ASIA PACIFIC JOURNAL of Educators and Education
Since 1979

Manuscript Title: An Investigation on the Effectiveness of an EMI Professional Development Programme

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Accepted Date: 2 July 2024

Please cite this article as: Zhou Ziqian, & Lee Kooi Cheng. (2025). An investigation on the effectiveness of an EMI professional development programme. *Asia Pacific Journal of Educators and Education* (Early view).

EARLY VIEW

An Investigation on the Effectiveness of an EMI Professional Development Programme

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Abstract: For purposes of accessibility and mobility in a globalised higher education context, the teaching of content subjects in English has gained traction in countries and universities where the first language is other than English. In the context of Taiwanese higher education where this study and paper is situated, the initial impetus to teach content subjects in English arose from the government's strong encouragement to attract international students. The increased traction in the implementation of such programmes has motivated a greater demand for professional development programmes for faculty members involved in teaching content in a language different from the medium of instruction of the university. This paper therefore seeks to report on a three-day intensive EMI professional development programme conducted synchronously via an online platform for 18 content instructors of a Taiwanese university. The study intended to ascertain participants' concerns prior to the professional development programme and the extent to which the programme addressed their learning needs. A mixed method approach was used for the collection and analysis of quantitative and qualitative data drawn from pre-workshop and post-workshop surveys and mentors' observation notes on participants progress and learning gains through teaching demonstrations. On challenges, findings of this study are consistent with earlier studies in terms of instructors' concern about their and their students' linguistic competencies, dilution of content, student attitude and motivation. An emerging observation is reference to wellbeing. On programme effectiveness, both the participants and mentors found that the participants experienced a very positive trajectory of growth in demonstrating good practices in teaching strategies and delivery techniques. However, linguistic competency and engagement though show improvement yet remain key aspects of attention. We contend that for EMI course effectiveness, institutions and instructors need to commit to long(er) term professional development programmes.

Keywords: English as Medium of Instruction (EMI), professional development

INTRODUCTION

As a measure to advance accessibility and mobility in a globalised higher education context, the teaching of content subjects in English has gained traction in countries and, in particular, in higher education institutions where the first language is other than English (Aizawa & Rose, 2019; Marsh, 1994; Yang, 2015). In Asia, this phenomenon is arguably observed in schools in countries which were part of the British colonies such as Brunei, Hong Kong, Malaysia, and Singapore in the late 1990s (Hou, Morse, Chiang & Chen, 2013 as cited in Tsou & Kao, 2017). Subsequently, in the late 2000s and early 2010s, there was a significant trajectory of growth seen at higher education institutions in countries and regions such as Japan, Korea, Macau, Taiwan, and China as part of their internationalisation strategies (Tsou & Kao, 2017). In Taiwan where this study is situated, the impetus in using English as a medium of instruction in higher education institutions came from the government's strong encouragement to universities to attract and bring in international students, with a targeted enrolment of 120,000 by 2020 at the initial stage (Welsh, 2012). This was recently adjusted to 320,000 by 2030, more than twice the number of 130,000 pre-pandemic in 2018 (Sharma, 2023). The selection of courses for the initial phases of adoption depended primarily upon disciplines and instructors. Incentivisation has also been built in for universities, departments, as well as individual instructors who embark on this innovation.

The increased traction in the implementation of programmes that integrate content and (another) language, specifically the English language, in the university curricula, has motivated a greater demand for teacher development programmes for faculty members involved in teaching content in a language different from the medium of instruction of the university. In recognition of this, since 2017, the institution where the authors are at has been offering an English as Medium of Instruction (EMI) professional development programme for universities in Taiwan. Started as a 5-day in-person programme, there was a break in 2020 and 2021 due to the Covid-19 pandemic. In 2022 when the programme was re-offered, it was done synchronously via an online platform as a 3-day intensive programme.

This paper seeks to report on two 3-day intensive EMI professional development programmes for 18 content instructors of a Taiwanese university. Findings of the study will enhance our understanding of the design of effective teacher training or professional development programmes for EMI instructors, their level of preparedness, and their sense of agency or the sense of themselves as autonomous actors in an otherwise new field of content-based instruction in a language not native to the instructors and most of the students.

LITERATURE REVIEW

Conceptually, CLIL makes the presupposition that content experts teach both language *and* their disciplinary content, with an equal focus laid on both of these (Marsh, 1994). EMI, on the other hand, refers to the use of the English language for the teaching of disciplinary content in educational contexts where the first or native language of most students are not English (Macaro & Han, 2019). EMI also assumes that disciplinary experts have sufficient language competency to facilitate the teaching of their disciplinary content in English. In fact, Schmidt-Unterberger (2018) points out emphatically that CLIL is rooted in the assumption that students learn both disciplinary content and language; in contrast, while CLIL may have gained traction in pre-tertiary educational settings, Schmidt-Unterberger cautions that equal focus on content and language may not be realistic and practicable in higher education settings. Instead, with EMI where language learning is for the most part an implicit aim (Huang, 2013; Schmidt-Unterberger, 2023; Yang & Gosling, 2014), Schmidt-Unterberger advocates for a model that has a combination of EMI programmes complemented by English language courses that support students' language learning.

The literature also reveals that CLIL and EMI face a distinctive set of challenges. For instance, in a study of the self-perceptions of STEM instructors, Block and Moncada-Comas (2022) found that these instructors did *not* see themselves as English language teachers but as content instructors teaching using the English language. Given how that these instructors identified themselves, pedagogically, as working within an EMI as opposed to a CLIL context, they did not teach their students how language could be used to express disciplinary content. The same finding was also observed in Deignan and Morton's (2022) study of six EMI instructors in the Spanish higher education context. This phenomenon is common not only in the European context where most of the earlier CLIL and EMI adoption occurred, it is also prevalent in the Asian context as revealed by Baker and Huttner (2019) (see also Bradford & Brown, 2017; Fenton-Smith, Humpries & Walkinshaw, 2017; and Galloway, Kriukow & Numajiri, 2017). Besides the challenge of instructors not identifying themselves as teachers of language, there are more fundamental issues on pedagogy and linguistic competency (Dang, Bonar & Yao, 2023; Deignan & Morton, 2022; Doiz & Lasagabaster, 2020; Lagasabaster, 2022; Macaro, 2020; Schmidt-Unterberger, 2022; Tsou & Kao, 2017). Specifically, instructors were not confident about their own linguistic capabilities, they feared the risk of content dilution and, hence, they prioritised content over language by code-switching as a coping mechanism (Yeh, 2012); indeed, some instructors even had doubts about the quality of *their* own teaching and course materials. This deep concern about linguistic competency and pedagogy was similarly noted by Vu and Burns (2014) who interviewed 16 EMI instructors in a Vietnamese university. Some cited challenges were accents, pronunciation, and the instructors' worry that their lack of language competency might have a negative impact on student learning.

Macaro et al's (2018) systematic review of 83 EMI studies across different geographical regions again recognised instructors' self-perception of inadequacy in language ability as an issue although it was not clear how they defined *adequate* or *sufficient* competency. The lack of clarity on the required standard of competency and a shortage of linguistically competent instructor were similarly observed by Dearden's (2015) study where data were collected from 55 countries. Interestingly, when participants, who were EMI instructors, were asked to rank attributes of an EMI instructor, the most important attribute among seven was "the ability to explain difficult concepts" and "the ability to create an interactive environment" (p. 23).

In the Taiwanese university context, a similar concern was observed. Tsou and Kao (2017) reported that the three main obstacles to the implementation of EMI in Taiwan are as follow: instructors and students' inadequate English language proficiency; questionable depth of content to be covered considering the varied language proficiency; questionable students' learning attitudes and motivation towards English-only mode of instruction and learning materials. Separately, Yuan et al's (2022) study found that EMI teachers were generally not well prepared, and some might lack support in pedagogy and competency in English while others might fear not being able to deliver their lessons competently. In particular, their main fear was that of exposing their lack of English language competency to the class. Huang's (2013) findings further echo EMI teachers' concern about presentation or delivery skills and their own competency in teaching a disciplinary area in English. Additionally, Yuan et al's findings are similar to those expressed in prior studies which noted the importance of having teachers appropriately trained for teaching disciplinary content in English (Huang, 2013; Lo & Lo, 2014; Pons Seguí, 2019; Pavón Vázquez & Ellison, 2013; Yang, 2016; Yang & Gosling, 2014).

On students' linguistic competency, Chang (2010) found that university students perceived themselves as not possessing a sufficient level of English language competence. Similarly, a different study by Yeh (2012), that surveyed 476 students enrolled in 25 EMI courses across six Taiwanese universities, found that students attributed their learning difficulties to their own level of English language proficiency. These are concerns similarly shared by Taiwanese instructors (Huang, 2013; Jiang, Zhang & May, 2019; Tsou & Kao, 2017; Yuan, Chen & Peng, 2022) and elsewhere by Vu and Burns (2014) in the Vietnamese context and Selvi (2022) in northern Cyprus. Taiwanese instructors had concerns about student attitude, student motivation and engagement (Hou 2013; Kung 2013; Tsou & Kao, 2017; Yang, 2014).

Several recommendations have been offered by commentators about how it is that EMI instructors can be better placed to teach disciplinary content in English. First, some authors have suggested the use of so-called 'meta-discursive' speech by EMI tutors (Doiz & Lasagabaster, 2022; Zhang & Lo,

2021). Meta-discursive speech or metadiscourse refers to pieces of terminology or other linguistic cues that allow the listener to better understand the intended meaning of a speaker. Metadiscourse has been especially useful in guiding listeners from different speech or linguistic backgrounds. Because communication is improved, tutors who employ metadiscourse are better able to facilitate classroom discussion or participation and promote student learning. A second recommendation involves the adoption of what is known as a student-centred (as opposed to teacher-centred) pedagogy as a means of engaging students (Yuan et al., 2022). Much has been written about such a pedagogy; very briefly, a student-centred pedagogy (or one that promotes 'active learning') is based on the assumption that students learn best when they do so 'autonomously'. In other words, students are best engaged and, as a result, are better able to retain and apply knowledge or skills, when what is taught to them resonates with their experiences, values and beliefs (Bonwell & Eison, 2005; Michael, 2006). In the words of some commentators, a student-centred approach, or 'active learning' as it is sometimes called, involves the belief that 'the process of education is about self-development and learning is truly meaningful only when learners have taken knowledge and made it their own' (Meyer & Jones, 1993, p. 20). Student-centric or active learning strategies take several forms. In the classroom, instructors are encouraged not so much to 'impose' what the 'right' answer is, but to arrange a path of inquiry—via, for instance, the Socratic method—in which students discover for themselves what is valuable.

In view of the challenges and concerns expressed by instructors as well as the solutions proposed in the literature, we contend that the crux is teacher readiness and the need for effective training programmes (Block & Moncada-Comas, 2022; Doiz & Lasagabaster, 2020; Kung, 2010; Macaro, 2020; Tsou & Kao, 2017; Yang & Gosling, 2014; Yang et al., 2022) and continuing professional development for EMI instructors (Dang, Bonar & Yao, 2023; Deignan & Morton, 2022; Yang et al., 2022). These professional development programmes range from a focus on Farrell's (2020) reflective practice, to Richard and Pun's (2023) typology of 51 features in 10 EMI curriculum categories in ascertaining the planning and evaluation of EMI programmes, and Lasagabaster's (2022) suggestion of certification as reward.

Despite professional development programmes designed specifically for EMI instructors, Dang et al's (2021) systematic review of 115 papers shows that EMI instructors did not believe that their teaching needs had been met. Dang et al (2021) further noted that there was a limited number of programmes that addressed both linguistic and pedagogical support. There is, in fact, a paucity in research that investigates the impact of EMI training programmes on EMI instructors at higher education (Lasagabaster, 2022). On this note, one way in which these programmes could be conceptually framed for research investigations is through the use of the ROAD-MAPPING framework developed by Dafouz and Smit (2020). Underpinned in sociolinguistics and

ecolinguistics, the ROAD-MAPPING framework comprises six dimensions: RO for roles of English (in relation to other languages), AD for academic disciplines, M for language management, A for agents, PP for practices and processes, and ING for internationalisation and glocalisation. The framework has been widely used by scholars researching EMI in multilingual higher education settings due to its potential in capturing the different sociocultural, multi-faceted and multi dimensions of EMI and forces that shape these dimensions. However, Dafouz and Smit (2020) acknowledge that this very complexity also makes it challenging to operationalise the framework for research design and analysis. They further recommend a contextualised understanding of the framework which could be complemented with another framework, as illustrated by Graham and Eslami (2020) in their professional development programme. In our paper, we draw reference from Graham and Eslami's findings although their 15 participants were pre-service secondary teachers.

In summary, we contend that investigations focusing on the approach, syllabus, and content of the EMI training programmes—as well as teacher perception on usefulness, relevance, and applicability to their respective contexts—would help shed insights on how such programmes could address the needs of EMI instructors in higher education settings and enhance their confidence and competency. Our study which looked at the effectiveness of two iterations of an EMI teacher training programme hopes to contribute to literature in this area.

CONTEXT OF THE STUDY

In mid-2022, our institution facilitated two iterations of an intensive 3-day EMI teacher training programme via synchronous online platform for 18 faculty members of a university in Taiwan. The EMI teacher training programme, which begun since 2017, has received encouraging feedback from participants. As a result, we were interested to find out in a more systematic way the extent of effectiveness of this intervention, especially with respect to the addressing of concerns of EMI teachers. Consent was sought from all 18 faculty members and 16 were given for the collection and use of data on an anonymous basis. Approval from our university's research ethics board was also sought and received (Reference number: NUS-IRB-2022-314).

Framed as part of the participants' continuing professional development initiative and an intervention in addressing the needs of the EMI instructors, we asked the following questions:

1. What are the key concerns articulated by EMI instructors and how do they perceive that their concerns have been addressed through the intervention of an EMI professional development programme?

2. With respect to the mentoring of EMI instructors, what are key aspects that mentors of EMI instructors raise as learning points for EMI instructors?
3. What, according to the participants, are the key elements that make an EMI professional development programme effective?

Based on the requirements set by the university and the needs of the participants, the 3-day professional development programme was designed to focus primarily on familiarising the participants with EMI pedagogical practices that promote student learning and strengthening their ability to deliver their teaching and engage their students in English. There was a combination of workshop sessions, one-on-one consultation with mentors, and teaching demonstration sessions. The aim of this paper is therefore to offer responses to the three research questions pertaining to the effectiveness of the professional development programme.

METHODOLOGY

Data of our study were drawn primarily from three sources: (a) a pre-workshop survey that established the needs, challenges and beliefs of the participants; (b) a post-workshop survey that sought to ascertain the extent to which the challenges and concerns of the participants had been addressed; and, (c) mentors' observation notes based on the teaching demonstrations and preparations done by the participants. Figure 1 is a visual representation of the research design and types of data collected.

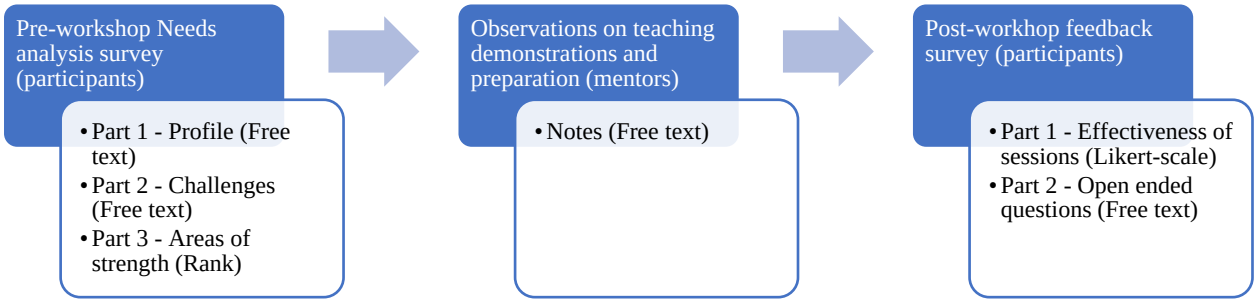

Figure 1. Research design, types and sources of data

The faculty members who formed the respondents of this study came from a diversity of disciplinary backgrounds and have taught a range of students—from the undergraduate to graduate levels. As shown in Figure 2, most of the participants in this study were from business-related disciplines. This was followed by engineering, arts, and science.

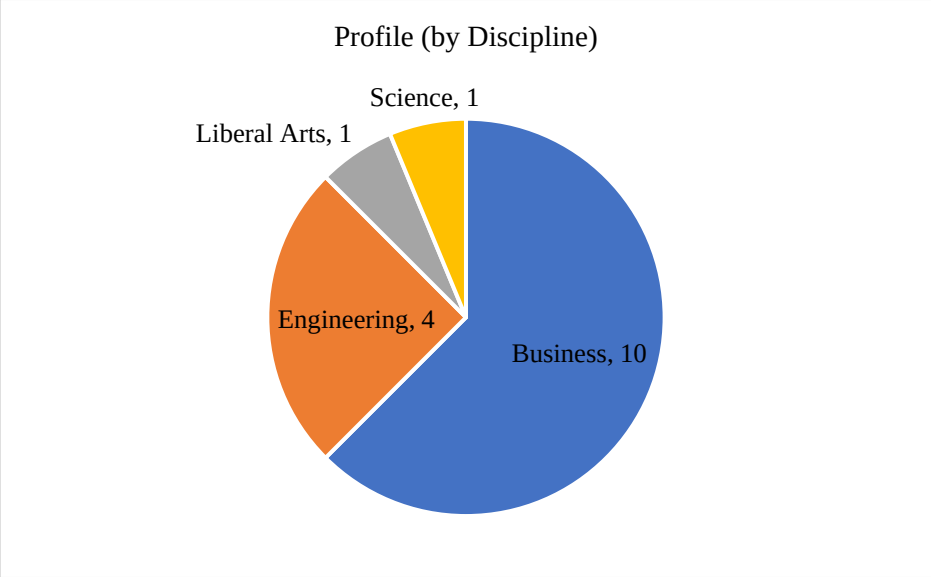

Figure 2. Profile of participants (by discipline)

The study participants also had a wide range of teaching experience—from a minimum of four to twenty-eight years, with 22 years as the average number of years. In fact, 75% of them were senior colleagues with more than 20 years of teaching experience. However, most had had little to no experience teaching in English (except one participant who had six years of experience teaching in English). In terms mentors, there were five with each mentoring two participants. These mentors had had more than 10 years of teaching experience and were selected to be in the programme based on their teaching record, namely recipients of department-level and/or university-level teaching excellence awards.

A mixed method approach was used in the analysis of data. Basic quantitative analysis was done for closed ended questions (such as ranking and Likert-scale) in the pre-workshop and post-workshop surveys. For open ended responses with free text option, such as the mentors' observation notes and participants' comments in the pre-workshop and post-workshop surveys, a content analysis approach was applied. As explained by Krippendorff (2004), content analysis is an empirically grounded research analysis method and a systematic approach in drawing meaningful connections from qualitative data consisting of texts, images, non-verbal communication cues, symbols.

For this study, qualitative data were coded based on issues identified in literature. Specifically, we focused on comments that made reference to linguistic competency (instructors' and students'), instructors' confidence in delivering content in English (which included coping mechanisms), and EMI pedagogy (see Table 1). These were also aspects that the intervention, namely professional development programme, intended to address. In terms of coding the dataset, we each coded entire dataset separately and had a 91% agreement on the coded categories. We reconciled statements that had received different

coding, which was primarily interpretation between EMI pedagogy and instructor's linguistic competency.

Table 1. List of coded categories and descriptions

Category	Description (Statements referring to instructor's …)
Linguistic competency (instructor)	self assessment of own linguistic competency (in English)
Linguistic competency (student)	perception of or comments on their students' linguistic competency (in English)
Confidence	remarks about their confidence in delivering or teaching the subject area in English, or coping mechanisms
EMI pedagogy	comments about pedagogy such as student engagement, revisions to teaching and learning materials, use of technology, frameworks/theoretical underpinnings
Others	feedback that does not fall under any of the specific categories

RESULTS AND DISCUSSION

In this section, we present and discuss our data in response to the three research questions.

Key Concerns Teaching in an EMI context

In our preparation to design the professional development programme, we were interested in finding out the key concerns participants had in teaching in an EMI context so that the programme could appropriately address these concerns. A pre-workshop survey (see Appendix 1) was sent to the participants approximately two three months before the start of the workshop. The pre-workshop survey (see Appendix 1) consisted of three parts. The first part intended to understand profile of participants. It asked participants of the number of years they had taught at the tertiary level, and how many of those years were their teaching conducted in English.

The second part of the pre-workshop survey asked participants to write in their own words the main challenges they faced when teaching in English. The responses were categorised and coded into five categories, namely linguistic competency (instructor), linguistic competency (student), teacher confidence, student engagement, and others as described in Table 1 with an interrater reliability of 91% when coded by two raters. The coding was also aligned with the options provided in the third part of the pre-workshop survey, namely "Areas to strengthen".

As observed in Figure 3, the most mentioned challenge relates to participants' assessment of their own linguistic competency (45%) which has relevance to their confidence in using English as medium of instruction to deliver content. This is followed by EMI pedagogy (32%), such as student engagement, student motivation, teaching and learning materials, and use of technology, and participants' perception of students' differing language competencies and how this could be appropriately addressed (23%).

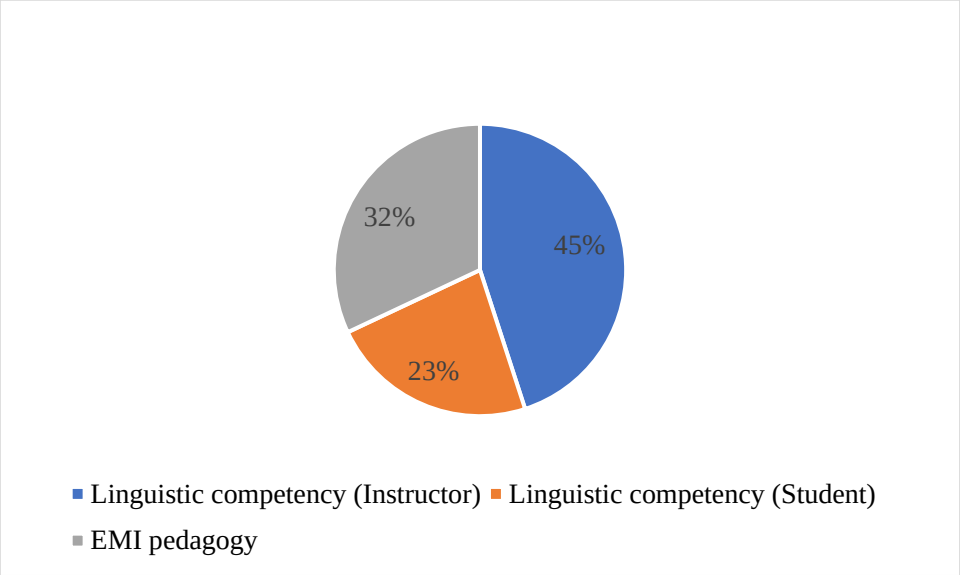

Figure 3. Challenges adopting EMI articulated by participants

These qualitative comments on instructors' own (lack of) competency centre on their concerns about fluency, use of appropriate expressions or terminology, and confidence teaching in a language that they had not done so. Below is a comment that encapsulates this sentiment,

> "Teaching in English is more stressful for teachers, because the accuracy and fluency of teaching in a non-native language cannot be compared with teaching in the native language. In comparison, it takes longer to prepare for lessons, and the class load is heavier than the same course."

On comments related to EMI pedagogy, these instructors queried:

> "(1) How to make student who doesn't speak English well feel more comfortable?; (2) How to keep students' attention in class?; (3) … how to differentiate pedagogies between EMI and traditional courses".

The third and last section of the pre-workshop survey offered participants a list of eight items (see Appendix 1), from which they were to choose and rank five items that they felt they would like to

strengthen (from most important '1' to least important '5'). Findings show that "*Strengthening my skills of oral presentation and delivery*" was the most important aspect that participants would like to strengthen. This was followed by "*Developing my proficiency or confidence in the use of English in my teaching*" and "*Increasing student engagement in my module or course*" (see Table 2).

Table 2. Top three areas to strengthen

Areas to strengthen	Rank
Strengthening oral presentation and delivery	1
Developing my proficiency or confidence in the use of English in my teaching	2
Student engagement	3

When findings as shown in Figure 3 were compared with responses as displayed in Table 2, it is not surprising to note that they align. Confidence in delivering content in English, the instructors' perceived English language competency, and student engagement are of immediate concern to the participants.

Our findings are consistent with those of other studies in the extant literature in terms of EMI instructors' articulated lack of linguistic competency and EMI pedagogical knowledge (Dang, Bonar & Yao, 2023; Deignan & Morton, 2022; Doiz & Lasagabaster, 2020; Lagasabaster, 2022; Macaro, 2020; Schmidt-Unterberger, 2022; Tsou & Kao, 2017; Vu & Burns, 2014). Our contention is that when EMI was introduced by respective institutions, it might have been assumed that the instructors at the outset *have* sufficient language competency to teach their disciplinary content in English and that language learning is a by-product of the EMI approach. However, *in practice*, EMI instructors do not see themselves as English language teachers. They are not confident about their own linguistic capabilities, fear content dilution and would even engage in code-switching to get their content across to students as observed by scholars across different geographical regions (Dearden, 2015; Selvi, 2022; Vu & Burns, 2014; Yeh, 2012).

Besides the mentioned concerns, what had surfaced more prominently from our study is EMI instructors' reported stress associated with ascertaining the quality of their own teaching and content. This could have stemmed from their concerns about engagement with students, student attitude and motivation as noted in earlier studies (Hou, 2013; Kung, 2013; Tsou & Kao, 2017; Vu & Burns, 2014; Yang, 2014). However, wellbeing which is an increasingly crucial area of care underscored in the current workplace and climate, appears to also have been understated. It seems, therefore, timely that our data show indicators of concerns for instructors' wellbeing and this might signal a re-examination of implementational strategies.

Effectiveness of Intervention – EMI Professional Development Programme

Recognising the needs of the participants through a pre-workshop survey and, indeed, what the literature recommends, the aims of the EMI training programme were intentionally framed to address their concerns about pedagogy as well as linguistic competency. The two aims of the EMI professional development programme were as follows:

1. Enrich participants' pedagogical and delivery strategies in the English medium so as to facilitate a learner-centred approach and student learning of their content knowledge.
2. Enhance participants' use of English for preparing and delivering content knowledge.

The EMI professional development programme consisted of a series of five different workshops spread across all three days, one-to-one mentoring sessions (on days 1 and 2) and teaching demonstrations by participants (on day 3). The one-to-one mentoring sessions prepared each participant for their 8-minute teaching demonstration scheduled to occur on day 3. The content of the teaching demonstrations drew principally from the discipline area of each participant, but evolved around the common theme of the Covid-19 pandemic.

The data collected consist of the following three sets. The first two sets—i.e. post-workshop surveys completed by the participants and observation notes written by mentors—allow us to ascertain the degree of effectiveness of the programme *vis a vis* its objectives and participants' articulated needs as established through the pre-workshop survey. The third set of data is a post-workshop survey (see Appendix 2), administered after the conclusion of the two workshops, which contained eight questions, seven of which were closed-ended questions while the last an open-ended one. Statements in closed-ended section aimed to solicit the participants' response on the extent to which they felt they had learned or gained from each session of the programme (Likert scale from 1 strongly disagree to 5 strongly agree). As shown in Figure 4, all the participants agreed and strongly agreed that they had learned from each session of the programme. Specifically, all participants seemed to find that they had gained a good understanding of student-centred pedagogy from the session on "*Enhancing Student Learning Experience in an EMI Classroom with Student-centered Pedagogy*". Similarly, participants found sessions that discussed pedagogical practices (i.e., appropriate use of meta-discourses in EMI (Doiz & Lasagabaster, 2022; Zhang & Lo 2021), effective use of technological tools, and designing questions to promote learning and thinking) very relevant. For sessions that attempted to build the participants' oral communication competencies and delivery skills, interestingly, the extent to which participants indicated they had learned seems slightly lower that sessions on pedagogical practices. Notwithstanding this, as observed from their response to the question on "*Overall, this EMI programme has helped me*

become a better or more confident educator when using the English language", all participants indicated that they "*strongly agreed*".

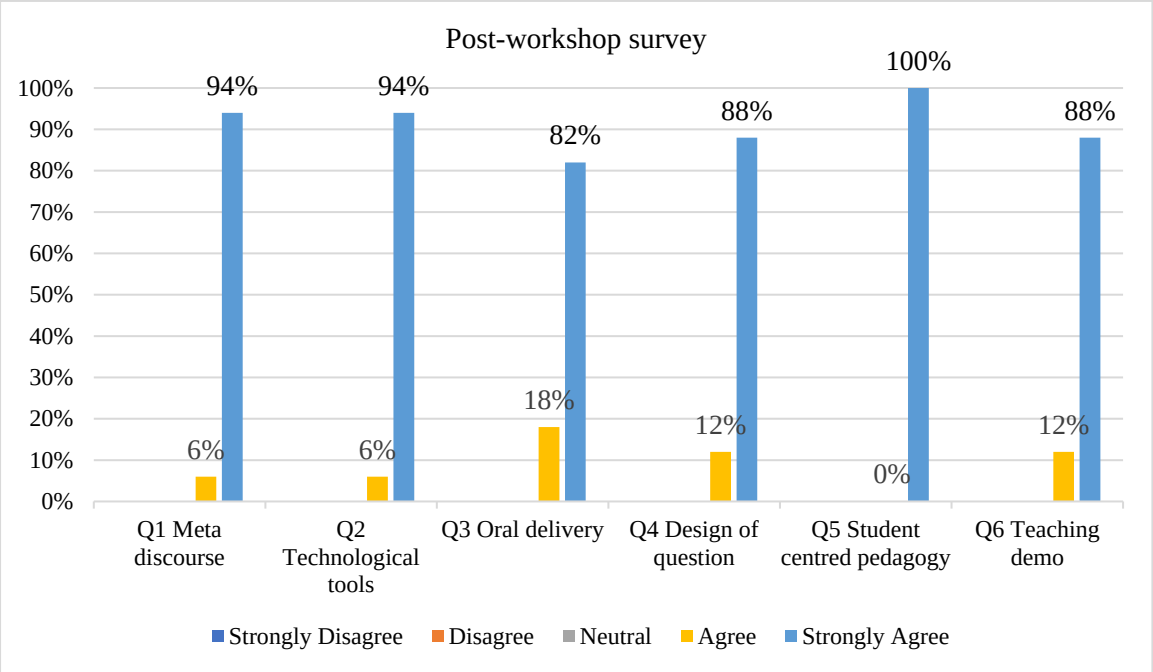

Figure 4. Participants' rating of sections of the EMI professional development programme

It is noteworthy that the motivation for placing teaching demonstration and soliciting participants' opinion on the usefulness of such a task in the professional development programme stemmed from a common remark by EMI instructors on the challenge or constraint in framing or re-framing their teaching and teaching materials for the EMI context. Related to this, consistent with what was found by Macaro (2020), and Block and Moncada-Comas (2022), introducing and familiarising vocabulary and terminology associated with disciplinary content seems to be the extent to which EMI instructors identified with language teaching. We opine that EMI instructors should and could go beyond teaching vocabulary associated with their expertise. Therefore, for the EMI professional development programme that we facilitated, a common theme of COVID was intentionally designed to determine if there were any merits to the complaint in question. The survey result suggests that despite the short duration given to complete the assignment, participants responded well to the task on a theme that was not part of their usual teaching material. In addition, as observed by some mentors, the participants seemed to show innovativeness infusing their domain expertise into the content of the teaching demonstration.

Another notable finding is that all the participants "*strongly agreed*" that they had "*gained a better understanding of student-centred learning pedagogy and practices*". (To recall, a student-centred

pedagogy has it that students learn best when they do so 'autonomously'.) The finding from this small sample set shows that awareness raising and spotlighting may be a catalyst to change of behaviour. As for the open-ended question, most participants offered positive comments, expressing 'enjoyment' or showing appreciation towards their mentors and, relatedly, the overall content of the workshop (e.g., "*I really appreciate what all professors from … have taught me in this 3-days workshop. It was a wonderful and meaningful learning journey for EMI workshop*"). One participant reiterated the importance of the workshop on student-centred learning (i.e., "*I think that the S-S-T [subject-students-teacher] Fit is very important for the Teaching process*"). Finally, one participant offered a useful observation that the workshops can be further strengthened had there been more time for participants to practise what they have learnt (i.e., "*More practices may be needed to improve this learning during each topic of the lecture*".)

Besides the self-perception survey as an instrument to assess the effectiveness of the EMI professional development programme, we collected and analysed mentors' observation notes in the form of a progress report as indicators of learning gains. On the progress report (see Appendix 3), mentors recorded observations about preparations done by their respective mentees for the teaching demonstrations and evaluative comments on the actual teaching demonstrations. These observation notes on preparations were the result of dialogues between mentors and mentees during the one-to-one consultations that were integral activities built into the schedule of the programme. Each participant's progress report, whenever these were updated by the mentors, were routinely offered to the mentees for their consideration.

The teaching demonstrations were an evaluation tool that was used for participants to apply and demonstrate the extent to which they had learned during the programme. To the programme developer, they provided an indication of learning gains and aspects in which the trajectory of growth was not obvious. For this purpose, the collated comments by the mentors were categorised into three themes, namely 1) clarity and structure of lesson, 2) teaching strategies and delivery techniques, 3) student engagement and participation. These themes were consistent with the focus of the workshop topics and requirements for the teaching demonstration. They were also aligned with the two key objectives of the programme in strengthening participants' pedagogical practices and delivery skills in English.

Table 3 shows the number of comments for strengths and areas of improvement for each theme. Collectively, mentors found their mentees' strength in employing appropriate teaching strategies and delivery techniques. An example of comments is "*Excellent teaser at the start that describes the psychological effects of extended periods of lock-down. This helps to show the importance of music*." Conversely, though not this highest percentage, this is also an area which mentors observed mentees could improve upon.

Another notable finding is student engagement and participation which mentors noted is a key area of improvement and not many participants were observed engaging well with their audience during the teaching demonstrations. An example of a comment for improvement is "*Be more deductive; introduce how AI and machine learning can be applied in specific contexts, which can better scaffold students in a systematic way*."

Table 3. Mentors' comments on participants' strengths and areas of improvement

Themes	Strengths (number of comments)	Strengths (% of comments)	Areas to improve (no of comments)	Areas to improve (% of comments)
Clarity and structure of lesson	14	27	11	24
Teaching strategies and delivery techniques	26	50	16	35
Student engagement and participation	12	23	19	41
Total no of comments	52		46	

To further expand on clarity and structure of lesson, across all three days, most or all participants were clear on what it was they were going to do for their teaching demonstration. Even at the initial stage (i.e. day 1 of each programme), most participants began their demonstrations with a brief outline of their lesson or at least an introduction to their topic of the day. It was observed on day 3, however, that key lesson points were not routinely summarised throughout the teaching demonstrations; this may be because the participants saw no need for doing so given the short length of each 8-minute teaching demonstration or that many of the participants were not aware of the importance of doing so. As one mentor recommended:

> "It was suggested that professor… may wish to summarise for students the content of the video he displayed in case students did not fully understand."

In terms of teaching and learning materials, at the initial stages (mostly day 1), the teaching materials of some participants were found to lack organization. For instance, a topic may receive treatment across different power-point slides, which is in tension with the audience expectation that a transition from one slide to another marks a transition of topics. As one mentor suggested,

> "We have at least four characteristics of effective leadership: honesty or transparency, calmness, two-way communication and being a role model. Devote one PPT slide to each of the four; this allows the audience to know that you are on one quality and not another. This will make for a more coherent and well-structured presentation."

Such matters of organization were often quickly resolved as seen by the teaching demonstrations on day 3.

On teaching strategies and delivery techniques, at the initial stages, most participants did not demonstrate the importance of the topic being covered; but, at the prompting of the mentors, a handful of participants managed to do this on day 3. For instance, a participant who had launched into a lecture on the qualities of effective leadership was advised by a mentor to prepare the ground as such:

> "Beginning the presentation with examples of failures of leadership will help show the value of your lesson. Prof Tung may then wish to use an example of how the CCP Chinese government were tight-lipped about COVID in the initial stages of the pandemic and how this caused more panic and suspicion on the part of the citizens."

Also at the initial stages, all or most participants engaged primarily in unidirectional lecture-style delivery. However, at the promptings of some mentors, some participants attempted to be more interactive by routinely asking questions. All participants demonstrated command of their subject matter; and, more noteworthy is the observation that all participants on day 3 successfully incorporated the theme of the Covid-19 pandemic into their teaching demonstrations even though they had a short amount of time to do so. This suggests something about EMI policies: namely, that such policies, when implemented, ought to preserve as much instructor autonomy with respect to what the *latter finds value in teaching* (which is often the instructor's area of research expertise).

It was further observed across all three days that a great many participants relied *only* on power-point slides for their presentations; only one participant used 'Zuvio' as a means of interacting with the audience. This prompted one mentor to remark, '[p]urposeful integration of educational technology in the classroom could be considered promote better student engagement'. In addition, most participants at the initial stages did not use audio-visual aids effectively. For instance, many power-point slides were crowded with text, with little associated images. Participants, however, were quick to revise their presentation slides as a result of comments made by mentors. But there were a small handful of participants who continued to rely on graphs or other information representational tools that were dense or require much background knowledge.

Further, at the initial stages, most participants were not aware of the use of meta-discursive speech to show transition, emphasis, and so forth. But, it was evident that participants used more of such speech in their teaching demonstration on day 3. One mentor recorded a mentee's use of meta-discursive speech on day 3 as follows:

> "Let's look at the objective for our lesson today;"
>
> "Before we start, let me ask you a few questions;"
>
> "Thank you for your input. Interesting ideas. Now, let's find out what are the alternatives to using tap water;"
>
> "We've come to the end of the session. I hope we've learned some strategies on how to use rainwater instead of tap water at home, so that we can save water usage."

However, not all participants attempted to adopt meta-discursive speech; this led one mentor to remark about a mentee's day 3 performance with the following: '[m]etadiscourse, especially in terms of signposting, *could be strengthened further* to give learners the verbal guidance needed to follow your train of thoughts' (emphasis added). A different mentor made an insightful remark, namely that the function of meta-discursive speech is as valuable as that of a use of two languages when teaching EMI:

> "He also used meta-discourse markers and signals like 'I have some suggestions but I want to hear from you' – which helped the audience know when they should respond. He also code switched between English and Mandarin (e.g. 'lan ren bao' – lazy bag) which made it even more interesting and relatable."

Finally, perhaps as a result of a lack of confidence in the English language, some participants had to read from their power-point slides or a prepared speech in their teaching demonstrations on day 3. It is unrealistic to expect that the issue of language proficiency can be successfully addressed in a 3-day EMI professional development programme. This raises the further question of what the criterion of English proficiency is for the identification and selection of EMI instructors to be involved in programmes such as the one being studied here. On a similar note, teaching strategies and delivery techniques are aspects in teaching and learning that take time to be cultivated, even in non-EMI context. Therefore, the observation that these are areas that participants in our programme showed progress yet remain also as areas in which they should continue to develop is not so surprising. Taken both into consideration, it suggests a long-term and continual professional development investment from the part of the institution and EMI instructors for effective EMI courses.

In terms of student engagement and participation, at the initial stages, some participants taught materials that were not easily accessible to non-specialists. Approximately half of this group of participants sought to make their material more easily accessible on day 3. At the initial stages (days 1 and 2), most participants often lacked activities for student engagement. But a handful of participants did endeavour to raise discussion questions in their teaching demonstrations on day 3.

The observations above indicate that an EMI programme such as the one being studied in this paper is effective in introducing its participants to practices associated with student-centred learning and engagement. As one mentor wrote:

> "Prof… made very good effort to make the topic relevant to the pandemic by including a summary to remind the student of the application of relativity in GPS systems used for contact tracing. He also added more questions to get the audience thinking but needs to be careful in the choice of words (e.g. use of jargons/ discipline-related vocabulary) and the sentence structures to ensure that the grammar is accurate. The intent of the questions to increase interaction was good."

Finally, of the 16 participant progress reports analysed here, one participant's day 3 teaching demonstration elicited praise for having incorporated student-centred practices: as one mentor wrote, *"[f]rom his sharing, it can be seen that he is already a successful EMI practitioner because of his focus on student engagement which can be seen in the discussions that were planned as well as the classroom atmosphere that he encourages...*". Nonetheless, a caveat is in order. It is not obvious that this piece of observation entered by a mentor was fully justified. Thankfully, we need not settle on a decision because, we need only make the more modest claim that the mentee had had some exposure to EMI teaching practices and not, as the mentor would have it, that the mentee was a 'successful' EMI practitioner. This shows that this participant has had exposure to pedagogies that are student-centric or those that promote 'active learning'. As with the importance of teaching strategies and delivery techniques, we contend that student engagement is a critical aspect in teaching and learning that not just EMI instructors but every instructor should commit to.

In summary, the key concerns articulated by EMI instructors, as shown in the pre-workshop data, are that EMI instructors lacked confidence in their English, doubted the quality of their teaching and course materials and knew little about student engagement. With respect to the mentoring of EMI instructors and the key elements that make an EMI programme effective, the mentor's observation reports and the post-workshop survey strongly suggest that an intervention which focuses on the themes of student-centred learning, when framed as an attempt at the engaging of professional development, will ensure

the success of an EMI programme. Equally crucial is a programme that allows for one-on-one mentorship and consultations between mentors and their mentees/participants, as illustrated in the extensive feedback and observation notes shared by mentors. This two-pronged approach—of a seminar-style training complemented by individual consultations tailor-made to each participant—is likely to be an effective recipe for EMI instructors not only to build their competencies but also to gain confidence in the teaching of their disciplinary subjects in English. Such an approach was also perceived to be effective and, indeed, enjoyable for EMI participants.

CONCLUSION AND IMPLICATIONS FOR FURTHER RESEARCH

It should be noted that the data marshalled above were mined but from a small number of 16 participants, which cannot constitute a representative sample of Taiwan university professors. But, what compensates for the small sample size is that the participants were of different gender, age, disciplinary background, range of teaching experience. Notably, gender and age increased the diversity amongst the small group of participants. So, although the data are by no means representative of Taiwan university professors, the qualitative opinions expressed constitute a valuable source of information for others seeking to design a similar EMI professional development programme for their instructors. Nevertheless, we maintain that one of the success factors of an EMI professional development programme such as this is the opportunity for the participants to interact with the facilitators and mentors through small-group sessions and one-on-one mentoring. Because of this and because specialised or focused faculty development programmes such as this are more of a rarity than norm, the small number of participants in the study is expected and realistic. Further, the success of any language or teacher training programme requires a further assessment of the performance of the participants after the passing of time.

Although not scoped in this paper, a longitudinal study that traces the EMI participants' progress is on-going. Such longitudinal studies may include investigations on the extent to which EMI professional development programmes have on instructors' teaching practices and student learning. As aptly noted by Macaro et al (2018), there is a lack of studies that examine the impact of EMI on disciplinary learning and growth in language proficiency. Relatedly, future research could also look at students' perspectives and experiences, and assess their performance and learning gains through a close examination of their assignments. Furthermore, Macaro et al (2018) have asked many insightful questions that could form the basis for future research topics and foci. Simultaneously, we have also not lost sight of the five *broader* aims of the motivation in implementing EMI in Taiwan, as contended by Tsou and Kao (2017), and more broadly as envisioned by Schmidt-Unterberger (2018) based on her EMI and ICLHE model.

The EMI professional development programme discussed in this present study is focused principally on EMI instructors; it is, therefore, an open question whether a different EMI programme could contain material that allows its participants to achieve one or more of the goals listed above. Perhaps, the labour involved in attempts to achieve these goals is spread across EMI instructors, university and state educational administrators. If so, then it may very well be that an EMI professional development programme should focus squarely on the more short-term aims of developing the pedagogical and linguistic competence of its participants, which this present EMI programme aims to do. This could then be followed by long(er)-term aims that enhance the EMI instructors' sense of agency navigating a teaching and learning landscape that is at present less familiar but arguably going to be more prevalent for them and their students.

ACKNOWLEDGEMENTS

The study was deemed exempt by the National University of Singapore's Institutional Review Board (reference number: NUS-IRB-2022-314).

REFERENCES

Aizawa, I., & Rose, H. (2019). An analysis of Japan's English as medium of instruction initiatives within higher education: The gap between meso-level policy and micro-level practice. *Higher Education, 77*(6), 1125–1142.

Baker, W., & Huttner, J. (2019). 'We Are Not the Language Police': Comparing multilingual EMI programmes in Europe and Asia. *International Journal of Applied Linguistics, 29*(1), 78–94.

Block, D., & Moncada-Comas, B. (2022). English-medium instruction in higher education and the ELT gaze: STEM lecturers' self-positioning as NOT English language teachers. *International Journal of Bilingual Education and Bilingualism, 25*(2), 401–417.

Bonwell, C. & Eison, J. (2005). *Active learning*. San Francisco: Jossey-Bass.

Bradford, A., & Brown, H. (Eds.). (2017). *English-medium instruction at universities in Japan: Policy, challenges and outcomes*. Bristol: Multilingual Matters.

Cao, F. (2022, June 10). *Metadiscourse in EMI academic lectures: Practices, awareness, and reflection* [Workshop handout]. National University of Singapore, EMI Professional Development Workshop.

Chang, Y. Y. (2010). English-medium instruction for subject courses in tertiary education: Reactions from Taiwanese undergraduate students. *Taiwan Int. ESP J., 2*, 53–82.

Dafouz, E., & Smit, U. (2020). *ROAD-MAPPING English medium education in the internationalised university*. Palgrave Pivot.

Dang, T. K. A., Bonar, G., & Yao, J. (2023). Professional learning for educators teaching in English-medium-instruction in higher education: A systematic review. *Teaching in Higher Education*, *28*(4), 840–858.

Dearden, J. (2015). *English as a medium of instruction: A growing global phenomenon*. https://doi.org/10.13140/RG.2.2.12079.94888

Deignan, T., & Morton, T. (2022). The challenges of English medium instruction for subject lecturers: A shared viewpoint. *ELT Journal*, *76*(2), 208–217.

Doiz, A., & Lasagabaster, D. (2020) Dealing with language issues in English-medium instruction at university: a comprehensive approach. *International Journal of Bilingual Education and Bilingualism*, *23*(3), 257–262. https://doi.org/10.1080/13670050.2020.1727409

Farrell, T. (2019). Professional Development Through Reflective Practice for English-medium Instruction (EMI) Teachers. *International Journal of Bilingual Education and Bilingualism*, 23(3), 277–286. https://doi.org/10.1080/13670050.2019.1612840

Fenton-Smith, B., Humphries, P. & Walkinshaw, I. (Eds.). (2017). *English-medium instruction in Higher Education in Asia-Pacific: From policy to pedagogy*. Bern: Springer.

Galloway, N., Kriukow, J., & Numajiri, T. (2017). *Internationalisation, Higher Education and the Growing Demand for English: An Investigation Into the English Medium of Instruction (EMI) Movement in China and Japan, ELT Research Papers 17.02*. London: British Council.

Garrison, D. R., Anderson, T., & Archer, W. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The internet and higher education*, *2*(2–3), 87–105.

Graham, K.M., & Eslami, Z.R. (2020). Using the ROAD-MAPPING framework to inform English medium instruction professional development in Taiwan. In E. Dafouz, & U. Smit (Eds.). *ROAD-MAPPING English medium education in the internationalised university* (pp. 117–136). Palgrave Pivot.

Huang, D-F. (2013). Aspects of English Medium Instruction research: Retrospect and Prospect. In Huang, D-F., M. Singh, & C-J. Tseng (Eds.). *Research Perspectives on English Medium Instruction in the globalized higher education*. Southern Taiwan University of Science and Technology.

Hou, A. Y. C., Morse, R., Chiang, C. L., & Chen, H. J. (2013). Challenges to quality of English medium instruction degree programs in Taiwanese universities and the role of local accreditors: A perspective of non-English-speaking Asian country. *Asia Pacific Education Review*, *14*(3), 359–370.

Hyland, K. (2005). *Metadiscourse: Exploring interaction in writing*. London, NY: Continuum.

Hyland, K. (2017). Metadiscourse: What is it and where is it going? *Journal of pragmatics*, *113*, 16–29. https://doi.org/10.1016/j.pragma.2017.03.007

International Society for Technology in Education. (2008). *National educational technology standards for teachers: Preparing teachers to use technology*. ISTE.

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*, 2nd ed. Thousand Oaks, CA: Sage Publications, Inc.

Kung, F-W. (2013). The More the Merrier? Bilingualism in an Academic Perspective: Exploring the Implementation of English-medium Instruction in Taiwanese Tertiary Education. *Asian EFL Journal Research Articles, 15*(4), 8–36.

Lasagabaster, D. (2022). Teacher preparedness for English-medium instruction. *Journal of English-Medium Instruction, 1*(1), 4–-64.

Lam, A. W. L. (2022, June 10). *Effective Online Teaching and Useful Online Resources*. [Workshop handout]. National University of Singapore, EMI Professional Development Workshop.

Lee, S. (2022, June 11). Asking Critical Questions to Develop a Community of Inquirers [Workshop handout]. National University of Singapore, EMI Professional Development Workshop.

Lo, Y.Y., & Lo, E.S.C. (2014). A Meta-Analysis of the Effectiveness of English-Medium Education in Hong Kong. *Review of Educational Research, 84*(1), 47–73.

Luu, T. H. L. (2022). Enhancing student learning in an EMI classroom with student-centred pedagogy.

Macaro, E., Curle, S., Pun, J., An, J., & Dearden, J. (2018). A systematic review of English medium instruction in higher education. *Language Teaching, 51*(1), 36–76.

Macaro, E. (2020). Exploring the role of language in English medium instruction. *International Journal of Bilingual Education and Bilingualism, 23*(3), 263–276.

Macaro, E., & Han, S. (2020). English Medium Instruction in China's Higher Education: Teachers' Perspectives of Competencies, Certification and Professional Development. *Journal of Multilingual and Multicultural Development*, *41*(3), 219–231.

M., David. (1994). *Bilingual Education & Content and Language Integrated Learning*. Paris: International Association for Cross-cultural Communication, Language Teaching in the Member States of the European Union (Lingua), University of Sorbonne.

Meyers, C., & Jones, T. (1993). *Promoting Active Learning: Strategies for the College Classroom*. San Francisco: Jossey-Bass.

Michael, J. (2006). Where's the evidence that active learning works? *Advances In Physiology Education, 30*(4), 159–167.

Pons Seguí, Laura. (2019). Qualitative meta-analysis on the training needs reported by in-service CLIL teachers. *Revista Española de Lingüística Aplicada/Spanish Journal of Applied Linguistics*, *32*, 277–303. https://doi.org/10.1075/resla.17020.pon

Pavón Vázquez, P. & Ellison, M. (2013). Examining teacher roles and competences in Content and Language Integrated Learning (CLIL). *Linguarum Aren, 4*, 65–78.

Richards, J. C., & Pun, J. (2023). A Typology of English-Medium Instruction. *RELC Journal*, *54*(1), 216–240.

Schmidt-Unterberger, B. (2018). The English-medium paradigm: A conceptualisation of English-medium teaching in higher education. *International Journal of Bilingual Education and Bilingualism*, *21*(5), 527–539.

Selvi, A. F. (2022). English-medium instruction in Northern Cyprus: Problems, possibilities, and prospects. In Y. Kırkgoz & A. Karakaş (Eds.), *English as the medium of instruction in Turkish higher education* (pp. 27–46). Multilingual Education, 40. Springer, Switzerland. https://doi.org/10.1007/978-3-030-88597-7

Sharma, Y. (2023, December 31). Taiwan ups drive to attract foreign students, researchers. *University World News*. https://www.universityworldnews.com/post.php?story=20240104193502309

Shulman, L. (1987). Knowledge and Teaching: Foundations of the New Reform. *Harvard Education Review*, *57*(1), 1–22.

Tsui, C. (2017). EMI Teacher Development Programs in Taiwan. In W. Tsou & S. M. Kao (Eds.), *English as a Medium of Instruction in Higher Education: Implementation and Classroom Practices in Taiwan* (pp. 165–182). English Language Education, 8. Springer, Singapore. https://doi.org/10.1007/978-981-10-4645-2_10

Tsou, W., Kao, S. M. (2017). Overview of EMI Development. In W. Tsou & S.M. Kao (Eds.), *English as a Medium of Instruction in Higher Education: Implementation and Classroom Practices in Taiwan* (pp. 3–18). English Language Education, 8. Springer, Singapore. https://doi.org/10.1007/978-981-10-4645-2_1

Vu, N. T. T., & Burns, A. (2014). English as a medium of instruction: Challenges for Vietnamese tertiary lecturers. *The Journal of Asia TEFL*, *11*(3), 1–33.

Yang, W. (2016). An investigation of learning efficacy, management difficulties and improvements in tertiary CLIL (Content and Language Integrated Learning) programmes in Taiwan: A survey of stakeholder perspectives, *LACLIL*, *9*(1), 64–109. https://doi.org/10.5294/laclil.2016.9.1.4

Yang, W. (2015). Content and language integrated learning next in Asia: Evidence of learners' achievement in CLIL education from a Taiwan tertiary degree programme. *International Journal of Bilingual Education and Bilingualism*, *18*(4), 361–382. https://doi.org/10.1080/13670050.2014.904840

Yang, W., & Gosling, M. (2014). What makes a Taiwan CLIL programme highly recommended or not recommended? *International Journal of Bilingual Education and Bilingualism*, *17*(4), 394–409. https://doi.org/10.1080/13670050.2013.808168

Yuan, R., Chen, Y., & Peng, J. (2022). Understanding university teachers' beliefs and practice in using English as a medium of instruction. *Teaching in Higher Education*, *27*(2), 233–248. https://doi.org/10.1080/13562517.2020.1715936

Yeh, C. C. (2012). Instructors' perspectives on English-medium instruction in Taiwanese universities. Curriculum & Instruction Quarterly, *16*(1), 209–232.

APPENDICES

Appendix 1: Pre-workshop Survey

English as a Medium of Instruction (EMI) Training Programme

(*Please delete the options that do not apply to you)

Name	
Department / College / School	
EMI Subject / Course	
Level of Students	
Teaching experience	
Number of years teaching at tertiary level	
Experience teaching in English	

** Please delete accordingly*

1. What are some of the challenges that you face when teaching in English? Please be as specific as possible.
2. Which areas would you wish to strengthen? Please choose items that apply to you, and rank the top FIVE ('1' means that the item is most important to you, '5' least important)

	Rank		*Rank*
☐ Increasing student engagement in my module or course		☐ Effective online teaching and learning	
☐ Fostering critical or independent thinking in my students		☐ Effective means of offering feedback to students to promote their learning	
☐ Strengthening my skills of oral presentation and delivery		☐ Developing my proficiency or confidence in the use of English in my teaching	
☐ Understanding what it means for my teaching, course or module to be 'student-centered'		☐ Others (please specify in this box)	
☐ Designing teaching material, lesson activities and course assessments or assignments that advance educational goals			

Appendix 2: Synopses of EMI training workshops

Five 'workshops', each 90 minutes in length, are offered in each of the two EMI Training Programme. Synopses of all five workshops are offered below.

Workshop 1: Metadiscourse in EMI Academic Lectures: Practices, Awareness, and Reflection

Metadiscourse, which is a species of discourse analysis and language teaching, refers to 'the commentary on a text made by its producer in the course of speaking or writing' (Hyland, 2017:17 quoted in Cao, 2022, p. 1). Metadiscourse is to be distinguished from the propositional content of the utterance (i.e. the locutionary meaning). The use of metadiscourse allows for greater linguistic interaction or engagement between speaker and audience and facilitates such interaction by expressing the structure or function of the utterance. A functional classification of metadiscourse (adapted from Hyland, 2005, quoted in Cao, 2022, pp. 2-3)

Table 1. Functional Classification of Metadiscourse

Metadiscourse	**Function**	**Examples**
Structuring and organizing discourse		
Transitions	Express logical relations between main clauses/sentences	*because, in addition, on the other hand*
Frame markers	Signal or preview a discourse act or text phase (i.e., sequencing text parts, labeling text stages, announcing goals, and shifting topics)	*now, to summarize, let us turn to, I'd like to discuss*
Location markers	Refer to other parts of the lecture	*Figure 1, as noted before, in the next class*
Code glosses	Help in understanding a particular discourse element (i.e., clarify, explain, rephrase, or exemplify content/ideas)	*This is called, in other words, that is, for example, it can be defined as*
Indicating stance and engagement with audience		
Hedges	Qualify statements, downtoning	*may, might, kind of, possibly*
Boosters	expressing certainty and commitment	*really, actually, in fact, for sure*
Attitude markers	Express affective position toward a proposition	*it is important, interestingly*
Self-mentions	Indicate the speaker's presence	*I , we* [exclusive]
Engagement markers	Create relationship/rapport with audience (ie., questions, direct appeal to the audience)	*you, we[inclusive], see, remember, questions*

Workshop 2: Effective Online Teaching and Useful Online Resources

This workshop introduces participants to the distinction between 'technology-enhanced teaching' (videos, online quizzes, collaborative tools Google Drive), 'blended learning' ('online platforms to facilitate self-directed and peer learning, i.e. students read or watch materials online and/or engage with

others through student-centred activities online and in class (e.g. forum, class discussion). The flipped classroom approach is one example of blended learning where some of the learning takes place online while other parts of the learning take place face-to-face' Lam, 2022) and 'MOOCS' (online courses). In addition, a distinction between 'traditional environments' and 'enhanced learning landscape' was also summarised for the participants; this is as follows (International Society for Technology in Education 2008 quoted in Lam 2002, p. 3):

Table 2. Contrast between Two Learning Environments

	Traditional Environments	Emerging Learning Landscape
1	Teacher-directed, memory focused instruction	Student-centred, performance-focused learning
2	Lockstep, prescribed-path progression	Flexible progression with multipath options
3	Limited media, single-sense stimulation	Media – rich, multisensory stimulation
4	Knowledge from limited, authoritative sources	Learner- constructed knowledge from multiple information sources and experiences
5	Isolated work on invented exercises	Collaborative work on authentic, real-world projects
6	Mastery of fixed content & specified processes	Student engagement in definition, design, and management of projects
7	Factual, literal thinking for competence	Creative thinking for innovation and original solutions
8	In-school expertise, content, and activities	Global expertise, information and learning experiences
9	Stand-alone communication & information tools	Converging information and communication systems
10	Traditional literacy & communication skills	Digital literacies and communication skills
11	Primary focus on school & local community	Expanded focus including digital global citizenship
12	Isolated assessment of learning	Integrated assessment for learning

Finally, a classification of various software or online platforms used in emerging technological landscape is offered to the participants (Lam 2002, p. 6):

Table 3. Classification of Software or Online Platforms for EMI Teaching

Description	Digital Tools

Quizzes (Synchronous / Asynchronous)	Kahoots https://kahoot.com	Quiziz https://quizizz.com	
Interactive Polls, word clouds, Q&A	Mentimeter https://www.mentimeter.com/	Sli.do https://www.sli.do/	Polleverywhere (can be inserted into PPT) https://www.polleverywhere.com/
Collaboration boards	Padlet https://padlet.com/	Mural https://www.mural.co/	Miro https://miro.com/
Collaboration Folders/ documents	Google Drive https://www.google.com/drive/	OneDrive https://www.microsoft.com/en-sg/microsoft-365/onedrive/online-cloud-storage	Microsoft Teams https://teams.microsoft.com/edustart
Animated videos	Powtoon https://www.powtoon.com/	Biteable https://biteable.com	VideoScribe https://www.videoscribe.co/en/
Video editing	Panopto https://www.panopto.com/	Adobe Premiere https://www.adobe.com/sg/products/premiere.html	
Infographics / Visualisation tools	Canva https://www.canva.com	Adobe Express https://www.adobe.com/express/	
Learning Management System	Zuvio https://www.zuvio.com.tw/	Schoology https://www.schoology.com	Edmodo https://www.edmodo.com
Learning Communities	Slack https://slack.com/	Yellowdig https://www.yellowdig.co/	Flipgrid (short videos only) https://flipgrid.com/
Language and Writing assistance	Grammarly https://www.grammarly.com/	Grammar Lookup https://www.grammarlookup.com/	ProWritingAid https://prowritingaid.com/

Workshop 3: How to Engage your Students (and to Get Them to Think Critically)

There are two aims of this workshop. First, to introduce participants to strategies of effective oral delivery. To that end, participants were offered a contemporary interpretation of classical 'ethos', 'logos' and 'pathos':[1] build trust and trustworthiness; reasoning with the audience by showing them the

[1] Classical ethos, logos and pathos refer to the following respective: get audience to look up to speaker as subordinates do their superiors; doing the reasoning for the audience; rousing emotions (you—i.e. the audience—ought to be angry!).

logical steps or moves you make in arriving at your lesson conclusions; exuding charisma by adopting the following techniques in your oral delivery: (i) use metaphors; (ii) use stories and anecdotes; (iii) demonstrate moral conviction; (iv) set high expectations for themselves and their followers and communicate confidence that these goals can be met; (v) use specific rhetorical devices including contrasts (frame and focus the message), lists (given the impression of completeness), repetition as well as rhetorical questions; (vi) charismatic leaders are masters at conveying their emotional states; (vii) They use body gestures, as well as facial expressions (Jacquart & Antonakis, 2010).

The second aim of this workshop is to introduce participants to the notion of 'critical thinking'. The following summarises several ways of fostering critical thinking in students (Hitchcock 2011; deleted for blind review):

1. No one right way: there is no single right way to teach a critical thinking course;
2. Motivate the students by showing the value of critical thinking;
3. Bridging*:* discern the attitudes, beliefs and values of your students and have your lesson material *be relevant* to those attitudes, beliefs and values;
4. Use salient current issues: take advantage of salient controversial issues as focuses for critical thinking. The recent pandemic comes immediately to mind;
5. Use real or realistic examples;
6. Promote 'understanding': according to Kvanvig (2003), the notion of 'understanding' can be defined as follows: [A]n internal grasping or appreciation of how the various elements in a body of information are related to each other in terms of explanatory, logical, probabilistic, and other kinds of relations that [epistemic] coherentists have thought constitutive of justification (192–193).

Workshop 4: Asking Critical Questions to Develop a Community of Inquirers

The workshop discusses strategies on structuring critical questions that facilitate learning in class. Through the process of engaging with questions, the workshop explores ways to encourage students to develop questions to reflect on and deepen their learning as a community of inquirers. A classification of the various types of critical questions is as follows (Anderson and Krathwohl quoted in Lee 2022, p. 2)

Table 4. Levels of knowledge and Types of Critical Questions

Level of knowledge	Evidence of knowledge	Example of Questions
Declarative knowledge	Student states or defines information and ideas by recalling or recognising them.	What are the independent variables in an experiment to bake a moist and fluffy Castella cake?

Conceptual knowledge	Student explains and interprets information or data based on prior learning of ideas and concepts.	Why are temperature and baking duration important factors to consider?
Procedural knowledge	Student selects and applies information or data to solve a problem or come up with a new idea / product.	How do we determine the ideal baking duration for baking a moist and fluffy Castella cake?
Meta-cognitive knowledge	Student creates and assesses new projects or products based on *known* standards and quality.	Design an experiment to find out the ideal baking temperature and duration for a moist and fluffy Castella cake, using 100g of flour, butter, sugar and 6 eggs.

The community of inquiry model holds that an interaction between the social, cognitive and teaching presence leads to "a worthwhile educational experience" even online (Garrison, Anderson & Archer, 2000). The social presence occurs when participants form their identity through purposeful communication in an environment of trust and interpersonal relations. This includes emotional expression such as the use of humour and disclosure of personal information, open communication where members express their ideas in a risk-free environment and group cohesion which boosts collaboration. The cognitive presence is the ability to build meaning as communication occurs. There are four phases of the cognitive presence including the triggering event that is the naming of an issue or problem, exploration, which is the exchange of relevant ideas to understand an issue, integration which is the association and connection of ideas to come up with a potential solution, and resolution which is the assessment of concepts and possible solutions. The teaching presence is the educational design and facilitation of understanding in computer-mediated communication. The instructor is usually involved in design and organization such as the design of curriculum and use of methods. This is part of instructional management where topics are defined, initiated and discussed. On the other hand, instructors or even students can facilitate discourse. Understanding is built together by disclosing personal meaning. Direct instruction can also take place when the instructor explains and discusses the content.

Workshop 5: Enhancing Student Learning in an EMI Classroom with Student-Centred Pedagogy

This workshop invites participants to reflect on and share about their understanding of student-centred teaching and learning (SCTL), its benefits as well as challenges they have faced when implementing student-centred curriculum design in their EMI courses. Luu elaborates on SCTL thus (2002, p. 3):

> According to Hoidn & Klemenčič (2020), SCTL is a pedagogical concept that places student at the centre of the teaching and learning process with the intention to foster deep learning and promote self-directed and lifelong learning. Contrary to the conventional didactic teaching with strong emphasis on teacher control and knowledge dissemination (Cannon and Newble, 2000), SCTL focuses on learners' autonomy, active participation,

sense of ownership and control over the learning process, and a supportive and trusting learning environment (Gibbs, 1992; McCombs & Miller, 2007).

Luu illustrates the distinctions between teacher-centred and learner-centred pedagogies with the following table from Patel-Junankar (2017):

Table 5. Teacher-Centred Versus Learner-Centred Pedagogy

Teacher-centred	**Learner-centred**
Focus is on the instructor	Focus in on both students and the instructor.
Students work individually	Students work in groups or alone, depending on the activity
The instructor observes and corrects students' responses	The instructor provides feedback and corrective action when needed
Only the instructor answers students' questions	Students may answer each other's questions and use the instructor as a resource
Only the instructor evaluates students' learning	Students evaluate their own learning, which is supported by the instructor

Appendix 3: Participants' Progress Report

Name of Mentee:	**Name of Mentor:**

Good Practices in Higher-Education Teaching

The following are traits of effective teaching that promote student learning.[2] An important caveat is the following: no single lesson ***will showcase all of these qualities.*** Different professors often prioritise different sets of qualities; and, different professors will excel at different qualities. Mentors do not expect to see all of these qualities being manifested in a single teaching demonstration, much less to an equal degree of manifestation.

Clarity and Structure of Lesson

- Clearly articulated goals and expectations for student learning.
- Different elements of the lesson fit together coherently and aim at the articulated goals.
- Different learning activities are allocated with appropriate amount of time, and aim at the lesson goals.
- Professor summarises key points of lessons.
- Professor is sufficiently prepared and this can be seen by the lesson material and activities planned.

Teaching Strategies and Delivery Techniques

- Professor demonstrates the importance of the topic being covered; enthusiasm for topic is displayed through appropriate body language and speech.
- Professor demonstrates command of the subject matter (e.g. cites the literature, refers to advances or current controversies in the field, provides informative answers to questions).

[2] See Chickering and Gamson (1987); Glassick, Huber and Maeroff (1997); Felton (2013); Gleason and Sanger (2018); deleted for blind review).

- Professor is effective in communicating information to the class. (Is mode of instruction or teaching primarily unidirectional lecture-based or more interactive, e.g. collaborative discussion?)
- Professor uses technology effectively.
- Learning materials (e.g. handouts/slides/recordings) amplify and promote desired learning.
- Audio-visual aids reinforce the content effectively.

Student Engagement and Participation

- Lesson material builds upon existing knowledge, desires, goals and level of competence of the students.
- Professor promotes discussion among students.
- Students seem to be excited and engaged by the professor; this can be inferred from note taking, eye contact, alertness, sense of enjoyment, quality and frequency of responses and other indicators of student engagement.
- Students appear prepared for the lesson. They have relevant materials with them in class and seem to have done preparatory reading or other forms of preparation.
- High quality and frequency of interaction between students and the professor and amongst student themselves.
- The professor encourages learners to share relevant information and experiences with the class.
- The professor encourages learners to share what they have learned but also allows for the occasional non-response.

Professor's Interpersonal Style

- The professor gets to know students and, as a result, is aware of their interests and needs. The professor uses student names, seems responsive, notices when hands are raised.
- The professor demonstrates enthusiasm for the subject matter or topic.
- The professor models the kind of engagement and participation expected from students.
- The professor is audible, easy to understand and is in command of the teaching space (e.g. does not overlook any portions of the class or lecture)/
- The professor member effectively responds to questions and disagreements.

First Preparation for Teaching Demonstration

Summary of Advice Offered by Mentor:

Second Preparation for Teaching Demonstration

Observations Made by Mentor on Mentee's 'Dress Rehearsal'

Strengths:

Areas that require improvement:

Evaluation of Mentee's Teaching Demonstration

Observations Made by Mentor on Mentee's Teaching Demonstration

Strengths: Areas that require improvement:

References

Chickering, A. W. and Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *American Association for Higher Education Bulletin* (March 1987).

Glassick, C. E., Huber, M. T. & Maeroff, G. I. (1997). *Scholarship assessed: evaluation of the professoriate*. San Francisco: Jossey-Bass.

Gleason, N. W. and Sanger, C. S. (2018). Peer Observation of Teaching Guidelines. (Yale-NUS College, Centre for Teaching and Learning). Retrieved from: https://teaching.yale-nus.edu.sg/wp-content/uploads/sites/25/2018/04/Peer-Observation-Booklet-web-version-edited.pdf

Felton, P. (2013). Principles of good practice in SoTL. *Teaching & Learning Inquiry*, *1*(1), pp. 121 – 125

Appendix 4: Post-Workshop Survey

(All questions rate from strongly disagree, disagree, neutral, agree to strongly agree)

1. I learned that the appropriate use of meta-discourse facilitates effective communication of content and the interaction between teachers and students.

2. I learned that technological tools can be useful in creating engaging lessons.

3. I learned strategies of effective oral delivery and was introduced to ways of promoting critical thinking in my students.

4. I learned how to design questions that promote learning and encourage student reflection and inquiries.

5. I gained a better understanding of student-centred learning pedagogy and practices.

6. Despite the common theme set for my teaching demonstration (i.e. the Covid-19 theme), I was able to teach what I believe to be interesting or valuable given my academic expertise.

7. Overall, this EMI programme has helped me become a better or more confident educator when using the English language.

EMI Research Study Consent Form

[Name of our institution deleted for blind review] wishes to further develop its EMI programme by studying the series of workshops that you have just participated in. This research involves an analysis of the pre- and post-workshop surveys you have submitted, as well as the progress report written by your assigned mentor. ***We want to assure you that the material you have provided us will be used only for academic research purposes and are fully anonymized (i.e. it will not bear your name or any piece of information that will allow others to identify its author).***

With our assurance above, we are seeking your consent to allow us to use the aforesaid material. But, if you do not wish to grant consent to the use of these pieces of material, your decision will be respected. We thank you, regardless, for being part of [Name of our institution deleted for blind review] EMI programme.

I consent / I do not consent