addition, it is assumed that academic research skills would empower EAP teachers to be more 'academic' and gain more respect within the university (Ding & Bruce, 2017), thereby assumably strengthening their identity construction (Taylor, 2024). Further studies are needed to explore how EAP teachers construct their academic identities and how these identities evolve in response to developing research competencies and shifting institutional recognition.

#### ***6.2.6.3 Divergent attitudes towards PD among content and EAP teachers***

It is found that content and EAP teachers generally exhibited differing attitudes toward PD. As revealed in the interviews (see section 5.2.2.2), content teachers appeared to attach significantly less importance to PD than their EAP counterparts. Several factors may help explain this attitudinal disparity.

For one thing, compared to EAP teachers, content teachers typically hold higher academic qualifications (i.e., PhD degree), and their attitudes towards PD may therefore be shaped by a strong sense of professional identity or ego tied to their academic achievements (Doiz et al., 2019; Fitzpatrick et al., 2022). However, as one PD lead pointed out, 'lots of academics in higher education have got PhDs and tons of publications, but maybe they are not very good teachers' (U1-PD2). This highlights that teachers with higher educational degrees are not necessarily good teachers. Rather, teaching competence is developed through continuous practice, critical reflection, and pedagogical training (Farrell, 2020; Macaro & Han, 2020). In this regard, sustainable

improvements in teaching quality depend on continuous engagement in relevant training, regardless of one's academic status or prior qualifications.

In addition, content teachers in this study tended to rely on their past teaching experience to guide their teaching practices (see section 5.2.2.2). While experiential knowledge can be valuable, exclusive reliance on it can be problematic, especially in institutions where pedagogical training is not available before or after teachers' recruitment (Murphy et al., 2020; Piquer-Píriz & Castellano-Risco, 2021). Therefore, as noted by Perry and Stewart (2005), past experience can be a double-edged sword, as it may inform the practice, but also reinforce outdated or ineffective methods if not critically examined (also see sustainability discussed above). Furthermore, content teachers' low willingness or even resistance towards taking PD can be further related to the pressure of research duties. As previously discussed, the *publish or perish culture* dominates many Chinese higher education institutions (Feng, 2024; Teng, 2024), leaving little time or motivation for teachers to pursue PD focused on pedagogical enhancement.

At a deeper level, it is closely related to the educational goals of the universities. As noted by McKinley and Rose (2022), some universities prioritise the overall teaching quality, while others focus predominantly on academic research output. Therefore, institutional orientation can significantly shape teachers' attitudes toward PD and ultimately impact students' learning experiences and outcomes within the institutions.

### **6.3 What are stakeholders' perceptions towards how collaboration between content and language teachers is addressed in professional development opportunities?**

A range of factors that influence collaboration between content and EAP teachers in PD have been identified in the interview, namely institutional and individual factors. The following sections discuss the relevant main findings, which provide practical insights into the further design and implementation of collaboration.

### 6.3.1 Institutional factors that facilitate or inhibit collaboration

#### 6.3.1.1 Departmentalisation that inhibits teachers' collaboration

Teachers reflected their institutions were not ready for managing collaboration between content and EAP teachers at the institutional level, primarily due to the departmentalisation entrenched within the universities. As highlighted by one EAP teacher: 'currently teachers at different departments in EMI settings are working in their silos ..... there is not much interaction between departments' (U1-LG3). Therefore, it is not uncommon among the participating institutions that teachers at different departments are currently working in silos.

The rigidity caused by departmentalisation, combined with insufficient top-down guidance, is therefore viewed as significant obstacle to collaboration. As one content teacher noted: 'A bridge between different departments should be constructed by the leads of the institution' (U2-C2). Similarly, one EAP teacher emphasised the need for institutional leadership to create space for collaboration: 'There needs to be more push from the management level in terms of giving more space for the collaboration to happen' (U1-LS1). However, PD leads articulated the institutional constraints, citing concerns around professional boundaries and reluctance among leadership to disrupt interdepartmental harmony: 'They (deans of different departments) do not want that collaboration to occur, because they feel it is stepping over the line of where responsibilities begin and end' (U1-PD1).

Given above, rather than proposing an overturn of existing structure, an eclectic approach is to seek some feasible adjustments. A pragmatic rather than radical approach is recommended. For instance, Murray (2022) proposed a decentralised model of English language provision in an Australian university, in which EAP teachers were embedded within disciplinary departments to offer more targeted academic English support more relevant to students' disciplinary needs. This hub-and-spoke mode of EAP provision helped better reflect EAP teachers' expertise and the function of EAP in the content learning, even when many students were L1 speakers of English. However, if this model is to be applied on a large scale or sustained, a series of challenges may arise, such as competing

priorities on human and resource investment, which is also recognised by the author (Murray, 2022). In light of this, the success of the mode may heavily depend on the extent of institutional leads' awareness of the importance of EAP to content learning and students' disciplinary needs of academic language support.

Given that collaboration between content and EAP teachers is still in its infancy in EMI contexts (Galloway et al., 2024; Lasagabaster, 2018) such as China. The aforementioned mode proposed by Murray (2022) may only exist at the conception stage. Nevertheless, it offered valuable insights into how collaboration might be piloted and strengthened through small-scale, informal initiatives to inform future scalable practices. Before that, the reported concerns of teachers stepping over the disciplinary boundaries and causing discord between departments need to be addressed. Therefore, the feasibility of the mode warrants more further research.

#### ***6.3.1.2 Limited incentives and resources in supporting collaboration***

Incentives of participation in collaboration has been reported as another important factor that influence collaboration. In the interview (see section 5.3.1.1), one incentive currently offered was a reduction in pre-assigned working hours (Zappa-Hollman, 2018), which mirrors similar incentives for PD participation (see section 6.2). Teachers also viewed the collaborative project as an incentive, particularly when aligned with their own PD needs.

Beyond these existing incentives, teachers indicated some preferred incentives such as monetary incentive and career promotion, which has also been identified in Bradford et al. (2022)'s study in Japan. Nonetheless, some teachers remained resistant to collaboration even given incentives. This suggests that while incentives are valuable, they may not be sufficient on their own. Future efforts to foster collaboration should also focus on clearer workload distribution and initiatives to raise awareness about the pedagogical and professional value of teachers' collaboration.

In addition to the limited institutional attention to collaboration and the lack of holistic mechanism (see above), a notable lack of resources invested in collaboration was also reported, echoing findings from previous studies (Galloway et al., 2024; Lasagabaster, 2018). Evidence from PD documents and interviews revealed that collaboration was formally addressed in PD only at a few EMI universities and a few EMI colleges, with no such initiatives found in EMI programmes (see Table 5.1.2.2-1 in section 5.1.2.2). This again demonstrates the existing disparities in institutional commitment to teachers' professional development across different EMI provision types (Liao et al., 2025). Teachers further expressed concerns about the worrying shortage of trainers qualified to guide collaborative practices. This deficiency may explain why some collaborative practices (either made by individual or institutional efforts) have terminated eventually. These findings highlight the urgent need to define what constitutes a 'qualified PD trainer' in EMI contexts and to explore how to develop and maintain trainers' expertise through targeted investment and policy support.

### **6.3.2 Individual factors that facilitate or inhibit collaboration**

#### ***6.3.2.1 Teachers' awareness of collaboration shaped by students' EMI experience and self-development needs***

Among the individual factors influencing collaboration between content and EAP teachers, teachers' awareness of collaboration emerged as a key determinant. This awareness was further found to be shaped by two main aspects, namely student's EMI experience and teachers' self-development needs. Specifically, on the one hand, many teachers acknowledged that collaboration could enhance students' learning in EMI contexts. For example, one content teacher reflected: 'Everything we are doing is out for the students. Language teachers have some expertise in something we (content teachers) are not good at. So when the students are L2 speakers of English, teachers collaborating together can be definitely helpful for students to improve their English and that will actually make our job easier' (JC1-C1). Such perspectives align with previous findings that collaboration is aligned with the goal of enhancing students' learning outcomes in EMI setting (Akıncıoğlu, 2024; Macaro & Aizawa, 2024).

On the other hand, some teachers viewed collaboration as an opportunity for professional growth. As a content teacher marked: ‘I think ‘interdisciplinary’ has become the buzzword in academia in recent years. We are all told that we have to try more things across disciplines. So we are not expected just to work in our own areas anymore. In principle, that is a good idea to collaborate. And I am in favour of that if it can add value to my professional development’ (U2-C2). This resonates with Reeves et al. (2017), who argue that collaborative practice can lead to shared knowledge construction and enriched pedagogical approaches of teachers. Importantly, this interdisciplinary mindset may serve as a starting point and foundation for addressing long-standing departmentalisation issue within the university (see section 6.3.1.1).

#### *6.3.2.2 Teachers’ mutual understanding of content and language expertise*

Teachers’ mutual understanding of the roles and contributions of content and EAP disciplines emerged as another key factor influencing their willingness to collaborate. In this study, a small number of content teachers demonstrated familiarity with EAP knowledge and expressed openness to collaboration (see section 5.3.1.2). For instance, JC3-C2 noted: ‘I think the core purpose of EAP is to teach students the academic skills they need in EMI study. If we [content teachers] do not know what their programme [EAP] is about, then the purpose of teaching EAP is unclear’. His awareness of EAP’s role in content learning may stem from his overseas educational experience during PhD and several years of EMI teaching in China, which likely contributed to his appreciation of EAP’s relevance to content learning.

Conversely, many content teachers showed resistance to collaboration, often due to their limited experience of collaboration or views on EAP as less relevant or subordinate to disciplinary teaching. Some content teachers viewed EAP as peripheral or subordinate to their academic fields (Li, 2021), while EAP teachers themselves reported feeling inferior within the university. The difference in staff defining themselves is further related to the questions of authority and status of content and EAP teachers (Ding & Bruce, 2017; Macaro & Tian, 2020; Ploettner, 2019) (fully discussed in section 6.2.6.2). Consequently, in many EMI

contexts, it is not uncommon that content teachers do not perceive language instruction as within their remit (Airey, 2012; Piquer-Píriz & Castellano-Risco, 2021), which further limits collaboration. In this regard, as suggested by Perry and Stewart (2005), to initiate collaboration, mutual understanding and clear expectation of collaborating teachers' roles are of greater importance. That is, the common understanding of roles and teaching philosophies shared by content and EAP teachers enable more open conversation and further collaboration opportunities.

#### ***6.3.2.3 Different attitudes towards collaboration among EGAP and ESAP teachers***

Notably, among EAP teachers, ESAP teachers were found to show greater awareness of the value of content knowledge for ESAP curriculum development and were more open to collaboration with content teachers (see section 5.3.1.2). This may be attributed to the nature of ESAP that requires alignment with disciplinary content, in contrast to EGAP which focuses on generic and transferable academic language skills across disciplines (Hyland, 2016; Tilakaratna, 2024). As such, ESAP teachers are more likely to recognise the importance of engaging with content teachers for understanding more discipline-related knowledge.

More specifically, the disciplinary complexity of subject-specific terminology, where the same terms can carry different meanings across fields (Hyland & Shaw, 2016; Wingate, 2022), was captured by ESAP teachers. For example, as JC1-LS1 reflected: 'It is hard when you get onto the vocabulary in the subject, then that is where you need collaboration with content specialists' (JC1-LS1). Other ESAP teachers highlighted practical strategies to address this challenge, such as reviewing recordings of subject lectures. For example, JC1-LS3 shared his experience: 'We (EAP teachers) got the recordings of maths lectures, and we started to really know something about the contents side and that was really useful to us'. Unfortunately, it did not entirely count as the prescribed working hours of curriculum preparation, as he continued: '[t]he lecture lasted for two hours, and I also borrowed the textbook for preparation, which took extra time ..... but I cannot really offset the actual hours that I used for this

(collaboration-related activities)'. This reflects that the time ESAP teachers invested in understanding disciplinary content was not formally recognised by their institutions, which may further discourage their motivation in collaboration participation, calling for the need for more structured and institutionally supported collaboration.

#### ***6.3.2.4 Interpersonal dynamics and its impact on collaboration***

Teachers' interpersonal dynamics also plays a critical role in shaping teachers' collaboration. Personal characteristics and interpersonal relationships, often unpredictable, can significantly affect their willingness to engage in collaboration. Similar to Perry and Stewart's (2005) finding, teachers were aware of the difficulties of incompatible personalities and styles of collaborating partners. In fact, interpersonal incompatibility was often identified as a primary reason for the failure of collaboration (ibid.).

Moreover, unfamiliarity between potential collaborators was also noted as a hindrance to collaboration, often stemming from the reported geographical separation of teachers' offices and administrative departmentalisation within the university (Galloway & Ruegg, 2022; Zappa-Hollman, 2018). To mitigate these challenges, it is recommended that institutions create opportunities for informal interaction, such as casual meetings or shared working spaces between content and EAP teachers. These informal settings may provide a more relaxed environment for relationship-building and the initial stages of collaborative work.

Consistent with earlier findings on factors influencing professional development (see section 6.2), leadership issues and teachers' time constraints were again identified as main factors influencing collaboration between content and EAP teachers. Teachers reported that heavy workloads often limit the time and energy that they can devote to collaboration, leading to their pragmatic decisions about how to allocate their working hours (Ding & Bruce, 2017; Ploettner, 2019). Addressing these barriers may require changes at the institutional level, particularly in relation to workload allocation and structured

support. For instance, integrating collaboration time into teachers' formal duties or reducing the workload of personnel involved in collaborative initiatives.

In addition, flexible collaboration models, such as informal consultations or short-term joint projects (see examples in section 5.1.2.2), can also make teachers' participation more feasible within constrained schedules. Ultimately, institutional recognition of collaboration as a core component of academic work, rather than an optional add-on, is essential to incentivise and sustain teachers' participation in collaborative practices (also see section 5.3.1).

#### 6.4 Chapter summary

This study revealed multiple findings from the analysis of PD documents and interviews, offering a comprehensive understanding of the current state of teachers' PD and collaboration in Chinese EMI contexts. Both objective and subjective insights on the design and implementation of teachers' PD opportunities and collaboration in PD are provided. The findings indicate that pedagogical skills development, aligning with the primary PD need reported by teachers, was the most common PD objective. PD programmes in participating institutions did involve collaboration but did not necessarily focus specifically on collaboration between content and EAP teachers, suggesting a current lack of institutional focus. As for PD trainers, language specialists are found to be the primary providers of PD, who are predominantly L1 speakers of English, which raised concerns about linguistic and cultural representation in teachers' PD in EMI contexts. Therefore, this study invites more discussion of defining the qualifications of PD trainers in EMI contexts.

Moreover, the study revealed notable differences across EMI universities, colleges, and programmes, including disparities in leadership, institutional support, management mode, and awareness of PD and collaboration. Whether these variations are intentional or due to institutional oversight remains unclear (see Macaro, 2018, for the Ostrich model). Nonetheless, EMI universities may serve as potential models for PD and collaborative practices for EMI college and EMI programme types within what it regards as affordable in financial and personnel resources. More comparative studies can be undertaken to explore

how such different types of EMI provision may impact students' learning outcomes.

The findings also reveal that it is highly challenging to promote collaboration in PD from both institutional and individual perspectives. Teachers and PD leads called for stronger top-down support and policy mandates to legitimise collaboration as a vital educational practice. Engagement in collaboration was found to be more likely when teachers have positive prior collaborative experiences, institutional encouragement, and mutual understanding of the roles of counterparts (content teachers or EAP teachers). Moreover, under the prevailing *publish or perish culture* within Chinese university settings, the institutional leads should consider more humanised ways to increase teachers' motivation of collaboration if the acknowledgement of its value is shared by different groups of stakeholders. Therefore, teachers' endeavours of participating in collaboration should be widely recognised and reflected on their staff evaluation system. Issues such as the differences of status of content and language teachers, awareness of collaboration and teachers' mutual understanding are also of particularly concern. More relevant financial and personnel resources should be allocated, and mechanism and guidance of collaboration should be established, as all these efforts are made to ensure students' academic success in EMI.

The next chapter will consider the implications of the study and its contribution to the existing knowledge of the field of EMI and EAP regarding teachers' professional development and collaboration between content and EAP teachers.

# Chapter 7: Conclusion

## 7.1 Introduction

This section briefly summarises every part of the study, particularly highlighting the key findings, contributions and implications, followed by the limitations of the study. Recommendations for further research are also put forward. This chapter ends with a thesis summary.

## 7.2 Overview of the study

This study investigates teachers' PD opportunities and collaboration of content and EAP teachers across three EMI provision types in China, namely EMI universities, EMI colleges, and EMI programmes. While extensive research has explored student challenges in EMI (section 2.4.1), much less attention has been paid to teachers regarding their challenges and needs for support (see section 2.4.2 and 3.3). Despite calls from scholars for targeted PD (Galloway & Ruegg, 2022; Lasagabaster, 2022; Macaro & Han, 2020), institutional support remains minimal in practice. This gap has led to fragmented and unsystematic PD offerings that fail to meet both language-related and pedagogical demands, and thus risk undermining EMI teaching quality and student learning outcomes. Such lack leads to fragmented and unsustainable PD provisions that fail to help address teachers' challenges, thus potentially compromising the teaching quality of EMI and students' learning outcomes.

Moreover, collaboration between content and EAP teachers, with its intended value of providing much-needed academic support to students by synergising both disciplinary and linguistic knowledge (Galloway et al., 2024; Richards & Pun, 2022), has been increasingly proposed to be an integral part of PD. However, either practices or research of teacher collaboration remain limited in practice, which is unhelpful in understanding how it is structured and operationalised to realise its intended value for students' learning in EMI.

Given above, this study explores (1) the current state of PD opportunities available to content and/or EAP teachers, (2) how content teachers, EAP

teachers, and PD leads perceive those opportunities, and (3) how collaboration is conceptualised, structured, and supported in PD. Multiple-method qualitative approach is employed through document analysis of PD-related documents and semi-structured interviews (20 content teachers, 20 EAP teachers, and 5 PD leads) among 13 participating institutions ranging from EMI university, EMI college and EMI programme. Overall, the study offers a comprehensive and detailed understanding of teachers' PD opportunities and collaboration, ultimately informing the design of more robust, collaborative, and institutionally supported PD opportunities that bolster EMI teaching and learning in Chinese EMI contexts.

Informed by the aforementioned research aims, research questions of this study are:

1. What professional development opportunities exist for content and EAP teachers in EMI contexts in China?
2. What are stakeholders (content teachers, EAP teachers, PD leads)' perceptions towards current professional development opportunities?
3. What are stakeholders' perceptions towards collaboration between content and EAP teachers addressed in their professional development opportunities?

### **7.3 Key findings**

In answer to RQ1, the findings revealed that PD for content and/or EAP teachers in Chinese EMI contexts is overwhelmingly led by English language specialists, while content teachers are rarely involved as PD trainers, thus posing a risk of strengthening the langue-centred PD model. Moreover, the dominance of NES as PD trainers could unintentionally sustain native-speakerism norm, which may risk negatively influencing students' EMI learning by limiting their exposure to the diverse, global varieties of English that is being used in real-world academic and professional settings (Galloway & Rose, 2015). PD provisions are found largely generic, workshop-based, and have an institutional focus on pedagogical skills, yet often fail to address discipline-specific, intercultural communication, or academic research skills. Although some emerging collaborative practices of content and EAP teachers as PD activities were reported in the interviews, most

of them were not written in the PD-related documents, suggesting a general lack of institutional attention. Overall, the findings of RQ1 highlight the need for more localised and institutionally endorsed PD structure.

In response to RQ2, the findings showed that teachers consistently reported that current PD provisions lack subject-specific relevance and fail to cater to their varying experience levels, yet EMI university type seemed to slightly outperform EMI college and programme types in these aspects. Differences among different groups of teachers were also of particular concern in terms of informing more branched PD in meeting teachers' needs, thus resulting in the following list:

- More specialised content-knowledge training for ESAP teachers.
- More English-language development training for local Chinese content teachers.
- More intercultural communication training for foreign EAP teachers.
- More academic research skills for EAP teachers especially those who are new to research.
- More foundational, pre-service induction and classroom observation support for novice teachers.

Additionally, compared to content teachers, EAP teachers showed greater enthusiasm in participating in PD in the hope of enhancing their institutional recognition and career opportunities. However, individual constraints such as content teachers' researching pressures under the *publish or perish culture* in Chinese HEIs and EAP teachers' heavy teaching and marking duties further discourage their PD engagement. Hence, it is necessary to establish a flexible, tiered PD structure that is more specifically applicable to teachers of different roles and at different career stages.

In response to RQ3, the findings revealed institutional and individual factors that influence collaboration between content and EAP teachers. At the institutional level, entrenched departmentalisation limits teachers' interaction, with department leads often refusing stepping over the established departmental boundaries. Furthermore, institutional acknowledged time for teachers' preparatory work of collaboration and institutional credit on teachers' collaboration are also important. Other factors such as resource constraints and

minimal incentives of reduced workloads have further discouraged collaborative practices, leaving many promising practices unsupported at scale. At the individual level, teachers' willingness to collaborate is shaped by their views on the benefits to students' EMI learning by seeing collaboration as a means to integrate language support into content teaching, and also a means to achieve personal professional growth in an increasingly interdisciplinary academic landscape. Moreover, other individual factors include a clear and shared recognition of roles when collaborating and compatible personalities of collaborators.

Overall, the findings of this study provide an improved understanding of teachers' PD and collaboration between content and EAP teachers across different types of EMI provision in China. A range of issues related to the design and delivery of teachers' PD and collaboration are discussed from the institutional and individual perspectives. The next section is to present the implications of the study.

#### **7.4 Contribution of the study**

This study firstly contributes to understanding TPD more systematically by creating an evaluation criteria list for PD for content and/or EAP teachers in EMI contexts (see section 3.4.3.4), which can benefit further investigation of TPD in various EMI contexts in a more critical manner.

Secondly, witnessing that many TPD has not been documented in the literature (Chang, 2023; Deroey, 2023), this study conducted comprehensive searches of university websites (Costa, 2015) of the participating institutions in search of PD opportunities documented in relevant documents, which revealed valuable institutional-level information related TPD and collaboration in PD.

Thirdly, this study extends beyond earlier studies by incorporating both content and EAP teachers' perspectives and their views on teachers' PD and collaboration. Particularly, informed by the imperative need of cross-fertilisation between EMI and EAP practices (Galloway & Rose, 2022; Macaro, 2018; Wingate & Hakim, 2022), this study timely supplements the current lack of

knowledge of EAP teachers' PD in EMI contexts along with their views on PD, as the majority of current PD studies research are focused on content teachers (Galloway et al., 2024; Li & Ma, 2020). The findings therefore advocate for more fair PD investments across teaching cohorts by recognising content and EAP teachers' respective expertise in EMI teaching. Hence, the investigation of PD for content and/or EAP teachers presents a more comprehensive picture of teachers' PD in China - a surging EMI context (Galloway et al., 2024).

Moreover, as existing TPD and collaboration studies were mostly conducted in one single institution, this study contributes to exploring these topics across different types of EMI provisions in China (EMI university, EMI college, and EMI programme). This study can therefore be regarded as a go-to place for scholars who are interested in gaining a relatively comprehensive understanding of the implementation of EMI in China especially regarding the current state of teachers' PD and collaboration between content and EAP teachers.

## 7.5 Implications of the study

Although it is a qualitative study not intending to generalise its results, it is hoped that the findings can inform the design and implementation of PD and teachers' collaboration in different types of EMI provision in Chinese EMI context by considering the identified factors that may influence PD and teachers' collaboration. In this section, theoretical and practical implications for the design and implementation of PD and collaboration between content and EAP teachers in EMI contexts are discussed.

The theoretical underpinning of this study lies in the creation of a list of evaluation criteria for PD for content and/or EAP teachers, which is summarised from the review of studies on teachers' PD in various educational contexts (see section 3.4.3.4). With the help of the evaluation list, TPD can be analysed systematically from structural aspects (*PD trainers, mode of assessment, certification, relevance, sufficiency, mode of delivery, duration, up-to-date PD content, sustainability, and local adaptability*) and content aspects (i.e., PD objectives) (*pedagogical skills, collaboration, English language skills, intercultural communication skills, specialised content knowledge*, and

*academic research skills).* At the practical level, this evaluation list contributes to providing a guide to critically unpacking TPD in different EMI contexts (while locally informed adjustments need to be made).

Informed by the findings of this study (see Chapter 6) in terms of the common issues of current teachers' PD and collaboration, practical implications are condensed into an action plan (see Table 7.5-1), which can be used to guide aspects where such provisions needing improved. Feasibility considerations are also discussed.

No.	Teachers' professional development	Feasibility consideration
1	Establishing context-sensitive PD to decolonise EMI	Invite institutional leads and local staff familiar with local educational environment and policies to provide consultations to inform more inward facing and context-sensitive PD.
2	Involving more content specialists as PD trainers	While it boosts disciplinary relevance of PD, institutional constraints such as time and training capacity should be considered.
3	Establishing experience specific and discipline specific tiered PD structure	Multi-tiered PD provides more targeted support for teachers, while it requires ongoing needs analysis and significant resources for effective implementation of PD.
4	Making regular updates to PD content	Update PD in response to emerging needs (e.g., AI, blended learning) and align it with best practices in higher education. Institutional commitment to regular review is critical.
	Teachers' collaboration	
1	Authorising collaboration as an educational practice at the institutional level	The implementation of collaboration should be accompanied by leadership buy-in and clear policy authorisation.

2	Establishing a clear guidance of collaboration	Clarity of roles and responsibilities of collaborators helps overcome resistance and supports trust-building.
3	Addressing departmentalisation (geographical and psychological) within university structure	Trying out small-scale hub-and-spoke mode (see section 6.3.1.1) of embedding EAP teachers in disciplinary departments seems promising. However, scaling demands resource allocation and faculty coordination.
4	Providing effective incentives to encourage collaboration	Needs analysis can be conducted to better capture what is needed to motivate teachers' engagement in collaboration. It is also of great significance to raise teachers' awareness of the importance of collaboration.

Table 7.5-1 Action plan for teachers' professional development and collaboration

Furthermore, this study also reveals some practical implications of EMI in Chinese HEIs. Firstly, *the publish or perish culture* prevailing in Chinese HEIs should be noted. Specifically, apart from certain teaching duties, content teachers are overwhelmingly tasked with publishing duty, which is one of the main indicators in their evaluation of career promotion (Teng, 2024). The tenure track system adopting lowliest place elimination series put teachers at a nerve-wracking situation, and it is more severe for early career researchers who have limited academic outputs (Moosa, 2018). EAP teachers, on the other hand, are pressured by intensive teaching workloads. Therefore, as noted by Macaro and Aizawa (2024), institutional leads have to be realistic about what is possible to achieve in PD given the workload constraints and institutional pressures imposed on the two groups of teachers. Moreover, decision makers need to consider whether the pursuit of scientific research outputs is in conflict with the educational goals stated and whether the teaching process gained much less attention in the universities under the *publish or perish culture*.

In addition, this study found that EMI PD has been designed and implemented in a vastly different way across different types of EMI provision, therefore affecting the actual outcomes of PD. EMI university type has been found perform generally better than EMI college and programme type in several aspects such as leadership, resources allocation institutional support, and institutional awareness of PD and provisions of collaboration. It is therefore recommended cross-institutional TPD resources sharing platform can be established, in which EMI universities taking the leading role of sharing the more advanced and comprehensive PD content with EMI colleges and EMI programmes. More profoundly, it is suggested to create a locally applicable accreditation of TPD through an online, self-paced course series in ensuring the capabilities of novice teachers (content and EAP teachers) newly working in Chinese EMI contexts. While experienced teachers can also use the online course series (embedded with the tiered PD structure - see above) to selectively choose PD training they need.

Last but not least, more institutional attention should be allocated on EAP teachers whose PD needs are largely overlooked at their institutions. Given the increasingly demanding requirement on students' English proficiency in EMI programmes, the important role EAP teachers play in providing integrated academic and language support programmes for students (Galloway & Rose, 2022; Macaro, 2020) should be acknowledged by institutional leads for the sake of students' academic success in EMI. Hence, to promote more fair PD investments across teaching cohorts, measures can be taken by preparing EAP teachers with more academic research skills training in response to their highly reported PD needs. Moreover, to further assure EAP teachers' important role in EMI, issues such as differences identified in content and EAP teachers' different status and work contracts within the institutions need to be revisited by the institutional leads.

## **7.6 Limitations of the study**

This study has some limitations that cannot be neglected. Firstly, it should be noted that publicly available PD documents collected through comprehensive searches of university websites might be questioned by the actual amount of

information collected, as many are only used for internal sharing and not permitted to be shared due to administrative restrictions. However, the volume of PD documents collected in the table in Appendix 3, in addition to interview data, has provided valuable information on PD and collaboration. Nevertheless, such documentary evidence is inevitably partial and cannot fully capture informal, evolving or undocumented practices (see ‘not found’ in the table). Therefore, the table is best interpreted in conjunction with other qualitative insights such as interview findings, which allows a more nuanced understanding of how PD is implemented in practice.

Secondly, limitation lies in the sample size of PD leads. Although different groups of stakeholders (content teachers, EAP teachers and PD leads) from different types of EMI provisions in China were included in this study, the number of PD leads ( $n = 5$ ) was much less than the number of CTs ( $n = 20$ ) and EAPTs ( $n = 20$ ). Therefore, PD leads’ interviews are viewed as supplementary information to teachers’ interviews, which indeed provided valuable insights from the perspective of those who design and deliver PD, thus enriching the management-level understanding of the current state of PD. Moreover, the findings would have been more comprehensive if policy makers (e.g., officers of the Ministry of Education) can be involved to discuss the issues of teachers’ PD and collaboration) at the national level.

Lastly, while the findings of this study are grounded in Chinese EMI contexts and may not be directly generalisable to other settings, they offer valuable insights into how teachers’ PD and collaboration function in rapidly expanding EMI contexts. Given the nature of qualitative study, transferability of the findings depends on the degree of contextual similarity to other EMI contexts (also see section 4.9). In this sense, the rich and contextualised insights revealed from this study enable researchers and practitioners to access the relevance to their own contexts in the aspects of teachers’ PD and collaboration. Notably, the PD evaluation list developed in this study (see section 3.4.3.4) provides a useful tool that, with contextual adaptation, can inform PD practices beyond Chinese EMI contexts.

## 7.7 Recommendations for further research

By investigating the provisions of PD and collaboration in EMI contexts in China, this study also sets the context for future research concerning more relevant issues in depth. Firstly, more studies are encouraged to use the TPD evaluation list to explore and examine TPD in China and similar EMI contexts. Unlike previous TPD evaluation frameworks (Kirkpatrick's Four-level Evaluation Model and Guskey's Five Levels of Teacher Professional Development reviewed in section 3.4.3) focusing on the process of PD in one single institution, the evaluation list created in this study is particularly concerned with EMI contexts, and more oriented to the 'fact' information of PD. Therefore, it is more suitable for investigating across different institutions within a relatively short research period. It should be noted that the evaluation list is not fixed. Scholars with similar research interests are welcome to adjust and improve it based on their research context.

Secondly, little is yet known about how these PD programmes and collaboration actually impact teachers' subsequent teaching practices. Further studies might, for example, include more action research case studies on individual teachers to explore the impact of certain types of PD on teachers' teaching practices. Longitudinal studies with instruments such as structured classroom observation instruments, teacher self-report questionnaires, or analysis of teaching materials before and after PD participation are suggested. In addition, the further impact of teachers' PD and collaboration on students' learning outcome can also be investigated from the quantitative perspective. Specifically, changes in students' academic English proficiency, subject understanding, classroom engagement, and academic performance in EMI courses can be tracked to confirm the effectiveness of teachers' PD and collaboration, as ensuring students' learning outcomes in EMI is the ultimate goal of EMI (McKinley & Rose, 2022). Surveys and language assessments, usually used in EMI quantitative research (Curle & Pun, 2024), can be used to measure whether PD-informed teaching practices lead to improved student experiences and learning trajectories. By linking teacher-focused and student-focused measures, quantitative research can provide robust evidence of the effectiveness of PD interventions and contribute to more evidence-based decision-making in EMI policy and practice.

Moreover, focus group interviews of both content and EAP teachers may hopefully reveal more concrete insights into personal factors influencing collaboration. Due to the administrative restriction, it has not been realised in this study.

As noted in section 7.6, a limitation might be the absence of policy-level actors' involvement. In the next step, future studies can be undertaken through interviews and follow-up policy ethnography with decision makers who are in charge of policymaking, such as principals of EMI universities, and deans of EMI colleges, and officers of the Ministry of Education in China. Issues regarding the allocation of funding and resources for in-house and external PD courses would be beneficial to grasp the key directions of EMI practices at the policy level. Moreover, as for the reported the common departmentalisation issues that inhibit collaboration between content and EAP teachers, it is imperative to gain an in-depth understanding with institutional leads in terms of institutional structure to determine the feasibility of innovative practices such as the Murray's (2022) tailored hub-and-spoke mode of EAP provision (see discussion in section 6.3) to students from different departments.

More studies can also be conducted to explore a broader scope of topics of higher education, such as how the *publish or perish culture* may affect the teaching quality of universities. This can be explored by focus group interviews with both institutional leads and teachers with different titles from different departments as well as by teaching evaluation surveys with students. That is, how to create a comfortable environment for different groups of teachers to survive and thrive in the universities.

## **7.8 Chapter summary and thesis summary**

This chapter summarised the key findings with the relevant literature after briefly outlining the rationale, aims and research questions, and methodology of the study. This is followed by the implications for the refinement of design and implementation of teachers' PD and collaboration with a series of suggestions for institutional leads regarding more wide-ranging educational issues. The

contribution and limitations of this study are then revisited and further areas for research are presented.

This study has created a list of evaluation criteria to critically understand teachers' PD across different types of EMI provisions in Chinese EMI contexts. It provides a timely and improved understanding of teachers' PD in a surging EM context - China, where teacher-related challenges awaiting to be addressed. Moreover, the investigation of teachers' views on teachers' PD and collaboration provides valuable insights into factors that influence teachers' PD and collaboration from the bottom-up perspective. The findings can be regarded as an action plan to guide and foster more effective PD and collaboration practices as well as inform EMI policy implementation. Given EMI continues to expand in China, this study holds implications for ensuring institutional support for teachers, attention on teacher agency, and students' learning outcomes in EMI. Particularly, this study advocates for a paradigm shift from viewing PD as peripheral or unnecessary to recognising it as fundamental to successful implementation of EMI. Ultimately, this study underscores the long-term success of EMI hinges on recognising teachers' endeavours made for enhancing EMI teaching quality and calls for a more holistic support system which ensures the empowerment of teachers and academic achievements of students.

Despite the limitations of this study, it contributes to existing body of studies and provides further insights into the design and implementation of teachers' PD and collaboration. It not only draws attention to teachers' issues in EMI, but also highlights directions for further research in similar EMI contexts. It is hoped that policy makers and institutional leads would regularly revisit the PD provided for content and EAP teachers to arrange more effective PD and collaboration for the sake of student's EMI experience.

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## Appendices

### Appendix 1. Aspects for evaluating TPD in different educational contexts

Context Aspects for evaluating TPD	TPD in HEIs (general)	CT PD in EMI contexts	EAPT PD in the Anglophone contexts	EAPT PD in the non-Anglophone contexts
Structural factors	PD trainer	PD trainer		
	Mode of assessment	Mode of assessment		
		Certification	Certification	
	Relevance to teachers' PD needs	Relevance to teachers' PD needs		
		Sufficiency	Sufficiency	
		Mode of delivery	Mode of delivery	
	Duration	Duration		
			Up-to-date PD content	
			Sustainability	
	Local adaptability	Local adaptability		
PD objectives	Collaboration	Collaboration	Collaboration	Collaboration
	Specialised content knowledge	Specialised content knowledge	Specialised content knowledge	Specialised content knowledge
		Pedagogical skills		Pedagogical skills
		Intercultural communication skills		Intercultural communication skills
			Academic research skills	Academic research skills
		English language skills		

## Appendix 2. Profiles of interviewees

Participants	Label	Nation-ality	Subject	Title	Teaching experience (EMI/EAP)	Highest degree and affiliation
CT	U1-C1	China	Language testing and assessments	Assistant professor	4yr EAP; 1yr EMI	PhD in Education (UK)
	U2-C1	Canada	Applied linguistics	Assistant professor	8yr EMI	MA in TESOL (Canada)
	U2-C2	UK	Education	Professor	12yr EMI	PhD in Education (UK)
	U3-C1	China	Engineering	Assistant professor	2yr EMI	PhD in Engineering (USA)
	U3-C2	China	Engineering	Lecturer	3yr EMI	PhD in Engineering (China)
	U4-C1	UK	Applied linguistics	Assistant professor	5yr EMI	PhD in Education (UK)
	U6-C1	USA	American literature	Associate professor	5yr EMI	PhD in Literature (USA)
	U7-C1	China	Biology	Assistant professor	2yr EMI	PhD in Biology (USA)
	JC1-C1	China	Biomedical engineering	Assistant professor	1yr EMI	PhD in Biomedical engineering (USA)
	JC1-C2	China	Mechanical Manufacturing	Lecturer	2yr EMI	PhD in engineering - within one year abroad (China)
	JC2-C1	China	Engineering	Senior lecturer	4yr EMI	PhD in Engineering (China)
	JC2-C2	Japan	Biology	Assistant professor	11yr EMI	PhD in Biology (Japan)
	JC3-C1	UK	Engineering	Senior lecturer	3yr EMI	PhD in Engineering (UK)

	JC3-C2	China	Engineering	Assistant professor	5yr EMI	PhD in Engineering (USA)
	P1-C1	China	Biology	Senior lecturer	3yr EMI	PhD in Biology (China)
	P1-C2	China	Biology	Assistant professor	3yr EMI	PhD in Biology (Netherlands)
	P2-C1	China	Biology	Assistant professor	5yr EMI	PhD in Biology (Hong Kong SAR)
	P2-C2	China	Biology	Associate professor	5yr EMI	PhD in Biology (China)
	P3-C1	China	Engineering	Assistant professor	3yr EMI	PhD in Engineering (China)
	P3-C2	China	Computer science	Assistant professor	6yr EMI	MA in Computer Science (China)
LT (EGAPT)	U1-LG1	UK	Tutorial EAP for postgraduate students	Senior lecturer, Head of Pre-Sessional English	10yr EAP	MA in TESOL (UK)
	U1-LG2	Serbia	EGAP for Y1 students	Senior language lecturer	2yr EAP	MA in Applied Linguistics (UK)
	U1-LG3	Canada	EGAP for Y1 students	Senior language lecturer	12yr EAP (incl 1yr ESAP)	MA in Education (Canada)
	U2-LG1	China	EGAP for Y1 students	Lecturer	2yr EAP	PhD in Education (Hong Kong SAR); EdD in Education (UK)
	U3-LG1	UK	EGAP for Y1 students	Lecturer	8yr EAP	MA in Applied Linguistics (UK)
	U3-LG2	UK	EGAP for Y1 students	Lecturer	6yr EAP (incl 1yr ESAP)	MA in TESOL (UK)

	U4-LG1	China	EGAP for Y1 students	Lecturer	1yr EAP	MA in communication (China)
	U7-LG1	China	EGAP for Y1 students	Lecturer	7yr EAP (incl 1yr EGAP)	PhD in Education (UK)
	JC2-LG1	China	EGAP for Y1 students	Lecturer	5yr EAP	MA in English Education (China)
	P1-LG2	China	EGAP for Y1 students	Lecturer	3yr EAP	MA in TESOL (UK)
	P2-LG1	China	EGAP for Y1 students	Lecturer	1yr EAP	PhD in Education (Australia)
LT (ESAPT)	U1-LS1	UK	ESAP for Business	Senior Language Lecturer	1yr ESAP	MA in Legal Practice (UK)
	U1-LS2	UK	ESAP for Mathematics	Language Lecturer	5yr ESAP	MA in Historical Research (UK)
	U2-LS1	China	ESAP for Music	Lecturer	2yr ESAP	MA in Music (USA); MA in TESOL (USA)
	U4-LS1	USA	ESAP for Medical Physics	Lecturer	1yr ESAP	MA in TESOL (UK)
	U6-LS1	China	ESAP for Biology and Chemistry	Language Lecturer	10yr EAP (incl 5 yr ESAP)	MA in Applied Linguistics (China)
	U7-LS1	China	ESAP for Business	Language Lecturer	5yr EAP (incl 2 yr ESAP)	MA in TESOL (China)
	JC1-LS1	UK	ESAP for Engineering	Lecturer	6yr ESAP	MA in Applied Linguistics (UK)
	JC1-LS2	UK	ESAP for Engineering	Lecturer	5yr ESAP	MA in Applied Linguistics (UK)
	JC1-LS3	UK	ESAP for Engineering	Lecturer	2yr ESAP	MA in TESOL (UK)
PD lead	U1-PD1	New Zealand	N/A	Module lead and designer of PGCert	2yr EAP	MA in Applied Linguistics (New Zealand)

	U1-PD2	USA	Certain modules of PGCert	Module lead and designer of PGCert	8yr PD lead	MA in Education (USA)
	JC2-PD1	China	N/A	Teaching and Admin Dean of EMI joint college	3yr PD lead	PhD in Biology (China)
	JC2-PD2	UK	N/A	Senior teaching fellow; EAP module lead	3yr PD lead	PhD in American literature (UK)
	JC3-PD1	UK	N/A	Senior lecturer; PD lead for EMI joint college	7yr EAP	MA in Education (UK)

### Appendix 3. PD provisions at participating institutions

PD formats	PD trainer	Mode of assessment	Certification	Relevance to teachers' PD needs	Sufficiency	Mode of delivery	Duration	Up-to-date PD content	Sustainability	Local adaptability	Objectives
U1 All PD	Courses	ELT specialist from the USA (MA in education)	Not found	Yes	Needs analysis conducted to learn about teachers' needs	Not found	In person	Not found	Content reviewed and adjusted with the latest findings of educational fields on a yearly basis	Content being 'context specific' by considering the local education policies, university culture and students' composition	Pedagogical skills, collaboration, Intercultural communication skills, Academic research skills
U1 CT PD	Courses	ELT specialist from the UK (MA in Applied Linguistics)	Not found	Yes	Not found	Not found	In person	2 days	Not found	Not found	Pedagogical skills, collaboration, English language skills, Intercultural communication skills, Specialised content knowledge
U1 LT PD	Courses	ELT specialist from UK	Not found	Yes	Not found	Reflected by types of PD activities provided (i.e., training sessions, classroom observations, feedback workshops and peer teaching)	In person	2 weeks	Not found	Content being 'Reflective and practical' by looking at how teachers can apply their new ideas to their own teaching contexts	Specialised content knowledge

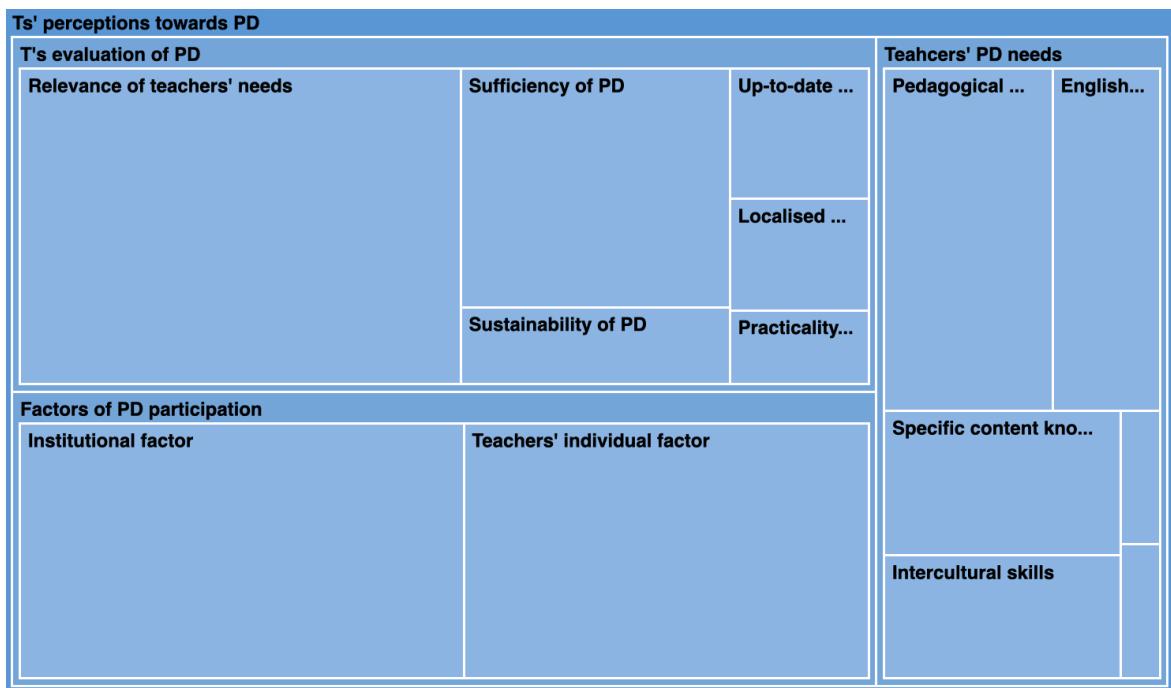
PD formats	PD trainer	Mode of assessment	Certification	Relevance to teachers' PD needs	Sufficiency	Mode of delivery	Duration	Up-to-date PD content	Sustainability	Local adaptability	Objectives
U1 PD	Workshop series (weekly), invited speakers, symposium (every semester), observation	ELT specialist from the USA (MA in education) Invited speakers: English native speakers with doctorates in education or linguistics; local content teachers	Not found	No	Some themed workshops provided based on PD leads' observations on teachers' needs	Not found	In person; online during pandemic	'Constant support'	Workshops delivered by teaching staff based on their experience in the local contexts	Pedagogical skills	
U2 PD	Invited speakers, workshops	Teachers	Yes	Not found	Reflected by types of PD activities provided (External teaching resources provided, including teaching and learning materials, pedagogical projects, etc.)	Not found	Not found	Not found	Not found	Pedagogical skills	

	PD formats	PD trainer	Mode of assessment	Certification	Relevance to teachers' PD needs	Sufficiency	Mode of delivery	Duration	Up-to-date PD content	Sustainability	Local adaptability	Objectives
U3 PD workshops and seminars	Meetings, workshops, and seminars	Not found	Not found	No	Not found	Not found	Not found	Not found	Not found	Not found	Pedagogical skills, collaboration	Pedagogical skills, collaboration
U4 PD	Invited speakers, workshops, observation	Not found	Mentor'	No	Not found	Reflected by types of PD activities provided (Invited guest speakers, seminars, and peer observations )	Not found	Not found	'Constant support'	Not found	Pedagogical skills, collaboration	Pedagogical skills, collaboration
U5 PD	Workshop series	Not found	Not found	No	Not found	Not found	Not found	Not found	Not found	Not found	Not found	Pedagogical skills
U6 PD	Workshop series	Local (Chinese) staff with a masters' degree of education in the USA	Peers' feedback on demo lessons	No	Not found	Not found	Not found	Not found	Not found	Not found	NOT FOUND	Pedagogical skills, collaboration, Intercultural communication skills, Specialised content knowledge
U7 PD	Workshop series	Not found	Not found	Yes	Not found	Not found	Not found	Not found	Not found	Not found	Not found	Pedagogical skills

	PD formats	PD trainer	Mode of assessment	Certification	Relevance to teachers' PD needs	Sufficiency	Mode of delivery	Duration	Up-to-date PD content	Sustainability	Local adaptability	Objectives
JC1 PD	PD provided by joint university, workshops, visiting staff at joint universities	Not found	Not found	No	Autonomy provided (10 % scholarship allocated in work contract)	Not found	Not found	Not found	Not found	Not found	English language skills, Pedagogical skills, collaboration, Intercultural communication skills, Academic research skills	
JC2 PD	Workshops, mini conferences	Not found	demo lesson	No	No PD specifically for EMI teaching	Not found	Not found	Not found	Not found	Not found	English language skills	
JC3 PD	Workshop series	Not found		No	Not found	Not found	Not found	Not found	Not found	Not found	Pedagogical skills, English language skills	
E1 CT PD	Courses	ELT experts with rich teaching experience in different contexts, most are NES.	Post-course feedback on a recorded class by mentors	Yes	Needs analysis conducted to learn about teachers' needs	Not found	Online during pandemic period; with options of online and in-person	One week /two weeks	The content is based on current international research into EMI	'Ongoing follow-up support' available (e.g., post-course support service)	Pedagogical skills, English language skills, Understanding students' needs, Intercultural communication skills	

	PD formats	PD trainer	Mode of assessment	Certification	Relevance to teachers' PD needs	Sufficiency	Mode of delivery	Duration	Up-to-date PD content	Sustainability	Local adaptability	Objectives
E2 CT PD	Courses	Not found	Not found	Yes	Personalised teacher development solutions provided	Not found	Hybrid	One week	Not found	Not found	Discussion of teaching behaviours Combining local conditions with global expertise	Pedagogical skills, English language skills

**Appendix 4. The hierarchy chart of themes and sub-themes of RQ2  
(screenshotted from NVivo)**



## Appendix 5. Interview transcript and coding sample

Note: The coding sample provided below is from the transcript of the interview with a content teacher at an EMI university (labelled U1-C1 in the coding template).

Interview with U1-C1 (Notes: speaker1: the researcher, speaker2: the interviewee U1-C1)	Codes Inductive Coding (I) & Deductive Coding (D)	Categories	Sub-themes	Themes
<p>speaker1 00:01</p> <p>Thank you very much for accepting to participate in this interview to share more about your understanding and views on professional development and collaboration between content and language teachers in EMI context. In this study, EMI is defined as the use of English language to teach academic subjects in countries or regions where the first language of the majority of the population is not English in the university settings. And content teachers are those who teach subjects content through English. There is no right or wrong answers and this interview will last about 30 minutes.</p> <p>Yeah, okay. So firstly, would you please tell me about yourself and your teaching career?</p> <p>speaker2 00:57</p> <p>I started my career in 2019 when I graduated from my PhD study. And then I became an EAP teacher at my institution. So I've worked previously for 3 years as an EAP teacher, and then I transferred to my current department of apply linguistics and became I become a content teacher. So I've worked as both an EAP teacher and now as a content teacher.</p> <p>speaker1 01:46</p>				

Thanks. So you're 3 years of experience of teaching. EAP job is before your PhD or after your PhD?

speaker1 01:58

After my PhD, I did my PhD study in a topic on EAP which is the students use of citations in their assignments. So yeah, I've always wanted to become an EAP teacher to even during my PhD study. So I thought that would be my first thing to do after graduation. And in fact, actually before my PhD study, I didn't work as a teacher before. So I think the whole reason why I came to the UK to study for firstly masters and then the PhD was because I want to become a teacher, but a teacher in the setting of higher education, not just primary school teacher. That's the whole reason why I came to do master's in education and then PhD. Then in my EAP teaching career, I could combine my research with my teaching.

speaker1 03:31

Okay, thank you. So can you tell me what courses are you currently teaching?

speaker2 03:39

Last semester I taught language testing and assessments. This semester I'm teaching the master dissertation module. Yeah, so far I've only taught these two.

speaker1 03:53

So your students are undergrad or master?

speaker2 04:00

Master students.

speaker1 04:06

So have you participated in any professional developments, including pre- or in-service opportunities provided at your university?

<p>speaker2 04:22</p> <p>I think so. We have a unit in the university called education development unit. This unit has about ten staff, and they often do some workshops on different aspects of teaching as such as how to redesign assessments in the age of AI, like what challenges ai brings to assessment. How can we redesign our assessment to cope with that. So those kinds of events every now and then. So mostly do these kinds of workshops that I have attended.</p> <p>speaker1 05:16</p> <p>So how do you feel about it like those workshops?</p> <p>speaker2 05:31</p> <p>I think the workshops are good, because if there are optional, so all of these workshops are optional, there's no requirements on whether you have to attend or not. In this case, then everyone can go there if they are interested. <b>So, they offer many workshops throughout the year, but there are only a few that I'm interested, like assessments or the other one I attended is like how to publish from educational research, how can you make use of your teaching and then turn it into publication so that I'm also quite interested because there's the need for us to publish. So if we can publish about teaching, then yeah, it's a very good use of our teaching resources. So for that reason, I'm kind of because they externally motivated by doing the thing. So I want to know more about it. If I'm interested, I would want to attend those workshops that are relevant to me.</b></p> <p>speaker1 06:42</p> <p>Thank you. So, in your opinion, <b>what is needed to become a content teacher?</b></p> <p>speaker2 07:05</p>	<p>PD content matching teachers' individual interest/ needs (I)</p>	<p>Relevance of teachers' needs</p>	<p>Teachers' evaluation of PD</p>
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<p>So this question is a bit difficult, because so far I've taught for 1 year as a content teacher. So from my side, I think that's quite important to motivate students interest in the EMI setting, I feel you need to do that in your teaching. You need to make sure that students are engaged.</p> <p>And also, what you're doing is you need to make them feel that it's relevant to them. So, yeah, I think that's important because the core purpose of your teaching is to make students learn. And some of some teachers will say, like you need to learn the learning objectives of this module. I think that's not the most important thing. As long as they are learning, even if it's not directly relevant to the objectives of this module, and it's a progress, and you should aim for that overall learning, right?</p> <p>In fact, I have to say like some modules. So in our university, the modules, we have module specification. The specification comes from previous module leaders design of the module. Also, we have a policy that you cannot change the models back, like in 1 year. So if you want to change the learning objectives, you have to act in advance and change that before you even teach the module. So what I want to say is that it's very complicated. The whole policy, a lot of the time is just very difficult to change learning objectives. So that means that the learning objectives themselves, they are not always accurate and say, so, you don't know the previous modulator about what was on their mind when they wrote the modules back. Right? So probably, you don't know whether they wrote it from scientific as research into that module, into that subject, or did they just come up with that in their head? So I think that's why I think learning objectives of the module itself is not the final goal of your teaching,</p>	<p>a CT/LT (D) - Increasing students' engagement (I)</p>			
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<p>but instead you need to you need to develop students interests in that subject generally, and that's what's important.</p> <p>speaker1 10:07 So in your opinion, what support or professional development are necessary for content teachers?</p> <p>speaker2 10:15 I feel like a lot is needed. I think currently I'm struggling a bit about, like I said, how to motivate students, because I feel in my classes, when I'm teaching the master students, I feel a lot of them are they kind of, it feels like they are just learning for the purpose of getting that degree. In some cases, a good thing. But sometimes it seems the like when they attend seminars, they don't do the things you ask them to do. And they lack engagements with the classes. So that could also mean like in the it's so safe in the teaching. If I ask a question, if nobody answers, then I'll try to just answer myself. And then if that turns into the habits, then gradually I myself would also lose interest in teaching, and then probably that whole lesson would look somewhat boring to the students as well. So that could form a bad circle in some way. So it could be that the students are not that engaged with the content in the first place, but in the end, it resulted in me as a teacher losing interest in engaging with them. As a result, I think support on how to deal with classroom environments. It is, how to motivate students and maybe some cases of some colleagues sharing cases about how they deal with lack of engagement and perhaps some more information about how should we look at it? Is it something we need to deal with in the classroom?</p> <p>speaker1 12:36 Thank you. So do you think currently you are adequately supported by</p>	<p>Inadequate PD provision (I)</p> <p>Characteristics required for being a CT/LT (D) - Increasing students' engagement (I)</p>	<p>Sufficiency of PD</p>	<p>Teachers' evaluation of PD</p>	<p>Teachers' PD needs</p>
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<p>professional development provided at your institution?</p> <p>speaker2 12:53</p> <p>So my feeling is that the fact is there are a range of workshops and sessions and pd opportunities. And in fact, we also have something called PGCert, which is called ap postgraduate certificate for EMI teachers for teaching. You need to sign up for that certificate, but I didn't attend trainings for that certificate because I have already got associates fellow when I was doing my PhD study. So I think I already got this accreditation and I just feel doing it for the same purpose would be a waste of time, but I guess in those sessions they did mention probably several aspects about teaching. <b>So I think the real problem regarding professional development is, it's probably difficult for that development unit to really suit the courses to pursue the training opportunities according to the staff's needs.</b> So there are a wide range of things available, but I there's so much information. And when I read through those sessions, I only find a few are relevant to me.</p> <p>Now in those kinds of sessions, I also sometimes find it's not relevant to what I want, because all their sometimes like ordered talking about is what activities can you use to engage with the students are what techniques you can use. But they didn't say, and all those teachers they presented the good examples.</p> <p>What they're saying is feeling like you, if you do this, you will work, you will get more students engagement. In fact, it seldom works like that. Like sometimes I had very good ideas of teaching. I feel it could go well, but in the end, it doesn't turn up as well as I thought. I think something is missing here, which is in some ways, I hope to see more experiences of both, I work went well and what didn't work and some more ideas about what to do if it didn't work.</p>	<p>PD content matching teachers' subjects (I)</p>	<p>Subject specificity</p>	<p>Relevance of teachers' needs</p>	<p>Teachers' evaluation of PD</p>
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<p>speaker1 17:19</p> <p>Thank you. So I'm going to ask questions related to collaboration. So does any collaboration exist between content and language teachers in your university so far?</p> <p>speaker2 17:40</p> <p>So my university has a very large language centre. It has to about 200 teachers. That's where I also worked before. So simply put the answer is for some of the EAP modules, I guess, for all of the EAP modules, when I work there, we were asked to do some sort of needs analysis. So EAP teachers are teaching aim our system is that for EAP in year one, it's a standard module for every major. But in year two, it becomes to depend on the majors. For example, there's one EAP module for business students, another one on humanities and social science, I think so for different subjects, the beginning scheme for all of the EAP module is to do that needs analysis. And usually that begins with the looking at the information that's only on our module page.</p> <p>A lot of the time the needs analysis is done with just checking like module specification of the targets are subject cluster. Sometimes, they will try to contact the module leaders in certain disciplines, but not everyone would respond. We have found that some of the programme directors in the subjects, they were response to EAP teachers and share. Sometimes they are willing to attend a meeting to share information about their programmes and how they want the language school to give support to their teachers, to their students. But that's only a few of the programme directors. Some other directors, just students didn't answer to those emails and didn't want to collaborate with the EAP teachers.</p>	<p>Challenges of collaboration</p>	<p>Mechanism of</p>	<p>Institutional factors</p>	<p>Factors that facilitate</p>
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<p>Yeah, so there are different sorts of collaboration and to different extents. I also heard that in EAP modules I wasn't involved. <b>We had a called cluster-based collaboration.</b> It's a kind of joint delivered EAP module with involvement of the content teachers (co teaching). But it only lasted for a few years. And later it has been shut down, so they no longer do those kinds of modules. I heard this because in the end, it turns to be separately delivered by maybe some lessons by the EAP teacher and some lessons by the content teachers. And they probably lacked a mechanism of working together. So that's so in the end, it didn't turn out to be staff collaboration. So that's what I heard, but I wasn't involved in that.</p> <p>speaker1 23:20 So far, have you been part of the collaboration, or you just heard of it?</p> <p>speaker2 23:30 So one thing I can remember was we have some individual meetings with some of the programme directors. One of them was from the education school. We have a very large school of education. A it was a quite big meeting because they sent over a team of five or six subject teachers. And we four or five EAP teachers went as well. So we sat together the meeting. We also got tea break and snacks for that meeting, and we just discussed the work like what was their content teaching look like? And what do they want from us regarding language support? So I think that was one example of collaboration. But following up on that, I don't think much what else happened after that. It was many for us just to getting some general idea of what their students are like. I think one thing they ask from us is to is to group the students from their apartments together. So for all the other students in our university, for post graduate level, they if they have EAP</p>	<p>ion (D) - How collaboration is operated in institutions (I)</p>	<p>collaboration</p>		<p>ate or inhibi t collaboration</p>
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courses, they would be a mixed subject. The teacher group of the school of education, they asked us to put their students together, try to use some examples that's relevant to their subjects during our teaching. Yeah, so I think that there's a reason why they responded quite well to us because maybe also because they regard things like language skills, writing skills quite high in their subjects, because obviously it's quite important in educational studies. Okay, so that was an example of having a meeting together. And the other event I could remember was a similar thing, but with the business school we have. But for business school, two program directors coming to the meeting, so it wasn't big. There weren't as many staff as the one was education, but also we had a similar meeting with business school.

speaker1 27:51

So how do you think of collaboration between content and language teachers?

speaker2 27:56

I think it's very important. I think the core purpose of EAP is to teach students the academic skills they need, right? To succeed in their program, if we (content teachers) don't know what their program is about, if we don't know what their (EAP) content teaching is like, what do they need to write or speak in their content subjects? Then what was what's the purpose of teaching EAP? Or what should be the aim of EAP teaching? I'm also quite interested in researching about this topic.

To some extent, we can see that there is a reason why traditionally there isn't much collaboration between EAP teachers and common teachers. It's probably for logistic issues, right? And then probably how the university structure, because it makes it saves

<p>Attitude towards collaboration (D) - Positive attitude (I)</p> <p>Challenges of collaboration (D) - Logistic issues (I)</p>	<p>Leadership issues</p> <p>Incentives of collaboration</p>	<p>Positive attitude</p> <p>Institutional factors</p>	<p>Attitudes towards collaboration between CT and LT in PD</p> <p>Factors that facilitate or inhibit</p>

<p>more time if everyone just does their own bits, right? It will save some time if EAP teachers design your EAP lessons, and then content teachers do their own. But I think like in terms of the pedagogical, the teaching benefits, ideally, there should be a collaboration between the two parties.</p> <p>Also, like I said, <b>how the universe is structured</b>. So if we think about as normal. EAP for example, an EAP module leader. So their job is to just offer the EAP module. <b>And if they managed to promote collaboration between them and subject teachers</b>, that could be a plus on annual evaluation of personal performance, right? So that's definitely something they could put on their evaluation. <b>But this kind of collaboration is difficult if there is no sustained support from higher above</b>. So if you are just doing this yourself, even as a module leader, <b>if you lack the clear structure or guidance of collaboration</b>, then you will soon you don't have the reason why you have to keep in contact with those programme directors.</p> <p>I think this obstacle is it appears to be <b>a lack of motivation for both sides of the teachers</b>, but more deeply is the lack of drive and incentive from <b>higher above to ask you to demand you to do that</b>. Let's say if, for example, the presidents or the head say now the dean of school of languages and each of the school director, you have to collaborate with them for each of your EAP program design. And if the president says like you have to attend how many meetings you have to work out. What kind of system to ensure collaboration? Like, what do we hope to get out of this? <b>So if there's more specific support and specific requirements on that, I think you will be more useful</b>. But in that case, some EAP teachers and maybe</p>	<p>University structure (I)</p> <p>Intangible incentive of collaboration (I)</p> <p>Challenges of collaboration (D) - Lacking clear guidance (I)</p> <p>Teachers' motivation of collaboration (I)</p> <p>Lacking clear guidance (I)</p>	<p>Resources of collaboration</p> <p>Resources of collaboration</p> <p>Teachers' awareness of collaboration</p> <p>Resources of collaboration</p>	<p>Institutional factors</p> <p>Institutional factors</p> <p>Institutional factors</p> <p>Individual factors</p> <p>Institutional factors</p>	<p>Factors that facilitate or inhibit collaboration</p>
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module leaders, they will feel pressured as well.	Tangible incentive of collaboration	Incentives of collaboration	Institutional factors	Factors that facilitate or inhibit collaboration
<p>So I think if this approach is used, then the teachers need to be motivated to be rewarded for doing that kind of collaboration. For example, if let's say some journal articles could come out as a result of this collaboration, if they could receive an additional reward for collaboration. And that will be more helpful.</p> <p>speaker1 35:13 So I think that would be all the questions. Is there anything you would like to add at the end?</p> <p>speaker2 35:28 As a content teacher, I hope to get more support for my teaching.</p> <p>speaker1 35:48 Thank you very much.</p>				Teachers' evaluation of PD

## Appendix 6. Interview (in pilot study)

### Interview of your perceptions on professional development opportunities and collaboration of content and language teachers in EMI contexts in China

Hello, thank you very much for participating in the interview to share your views on professional development opportunities and collaboration between content teachers and language teachers in Chinese EMI contexts. In this study, EMI is defined as the use of the English language to teach academic subjects in countries where the first language of the majority of the population is not English in university settings. Content teachers are those who teach subject content through English and language teachers are those who teach English for Academic Purposes (EAP) to students in EMI contexts.

There are no right and wrong answers. The whole interview session will last about 30-45 minutes. Thank you again for your participation!

#### *Interview guide*

##### **I. Background information**

Firstly, could you please begin by telling me about yourself and your teaching career? For example, when you joined this university, what EMI/EAP experience you had before taking up this post, etc.

##### **I. Questions of the study**

1. What professional development opportunities are provided at your university?

2. If there are PD opportunities, have you participated in any?

2-1 If yes, what is it/ what are they?

Examples:

- In-house training (e.g., faculty Development events hosted in your university)
- Off-campus training opportunities (e.g., seminars hosted by academic associations)
- Overseas training opportunities
- Online training materials
- Others (please specify: \_\_\_\_\_)

2-1-1 How do you feel about it?

2-2 If no, why not?

3. Do you think you are adequately supported by professional development opportunities provided by your university, and why?

4-1 (For CT) What professional development do you think content teachers need when working in EMI contexts?

4-2 (For LT) What professional development do you think language teachers need when working in EMI contexts?

5-1 (For CT): What characteristics/ skills are important for content teachers who teach in EMI context?

5-2 (For LT): What characteristics/ skills are important for language teachers who teach language-related courses to EMI students in EMI context?

6. What do you think might be the obstacles for you to take part in? Why?

7. Does any collaboration between content and language teachers exist in your university?

8. Have you had any collaboration experience?

8-1 If yes, what is it/ what are them?

Examples (forms of collaboration which include but are limited to):

co/team-teaching

co-design teaching materials for EMI courses

co-design teaching materials for EAP courses (e.g., *English for Engineering*)

workshops/seminars for both groups of teachers

online forum for both groups of teachers

others (please specify: \_\_\_\_\_)

8-1-1 How do you feel about these collaboration practices at your institution?

8-2 If no, why not?

9. How do you think of collaboration between content and language teachers?  
Why?

10. Do you think that collaborating with content/language teachers will improve your own teaching (skills)? Why/why not?

11-1 (For CT) What do you know about language teachers and their department in your university?

11-2 (For LT) What do you know about content teachers and their departments in your university?

12. In your opinion, what might be the obstacles to facilitate collaboration between content and language teachers?

Closing:

Thank you for your time. Is there anything you would like to add that hasn't been covered in this interview?

- End of the interview -

## Appendix 7. Interview (in main study)

Note: content coloured in blue are revised content after the pilot study

### **Interview of your perceptions on professional development opportunities and collaboration of content and language teachers in EMI contexts in China**

Hello, thank you very much for participating in the interview to share more about your views on professional development opportunities and collaboration between content teachers and language teachers in Chinese EMI contexts. In this study, EMI is defined as the use of the English language to teach academic subjects in countries where the first language of the majority of the population is not English in university settings. Content teachers are those who teach subject content through English and language teachers are those who teach English for Academic Purposes (EAP) ([English for General Academic Purposes \(EGAP\)](#) and/or [English for Specific Academic Purposes \(ESAP\)](#)) to students in EMI contexts.

There are no right and wrong answers. The whole interview session will last about 30-45 minutes. Thank you again for your participation!

#### *Interview guide*

##### **I. Background information**

Firstly, could you please begin by telling me about yourself and your teaching career? For example, when you joined this university, what EMI/ [ELT \(English language teaching\)](#) experience you had before taking up this post, etc.

##### **II. Questions of the study**

1. What professional development opportunities are provided at your university?

2. If there are PD opportunities, have you participated in any?

2-1 If yes, [what is/was it/ what are/were they?](#)

Examples:

- In-house training (e.g., faculty Development events hosted in your university)

- Off-campus training opportunities (e.g., seminars hosted by academic associations)
- Overseas training opportunities
- Online training materials
- Others (please specify: \_\_\_\_\_)
- No pre-service training)

2-1-1 **How did you find the experience of these PD opportunities? what are your reflections on that experience?**

2-2 **If no, why not?**

3. **Do you think you are adequately supported by professional development opportunities provided by your university, and why?**

4-1 (For CT) **What professional development** do you think content teachers need when working in EMI contexts?

4-2 (For LT) **What professional development** do you think language teachers need when working in EMI contexts?

5-1 (For CT): **What characteristics/ skills are important for content teachers who teach in EMI context?**

5-2 (For LT): **What characteristics/ skills are important for language teachers who teach language-related courses to EMI students in EMI context?**

6. **Have you found any difficulty of taking PD? Why?**

7. **Does any collaboration between content and language teachers exist in your university?**

8. **Have you had any collaboration experience?**

8-1 **If yes, what is it/ what are/were them?**

Examples (forms of collaboration which include but are limited to):

co/team-teaching

co-design teaching materials for EMI courses

co-design teaching materials for EAP courses (e.g., *English for Engineering*)

workshops/seminars for both groups of teachers

online forum for both groups of teachers

others (please specify: \_\_\_\_\_)

8-1-1 [How did you find your experience of collaboration? what are your reflection on that experience?](#)

8-2 If no, why not?

9. How do you think of collaboration between content and language teachers?

Why?

10. Do you think that collaborating with content/language teachers will improve your own teaching (skills)? Why/why not?

11-1 (For CT) [To what extent are you familiar with the work of language teachers at your university?](#)

11-2 (For LT) [To what extent are you familiar with the work of content teachers at your university?](#)

12. In your opinion, what might be the obstacles to facilitate collaboration between content and language teachers?

Closing:

Thank you for your time. Is there anything you would like to add that hasn't been covered in this interview?

- End of the interview -

## Appendix 8. Plain Language Statement

### Plain Language Statement

#### Title of project and researcher details

Investigating professional development of content and language teachers in English Medium Instruction (EMI) contexts in China

Researcher: Jingwen Zhou

Supervisor: Dr Nicola Galloway, Dr Ide Haghi

Course: This is PhD research from School of Education at University of Glasgow. The research aims at exploring professional development of content and language teachers as well as collaboration between content and language teachers in Chinese university EMI contexts.

Before you decide if you want to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the information on this page carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

I hope that this sheet will answer any questions you have about the study.

#### 1. What is the purpose of the study?

The purpose of this study is to investigate professional development of content and EAP teachers and their collaboration for the purpose of bettering EMI teaching quality in Chinese EMI contexts. By doing so, interviews will be used.

#### 2. Why have I been chosen?

You are being asked to take part because you are either a content teacher or a language teachers or professional development leads at your institution.

#### 3. Do I have to take part?

You do not have to take part in this study. It is up to you to decide whether or not to take part. If you decide to take part, you are still free to withdraw at any time and without giving a reason. If, after you have started to take part, you change your mind, just let me know and I will not use any information you have given me in my writing.

#### **4. What will happen to me if I take part?**

If you take part, I will ask you some questions about what you think about professional development of content and/or language teachers as well as collaboration between content lecturers and language teachers. It will take about 30-45 minutes for interview. You do not have to answer any question that you do not want to. I will record the interview sessions on a voice recorder so that afterwards I can listen carefully to what was said.

#### **5. Will the information that I give you in this study be kept confidential?**

I will keep all the data I collect about your opinions about professional development of content and/or language teachers as well as collaboration between content and language teachers in the interview in a locked cabinet or in a locked file on my computer. All information which is collected about you during the course of the research will be kept strictly confidential. When I write about what I have found, your name will not be mentioned and any information about you will be replaced by a pseudonym so that you cannot be recognised from it. However, if during our conversation I hear anything which makes me worried that you might be in danger of harm, I might have to inform relevant agencies of this.

#### **6. What will happen to the results of this study**

I will analyse the data I collect from participants, and present this in the dissertation which I am writing for my PhD research and publication papers. All participants will receive a written summary of the findings and I will also present the information to colleagues. I will destroy the data at the end of the project (01/31/2026). All participants will not be identified in any report/publication.

## **7. Who has reviewed the study?**

This study has been reviewed and agreed by the College Research Ethics Committee, University of Glasgow.

## **8. Who can I contact for further Information?**

If you have any questions about this study, you can ask me - Jingwen Zhou (j.zhou.2@research.gla.ac.uk).

or my supervisor Dr Nicola Galloway (nicola.galloway@glasgow.ac.uk) or Dr Ide Haghi (ide.haghi@glasgow.ac.uk).

or the ethics administrator (socsci-ethics@glasgow.ac.uk).

Thank you for reading this, I am looking forward to working with you!

## Appendix 9. Consent form

### Consent Form

Title of Project: Investigating professional development of content and language teachers in English Medium Instruction (EMI) contexts in China

Name of Researcher: Jingwen Zhou

#### Please tick as appropriate

Yes  No  I confirm that I have read and understood the Participant Information Sheet (or Plain Language Statement) for the above study and have had the opportunity to ask questions.

Yes  No  I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

Yes  No  I consent to interviews being audio-recorded

Yes  No  I acknowledge that participants will be referred to by pseudonym.

Yes  No  I acknowledge that participants will be identified by name in any publications arising from the research.

Yes  No  I acknowledge that there will be no effect on my grades/employment arising from my participation or non-participation in this research.

#### I agree that:

Yes  No  All names and other material likely to identify individuals will be anonymised.

Yes  No  The material will be treated as confidential and kept in secure storage at all times.

Yes  No  The material will be destroyed once the project is complete.

Yes  No  The material will be retained in secure storage for use in future academic research

Yes  No  The material may be used in future publications, both print and online.

Yes  No  I waive my copyright to any data collected as part of this project.

Yes  No  Other authenticated researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.

Yes  No  Other authenticated researchers may use my words in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form

Yes  No  I acknowledge the provision of a Privacy Notice in relation to this research project.

I agree to take part in this research study

I do not agree to take part in this research study

Name of Participant .....

Signature .. Date ..

Name of Researcher Jingwen Zhou

Signature Jingwen Zhou

Date 29/01/2023

- End of Consent Form -