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Ali Karakaş
Yasemin Kırkgöz *Editors*

Teacher Professional Development Programs in EMI Settings

International Perspectives

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Ali Karakaş • Yasemin Kırkgöz
Editors

Teacher Professional Development Programs in EMI Settings

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Preface

The widespread adoption of English as a Medium of Instruction (EMI) in higher education has fundamentally reshaped the global academic landscape, highlighting the urgent need for innovative and context-sensitive professional development programs for educators. This book, *Teacher Professional Development Programs in EMI Settings: International Perspectives*, assembles diverse scholarly perspectives to address this critical challenge.

As editors, we aim to provide a comprehensive resource that critically examines the complexities of teaching in EMI contexts while offering pragmatic insights for educators, policymakers, and administrators. The volume emerges from a crucial recognition: while EMI has been widely implemented to advance internationalization, it simultaneously imposes significant challenges on educators. These challenges encompass language proficiency, pedagogical adaptation, and cultural nuance, necessitating professional development initiatives that transcend traditional language training.

The book is strategically structured into three interconnected parts. Part I critically analyzes EMI policy implementation through national and institutional case studies, revealing the intricate sociopolitical dynamics underlying EMI adoption. Part II concentrates on teacher training, providing substantive insights into best practices and systemic challenges across diverse educational settings. Part III explores future trajectories for professional development in EMI, engaging with technological innovations, interdisciplinary collaboration, and ethical considerations.

Each chapter offers a distinctive lens on EMI implementation, ranging from the complexities of introducing EMI in Algerian universities to the sophisticated integration of microteaching techniques in South Korean contexts. Collectively, these contributions demonstrate that while EMI practices exhibit significant contextual variation, the fundamental requirement for comprehensive and sustainable professional development remains universal. Critically, the book underscores the necessity of grounding professional development programs in rigorous empirical research, ensuring responsive and targeted support for educators and students.

We express our profound gratitude to the contributing authors, whose scholarly expertise and commitment have enriched this volume. Our appreciation extends to academic peers and reviewers whose discerning feedback has significantly refined this work.

Our aspiration is that this book will catalyze innovative conversations and initiatives in EMI professional development, ultimately elevating educational quality on a global scale. By synthesizing diverse experiences and insights, we aim to contribute meaningfully to the evolving discourse on EMI and support educators navigating the complex terrain of teaching in a globalized academic environment.

Burdur, Turkey — Ali Karakaş
Adana, Turkey — Yasemin Kırkgöz

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First and foremost, we extend our heartfelt thanks to SPRINGER for recognizing the importance and timeliness of this topic and for investing in this edited volume. Our gratitude goes out to the Springer team for their unwavering support and dedication throughout the publishing process. We are particularly grateful to Marianna Georgoulis, the Publishing Editor, as well as Immaculate Juyanthi and Helen van der Stelt, who patiently guided us from the onset of this project and addressed every query with care. We are also deeply appreciative of our contributors for their dedication to writing and submitting their chapters on time, despite facing unexpected challenges and increasing workloads. Special thanks are due to the reviewers, many of whom were also contributors, for their invaluable feedback that helped shape this book and enhance the quality of each chapter. Any remaining errors are solely our responsibility.

Contents

Part I Policy Implementation for EMI: Reflections from the Field

Introduction 3
Ali Karakaş and Yasemin Kırkgöz

Understanding EMI Research and EMI Teachers' Professional Development 11
Oktay Yağız and Burcu Aydın

A Systematic Review of Professional Development in English Medium Instruction in Higher Education 27
Sinem Ezgi Deniz, Kübra Doğan, and Ali Karakaş

Considering the Implementation of English as a Medium of Instruction: Between Ambitions and Risks 51
Amira Benabdelkader

EMI Course Process in the Turkish Higher Education Context and Pedagogical Implications 69
Mehmet Birgün and Yasemin Kırkgöz

Designing Professional Development Activities to Meet EMI Assessment Challenges 91
Olivia Mair, Amanda Murphy, and Francesca Costa

Part II Teacher Training in EMI: Best Practices and Challenges

Classroom Practices in EMI: Reflections from the Field 111
Sharon Hartle

Educating University Teachers for New Roles: Notes About the Reconstruction of the Knowledge Base of Brazilian Academics Who Teach in EMI Settings 145
Telma Gimenez

EMI Professional Development at a Korean Science and Engineering University: Practices and Challenges 163
Eun Gyong Kim and Mik Fanguy

Collaborative Online International Faculty Development for English-medium Instruction: The Role of Reflective Learning 177
Olivia Mair

Part III Directions for EMI Professional Development

Future Directions for Professional Development in EMI Settings 197
Ali Karakaş and Yasemin Kırkgöz

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Part I
Policy Implementation for EMI: Reflections from the Field

Introduction



Ali Karakaş and Yasemin Kırkgöz

Abstract This chapter introduces the book that explores the critical role of professional development in English Medium Instruction (EMI) across global higher education contexts. As universities increasingly embrace EMI to enhance their international profiles and educational quality, the need for comprehensive professional development programs has become paramount. The book presents diverse international perspectives on EMI professional development by examining challenges faced by educators and existing training approaches across different regions, e.g. North Africa, Turkey, Italy, Brazil, and South Korea. Through ten chapters in the rest of the book, contributors analyze various aspects of EMI professional development, from language proficiency and pedagogical skills to cultural competency and assessment literacy. The volume emphasizes that effective EMI implementation requires more than just language training, which underscores the importance of context-specific, comprehensive approaches that address both linguistic and pedagogical challenges. By sharing experiences and best practices from various contexts, this book provides valuable insights for educators, administrators, and policymakers involved in EMI implementation.

Keywords English medium instruction · Professional development · Teaching methodology · Higher education

In the current globalized landscape, English Medium Instruction (EMI) has become a critical strategy for universities striving to enhance their international profiles and

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improve educational quality (Kırkgöz & Karakaş, 2022). The rapid expansion of EMI in higher education institutions worldwide, including in non-Anglophone countries, has been driven by factors such as internationalization, improving graduate employability, and attracting international students (Galloway et al., 2017; Macaro et al., 2018). However, this growth has necessitated comprehensive professional development (PD) programs to ensure that faculty members are well-equipped to deliver content courses effectively in English.

The significance of EMI professional development cannot be overstated. As universities increasingly adopt English as their medium of instruction, the need for faculty who are proficient in both their subject matter and English language proficiency becomes paramount. Effective EMI instruction requires a deep understanding of pedagogical principles, cultural competencies, and language proficiency. However, research has highlighted that many EMI teachers face difficulties related to their own English proficiency as well as pedagogical challenges in teaching complex academic content in a second language (Macaro et al., 2020). Studies have further found that EMI teachers often feel unprepared and lack confidence in their ability to teach effectively in English (Dearden & Macaro, 2016; Kim & Shin, 2014).

While some universities and organizations have begun offering professional development programs for EMI teachers, there is still a lack of consensus on the specific competencies required and how these should be developed and certified (Macaro et al., 2020). Existing training programs tend to focus heavily on general English proficiency rather than the specialized linguistic and pedagogical skills needed for EMI (Dubow & Gundermann, 2017). There is thus a growing recognition that EMI teacher development needs to go beyond language proficiency to address issues, such as interactive teaching methods, supporting students' language development, and adapting materials (Chen & Peng, 2019; Macaro & Han, 2020).

This edited volume brings together research and perspectives from various contexts to examine professional development approaches and the needs of EMI educators. The chapters explore challenges faced by EMI teachers, and existing training programs by offering recommendations for enhancing EMI teacher preparation and ongoing development. By compiling insights from different national and institutional contexts, this book aims to contribute to the emerging body of knowledge on EMI teacher competencies and how these can be systematically developed through targeted professional learning opportunities.

The book is structured to provide a comprehensive overview of EMI professional development, exploring various approaches and models implemented in different regions. Each chapter offers a unique perspective, highlighting the successes and challenges faced by educators and institutions. The contributions are authored by experts who have actively engaged in EMI professional development, ensuring that the insights presented are grounded in practical experience.

1 Outline of the Book

This volume presents a diverse array of international perspectives on EMI professional development, reflecting the global nature of this educational trend. In Chapter "Understanding EMI Research and EMI Teachers' Professional Development", Oktay Yağız and Burcu Aydın explore the complexities and challenges of EMI and the professional development of EMI educators. They highlight the need for comprehensive training programs that go beyond language proficiency, incorporating pedagogical strategies, cultural awareness, and subject-specific challenges. They also emphasize the lack of structured and pedagogically supported EMI training programs globally, despite EMI teachers often facing difficulties due to insufficient teaching methodology training. The chapter reviews studies across countries, underscoring the need for continuous, interdisciplinary, and context-sensitive professional development to enhance educators' confidence and creativity. Additionally, the chapter stresses the requirement for more in-depth, evidence-based research on the effectiveness of these training programs, considering how local educational policies, socio-economic conditions, and institutional characteristics influence EMI practices. The authors conclude with recommendations for improving EMI teaching quality through more structured and comprehensive programs addressing conceptual, pedagogical, and language-related aspects.

Chapter "Academic English Language Policies and Practices of English-medium Instruction (EMI) Universities in Turkey from Policy Actors' Eyes", written by Sinem Ezgi Deniz, Kübra Doğan, and Ali Karakaş, lays the foundation for understanding the intersection of EMI and professional development. It emphasizes the importance of effective professional development in the successful implementation of EMI. The chapter suggests that without proper training and development, EMI teachers may struggle with both language proficiency and pedagogical challenges, ultimately impacting the quality of education. The chapter also discusses the systematic review process undertaken by the authors, focusing on empirical studies published between 2019 and 2024 that meet specific inclusion criteria. These studies also highlight the necessity for tailored professional development programs that address not only language proficiency but also pedagogical skills, cultural competency, and assessment literacy. One key implication of the reviewed studies is that the goal of EMI professional development is to provide educators with the tools they need to succeed in increasingly globalized and diverse educational environments. This overview is crucial, as research has shown that effective professional development is key to successful EMI implementation (Macaro et al., 2020; Chen & Peng, 2019).

Chapters "Considering the Implementation of English as a Medium of Instruction in the Algerian Higher Education: Between Ambitions and Risks" and "EMI Course Process in the Turkish Higher Education Context and Pedagogical Implications" offer insights from North Africa and Turkiye, respectively. In Chapter "Considering the Implementation of English as a Medium of Instruction in the Algerian Higher Education: Between Ambitions and Risks", Amira Benabdelkader explores the

potential implementation of EMI in Algerian higher education. Her study examines the current language policies, the attitudes of faculty and students towards EMI, and the challenges that may arise in the Algerian context, including issues related to language proficiency, pedagogical readiness, and institutional support. Benabdelkader highlights the complexities of introducing EMI in a region where French has historically dominated the educational landscape by stressing the need for a gradual and context-sensitive approach to EMI adoption. The findings underscore the importance of aligning EMI initiatives with the linguistic and cultural realities of Algerian universities, ensuring that any transition to EMI enhances rather than hinders educational outcomes. In contrast, Chapter "EMI Course Process in the Turkish Higher Education Context and Pedagogical Implications" by Mehmet Birgün and Yasemin Kırkgöz examines the EMI course process in Turkiye, offering a comparative perspective that enriches the discussion on context-specific approaches to EMI, as emphasized by Galloway et al. (2017). The chapter provides an in-depth analysis of the unique challenges and opportunities that arise in the Turkish higher education context, particularly focusing on the adaptation of EMI practices to local needs and constraints. Through a mixed-methods approach, the authors explore both the pedagogical adjustments required by instructors and the institutional support necessary for successful EMI implementation. The chapter further highlights the importance of aligning EMI initiatives with national language policies and cultural dynamics, ultimately offering valuable insights for policymakers and educators who are seeking to optimize EMI in similar contexts.

Moving to Southern Europe, Chapters "Designing Professional Development to Meet EMI Assessment Challenges" and "EMI Teacher Training and Learning Design: Insights from Verona University and Beyond" focus on the Italian context. In Chapter "Designing Professional Development to Meet EMI Assessment Challenges", Olivia Mair, Amanda Murphy, and Francesca Costa address the critical issue of assessment in EMI, offering a detailed exploration of the challenges and strategies for effective assessment in EMI settings. They emphasize the importance of aligning assessment practices with the specific needs of EMI students, addressing both language proficiency and content mastery. This chapter highlights the necessity for tailored professional development that equips EMI educators with the skills to design and implement fair and effective assessments. In Chapter "EMI Teacher Training and Learning Design: Insights from Verona University and Beyond", Sharon Hartle reflects on classroom practices at Verona University by providing practical insights into the daily challenges and successes of EMI implementation. She explores how EMI lecturers at Verona have adapted their teaching approaches following professional development, with a particular focus on increasing student interaction and engagement. Hartle also examines the integration of digital tools like Mentimeter and Kahoot to foster participation, especially in large classes. She also discusses how lecturers have embraced strategies such as content segmentation and transparent course structuring to make their EMI teaching more accessible to students. The chapter highlights the shift many lecturers experienced from initially focusing on their own English proficiency to becoming more concerned with effective pedagogical strategies for EMI contexts. These contributions align with research

showing that assessment literacy and practical pedagogical skills are essential components of EMI teacher development (Dimova & Kling, 2015).

Chapter "Educating Teachers for New Roles: Reconstructing the Pedagogical Content Knowledge of Brazilian Academics Who Teach in EMI Settings" shifts our attention to South America, with Telma Gimenez examining the reconstruction of knowledge bases for Brazilian academics teaching in EMI settings. This chapter provides a critical perspective on EMI implementation in Brazil, drawing on Shulman's (1987) categories of teacher knowledge to propose a comprehensive approach to EMI teacher development. Gimenez argues that EMI preparation should go beyond language proficiency and pedagogical skills to include reflections on the nature of knowledge, curriculum choices, and the role of English in academic settings. The chapter illustrates how EMI can prompt deeper considerations about teaching practices, learner characteristics, and educational purposes in Brazilian higher education. By presenting excerpts from studies with postgraduate teachers and students, Gimenez demonstrates the importance of considering the full spectrum of teacher knowledge in EMI contexts. This chapter underscores the need for professional development that addresses the sociopolitical dimensions of EMI, as argued by Sah and Fang (2024), and contributes to the growing call for more critical and contextualized approaches to EMI implementation and teacher preparation in diverse global settings.

Chapter "EMI Teacher Training at a Korean Science and Engineering University: Practices and Challenges" provides an East Asian perspective, with Eun Gyong Kim and Mik Fanguy describing EMI professional development practices and challenges at the Korea Advanced Institute of Science and Technology (KAIST), a prestigious science and engineering university in South Korea. The authors present a detailed case study of KAIST's newly launched EMI professional development program, which utilizes microteaching techniques to provide personalized feedback and training to content professors. Their chapter explores the program's structure, including its four-stage approach encompassing initial assessment, guided learning, practical application, and reflection. Kim and Fanguy highlight both the successes of the program, such as high satisfaction rates among participants, and ongoing challenges, including issues with sustained participation and follow-through. The authors also discuss the unique context of KAIST, where the majority of faculty are non-native English speakers tasked with delivering complex scientific content in English to a predominantly Korean student body. Their insights resonate with findings from other Asian contexts, such as those reported by Hamid et al. (2013) in Vietnam, particularly regarding the need for tailored, context-sensitive approaches to EMI professional development in science and engineering fields.

In Chapter "Collaborative Online International Faculty Development for English Medium Instruction", Olivia Mair presents a global view through a collaborative online international faculty development (COIFD) program for EMI teachers. This innovative program involves higher education institutions across six countries and aims to enhance the pedagogical, linguistic and cultural competencies of university teachers in EMI settings. The chapter examines the role of reflective learning in the program, analyzing how participants engage in critical reflection on their teaching

practices and implement changes. This aligns with recent calls for more innovative and internationally oriented approaches to EMI teacher training that offer integrated linguistic and pedagogical support (O'Dowd, 2018; Dang et al., 2023). By bringing together EMI teachers from diverse contexts in a sustained online community of practice, the COIFD program provides a model for scalable, flexible professional development that can foster transformative learning. Mair's analysis offers insights into how such programs can promote critical reflection and perspective transformation among EMI teachers across cultural and disciplinary boundaries.

Finally, in Chapter "Future Directions for Professional Development in EMI Settings", Ali Karakaş and Yasemin Kırkgöz synthesize key themes from the international case studies and outline future directions for EMI professional development research. This concluding chapter emphasizes the need for comprehensive, context-specific PD approaches that go beyond language training to address pedagogical skills, assessment literacy, and strategies for supporting students' disciplinary language development. It highlights several promising areas for future research, including long-term studies on PD impact, comparative research across contexts, and investigations incorporating student perspectives. The chapter also calls for more research on EMI teacher competencies, the integration of ESP approaches, and the use of technology in EMI professional development. By identifying these future directions, the chapter provides a roadmap for advancing the field of EMI professional development in increasingly diverse and internationalized higher education settings.

This diverse collection of international perspectives demonstrates that while EMI challenges may vary by context, the need for comprehensive professional development is universal. As Macaro and Han (2020) argue, effective EMI teaching requires not just language proficiency, but a range of pedagogical and cultural competencies. By exploring various approaches to EMI professional development across different countries and regions, this volume contributes to the growing body of knowledge on how best to prepare and support EMI educators in an increasingly globalized higher education landscape.

The adoption of EMI in universities is not merely a linguistic shift but a comprehensive transformation that impacts teaching practices, curriculum design, and institutional policies. Effective professional development programs are crucial for facilitating this transition. They provide faculty with the necessary skills to navigate the complexities of teaching in a foreign language, ensuring that educational quality is maintained.

Professional development in EMI contexts typically encompasses several key areas:

1. Language Proficiency: Enhancing the English language skills of faculty members to ensure they can deliver content clearly and effectively.
2. Pedagogical Skills: Equipping instructors with modern teaching methods that are student-centred and interactive, moving away from traditional lecture-based approaches.

3. Cultural Competency: Preparing faculty to address the diverse cultural backgrounds of their students, fostering an inclusive and supportive learning environment.
4. Assessment Literacy: Developing faculty's ability to design and implement fair and effective assessment practices that take into account language and content integration in EMI settings.

As the chapters in this volume demonstrate, successful EMI professional development programs are those that are tailored to the specific needs of the institution and its faculty. They are iterative, reflective, and adaptive, continuously evolving to address emerging challenges and incorporate new insights.

In conclusion, this book provides a valuable resource for educators, administrators, and policymakers involved in EMI. By sharing experiences and best practices from various contexts, it aims to contribute to the ongoing development of effective EMI professional development programs worldwide. The insights and recommendations presented here will help institutions navigate the complexities of EMI, ultimately enhancing the quality of education they offer and supporting their goals of internationalization. As EMI continues to expand globally, ensuring educators are adequately prepared and supported remains an urgent priority.

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Understanding EMI Research and EMI Teachers' Professional Development



Oktay Yağız and Burcu Aydın

Abstract This chapter explores the complexities and challenges involved in English as a Medium of Instruction (EMI) and the professional development of EMI educators. It highlights the need for comprehensive training programs that go beyond language proficiency, incorporating pedagogical strategies, cultural awareness, and subject-specific challenges. The chapter emphasizes that while EMI teachers often face difficulties due to insufficient training in teaching methodologies, there is also a lack of structured and pedagogically supported EMI training programs globally. It reviews various studies and professional development practices across different countries, pointing out the need for continuous, interdisciplinary, and context-sensitive professional development that fosters collaboration and enhances educators' confidence and creativity. The need for more in-depth, evidence-based research on the effectiveness of these training programs is also stressed, with a focus on how local educational policies, socio-economic conditions, and institutional characteristics influence EMI practices. The chapter concludes with recommendations for improving the quality and effectiveness of EMI teaching through more structured and comprehensive training programs.

Keywords EMI · Professional development · Teacher training · Pedagogical strategies

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1 EMI as a Research Field

The role of English as a global language is expanding, leading many countries to advocate for its use as a medium of instruction (EMI) in universities and schools. In recent years, EMI has been increasingly promoted in various educational settings, with a particular focus on universities. This development is a strategic step towards establishing a formidable global presence for higher education institutions. The increasing prevalence of English as the medium of instruction is underpinned by its role as a universal language for cross-cultural communication, uniting individuals of diverse linguistic backgrounds (Jenkins, 2000; Widdowson, 1994). Within the framework of the internationalisation goals of universities through EMI, students and teachers interact both linguistically and culturally. This intercultural interaction encourages linguistic development, cultural awareness and mobility between countries. This situation increases the quality of education and research in higher education institutions where EMI schemes are implemented. In a study conducted across 55 countries using open-ended survey questions, supported by British Council educators (Dearden, 2014), it is predicted that EMI applications will increase even further in the future. In the study conducted by Earls (2016) in Germany, students and teachers stated that EMI is a necessity, particularly in some programs, in the globalizing education environment and that it is meaningless to provide education in their own language in the field of International Accounting. Byun et al. (2011) reached similar findings in another study they conducted in South Korea. Bozdoğan and Karlıdağ (2013) also stated in their interviews with students in Türkiye that the participants viewed receiving education in English positively both to improve their foreign language skills and to gain various advantages in terms of their profession. In the Japanese sample, Chapple (2015) emphasized that students' desire to receive education in English is mostly due to their desire to improve their English skills. Despite these positive approaches towards EMI in Türkiye, the concerns of academics and students on this issue are also noteworthy. These concerns are mostly focused on the English language proficiency of either students or academics or both groups (e.g. Karakaş, 2014, 2015, 2016, 2017). At this point, it is clear that there is an uncertainty about what exactly the concept of proficiency covers and how it should be defined. As such, different researchers have preferred different terminological uses each time and have not been able to establish standard definitions and frameworks. When it comes to teacher proficiency, it is believed that a high level of English proficiency is required in EMI (Choi, 2013), because English proficiency is seen as a significant obstacle not only for students but also for teachers who teach in EMI environments. However, there is no full consensus on the level of English proficiency that teachers who will teach in EMI environments should have. It is thought that EMI teachers should have a doctorate degree from an Anglophone country, that they should have taught abroad or that their managers should have an opinion that the teacher speaks English well.

In many countries, it is not possible to provide quality English language education at the university level, and academics who teach in English experience

widespread difficulties in their pedagogical competence as well as in knowing and using English as a foreign language correctly and effectively (Macaro, 2018). An ongoing descriptive exploration of diverse facets of EMI environments, encompassing educators' and students' viewpoints and the pedagogical strategies applied within EMI settings, has been undertaken. Nevertheless, a serious need exists for interventional, comparative, and impact-assessing scientific investigation. In particular, the need for local studies that take into account EMI parameters that differ in terms of countries' language structure, educational policies, socio-economic characteristics and conditions can contribute to the global standardization of EMI. The parameters on which countries differ may have common points while they may also have characteristics that distinguish them from other countries. Given this criticality, it is evident that there is a notable gap in the relevant literature on professional development in EMI (Dearden & Macaro, 2016; Macaro et al., 2018). Indeed, Macaro et al. (2018, p. 65) define the point reached in terms of the subjects, scope, research designs and data type of the research conducted in the field of EMI as follows: "despite the widespread and increasing interest, EMI research is still in its adolescence". It can be said that one of the reasons underlying this definition is that these studies are descriptive studies due to the limited use of measurement tools other than applied design and participant evaluation.

The emphasis on language in the professional development of educators to create a more qualified EMI environment is justifiable. However, it should be acknowledged that language is not the only factor to consider. Pedagogical guidance, suggestions, and enhanced conceptual awareness of education in a second language must also be given due attention. To achieve this goal, it is imperative to develop and implement robust professional training models. These models will empower EMI teachers to use English accurately and effectively for teaching purposes, thereby enhancing their pedagogical competence and conceptual understanding of EMI.

2 EMI Professional Development Issues

English language education in higher education is one of the most important tools used by universities in countries where English is not the native language for their internationalization goals, their efforts to be the choice of foreign academics and students, and their institutional reputation. Universities are increasingly using English as the language of instruction in their programs globally. However, in many countries, it is not possible to provide quality English language education at the university level, and academics who teach in English experience widespread difficulties in their pedagogical competence as well as in knowing and using English as a foreign language correctly and effectively (Macaro, 2018). In various studies, it has been found that teachers teaching in EMI do not feel confident in their knowledge of English grammar and pedagogical terms. This lack of confidence significantly hinders their performance in the classroom (Macaro et al., 2018). Many academics teaching in EMI may lack formal training in language instruction. As a

result, they often overlook the important connection between language and content, simply translating course materials and presentations from their native language into English (Maxwell-Reid, 2020). This highlights the critical need for a global strategy to address the challenges faced within EMI environments and to develop new, research-based approaches (Breeze & Sancho Guinda, 2022; Cañado, 2020).

For academic staff who teach field courses to deliver high-quality education in English, it is essential to prioritize the development of programs and models aimed at training competent EMI academics. It is imperative to rigorously test these programs using scientific research methods to ensure they are effective in promoting cognitive and impactful teaching within an efficient EMI environment. For this purpose, examining the experiences, opinions and practices of EMI educators is important for a more qualified EMI education environment. To contribute to EMI teachers' professional development and to strengthen their knowledge and experience as well as minimize their anxiety and lack of self-efficacy, relevant interventional research has considered three main fields; that is, conceptual, pedagogical and language-related fields.

2.1 Conceptual Field

In non-English monolingual countries, the trend from teaching English as a foreign language to English as the language of instruction is evident at all levels of education, with the most obvious transformation taking place in higher education. Universities in many countries are combining academic knowledge with English using Content and Language Integrated Learning (CLIL), EMI and Content-Based Language Teaching (CBLT) approaches. While CLIL has an educational approach focused on content and language learning, in the CLT approach, content is a tool used for language learning. The learning outcomes in the EMI environment are directly linked to the content and do not aim at a planned language learning and assessment process. A conceptually correct understanding of these educational approaches in which English is used in different contexts and for different purposes is considered to be the main requirement of educators in these settings. However, a systematic literature review revealed that there is significant inconsistency and confusion in defining and delineating the scope of EMI and its related educational concepts (Macaro et al., 2018). Dearden's (2014) study, involving educators from 55 countries, clearly demonstrates the urgent necessity of creating an explanatory glossary of terms to ensure clarity and understanding, highlighting an undeniable need for enhanced conceptual precision.

2.2 Pedagogical Field

While the lack of adequate professional development opportunities and institutional support for EMI education for non-native English-speaking academics has been the subject of some scientific studies, there is a serious lack of research on the content, types and effects of teacher training for EMI practices. For example, in the comparative study conducted by Dearden and Macaro (2016) on Austria, Italy and Poland, it was stated that academics were asked to teach in EMI classes because they had overseas experience and relatively good English speaking skills. This situation negatively affects EMI academics in pedagogical and psychological terms (Westbrook & Henriksen, 2011). Indeed, when considering the geography of Europe, Wächter and Maiworm (2014) stated that there is no compulsory or elective training program for the development of EMI educators. Pagèze and Lasagabaster (2017) suggest that this development process will contribute to internationalization by developing bottom-up approaches, in other words, by ensuring the continuity of professional development with locally determined goals.

In one of the training programs, Airey's (2011) study asked 18 educators from different disciplines in Sweden, with limited or no experience, about EMI professional development training. It was seen that the potential for professional promotion was the main reason for the educators to participate in this training. It was also seen that some of these participants were asked to teach in EMI classes without having had sufficient preparation. In the study of Aguilar and Rodríguez (2012), it was seen that the main motivation of EMI academics in these environments was to improve their English language skills, but they did not intend to change their teaching methodologies. In a similar study conducted by Guarda and Helm (2017) in Italy, 50 academics were subjected to a professional development program, and the pre-test and post-test findings of the study revealed that there were changes in the perceptions of the participants and that these academics attached more importance to interacting with their students in English and taking their students' needs into consideration. On the other hand, there are also study findings that show that teachers of EMI students are relatively less interested in their level of English proficiency (e.g., Bolton & Kuteeva, 2012; Hellekjær & Westergaard, 2003). In fact, in some higher education institutions, teaching in EMI programs has even become an institutional requirement (Cho, 2012).

While EMI is becoming widespread in higher education due to its increasing importance and potential contributions, EMI academics face pedagogical difficulties in integrating course content into the English language (Tuomainen, 2018). On the one hand, difficulties in terms of language proficiency (Barnard, 2015), on the other hand, lack of knowledge about the theoretical definition and function of EMI education, the pedagogical characteristics of EMI teaching and the critical role of English (Maxwell-Reid, 2020) negatively affect the EMI environment and hinder an efficient teaching process. Therefore, it is another important element that EMI education should also have a pedagogical aspect.

2.3 English Language Proficiency

Most of the challenges related to learning through English have been addressed through the provision of language support systems (Galloway & Rose, 2021). The varying foreign language proficiency levels of EMI teachers, their lack of cognitive academic language proficiency (Cummins, 2003), the possibility that teaching an academic subject in a foreign language may cause difficulties and disrupt students' learning, and the fact that EMI educators' language abilities directly affect the quality of EMI education (Ball & Lindsay, 2013; Margić & Vodopija-Krstanović, 2018) necessitated another stage of professional training models. Ideally, an EMI educator is expected to have the subject knowledge, teaching pedagogy, and English proficiency to facilitate classroom communication, such as asking questions, answering questions, providing feedback, and evaluating students (Freeman et al., 2015). To ensure high-quality education in a foreign language, it is crucial to provide EMI educators with professional training opportunities. However, there appears to be a lack of emphasis on the language proficiency and teaching abilities of these educators (Lozano & Strotmann, 2015). Moreover, there is no consensus on the specific competency levels required. Consequently, the development of EMI education standards will necessitate applied research conducted across diverse EMI environments. EMI studies have shown that limited English knowledge negatively affects the processes of communicating, explaining, using the target language comfortably, and asking questions in the classroom, and that interaction in the classroom environment turns into simple, closed-ended expressions, decreasing student participation and discussion environments (e.g., Hahl et al., 2016; Margić & Vodopija-Krstanović, 2018). The inability of the EMI educators to express themselves in an accurate and appropriate language causes the target content to be simplified and reduced, and as a result, the course content cannot be sufficiently understood (Knapp, 2011), students' expectations from the EMI educator are reduced, and some prejudices are formed regarding their competence (Margić & Vodopija-Krstanović, 2018; Tatzl, 2011). Therefore, providing the necessary language training opportunities for EMI teachers to have sufficient English proficiency is of particular importance for ensuring the quality of teaching in EMI. During the implementation of professional development implementations, cognitive academic language support needs to take place and thereby contributes to EMI teachers' qualified use of the English language.

These three areas mentioned can be important issues of professional development practices in education. Scientific research can help optimize professional development training by identifying more efficient practices. Researchers have examined EMI education programs with varying durations across different European countries to improve these approaches (Costa, 2015; Jiménez Muñoz, 2020; O'Dowd, 2018) and educational services developed according to the educational infrastructure, quality and above-mentioned variables of the countries have been provided, and similar themes have been presented in terms of their contents in the light of the literature. The key to improving educational processes is ensuring continuity. Current practices consider language skills, teaching abilities, and identified

needs. However, the lack of assessing professional development programs hinders positive changes at universities and delays meeting teaching standards using EMI. Therefore, it has become an important requirement to minimize cognitive and pedagogical deficiencies through professional development activities for EMI academics to become educators with sufficient English language proficiency and advanced pedagogical competence. For example, research data have shown that educators who teach in English in Türkiye do not receive any professional training even in their own language after starting their teaching careers, and they do not undergo a professional development process for effective EMI education (Macaro et al., 2016).

The majority of studies conducted in this field are descriptive, based on self-report findings (e.g. Briggs et al., 2018; Dearden, 2014; Dearden & Macaro, 2016; Galloway & Rose, 2021; Muñoz de Prat, 2020), are not supported by real teaching practices (e.g., microteaching), do not include intervention designs and comparative processes. These studies, which rarely include practical processes where results and impact measurements are made, can provide limited assistance to policymakers and teachers in finding solutions to the challenges they face in EMI careers. Costa (2015) introduces training activities offered for EMI educators in various universities in ten European countries, covering processes defined in different ways for English language education, and of different durations. For example, these trainings consist of a wide range of trainings, from 1-week presentations on pronunciation activities to trainings covering up to a semester of reading and writing activities. It should be noted that if an incorrect pronunciation is not corrected, it will become permanent and will be difficult to improve (Valcke & Pavón, 2015). However, no information was provided on how these trainings were organized, or whether evidence-based scientific research was conducted on the gains, needs and opinions of the participants.

Training programs designed for more qualified EMI training are developed by taking the language, educational structure, socio-cultural structure and economic dynamics specific to each country into account; this makes standardization in EMI educator/student training partly difficult. However, considering the parameters specific to countries and their higher education institutions is both inevitable and useful. The few evidence-based training programs organized for educators and students in EMI programs conducted in higher education institutions in different countries have mostly addressed the development of English language skills and, to some extent, pedagogical elements.

Similar EMI professional development practices consisting of different durations have been investigated in various European countries (Costa, 2015; Jiménez Muñoz, 2020; O'Dowd, 2018), and educational services developed according to the educational infrastructure, quality and above-mentioned variables of the countries have been provided, and similar themes have been presented in terms of their contents. The most important common point in increasing the efficiency of these educational implementations is the necessity of ensuring continuity. The educational applications developed have been designed based on participants' language achievement levels, general pedagogical communication skills, and requirements identified

through needs analysis (e.g., Cañado, 2020; Volchenkova et al., 2022). However, the absence of scientific data examining the progress, effectiveness, and influence of in-service professional development programs hinders universities from enacting beneficial changes to their educational policies and causes delays in achieving specific standards in EMI teaching processes. This issue is also a significant problem when it comes to figuring out the standards for accrediting universities on both a national and international level. Therefore, minimizing cognitive and pedagogical deficiencies through professional development activities has become an important requirement for EMI teachers to become educators with adequate English language proficiency and advanced pedagogical competence. The vast majority of research conducted in this particular area involves providing detailed, narrative descriptions and relies heavily on obtaining data through self-reported responses from the participants (e.g., Galloway & Rose, 2021; Muñoz de Prat, 2020). In McCarthy's 2019 study, EMI programs in Japan were determined in line with the requests of the participants by conducting face-to-face interviews with each relevant EMI educator to develop support programs, and 16 educators were provided with short-term language-based support seminars on the use of English in academic settings. These support services mainly included English academic writing. 21 participants participated in the training program designed by Hartle (2020) as blended learning in a higher education institution in Italy, and the content of this training process was developed with professional development courses focused on English language skills in line with the needs determined by nine survey questions. In this study, Hartle underlines that EMI training programs are limited in terms of number, variety and systematicity. The fact that the data collection tool that made this training program concrete consisted of a small number of quantitative questions can also be criticized in terms of the methodology of the study. However, with in-depth analyses using qualitative data collection tools, the needs of the participants and the difficulties they faced could be better understood, along with their reasons, and by observing their performances, real-life practices, problems, strengths, and weaknesses could be determined.

Designing and delivering EMI teacher training is a complex process. It requires consideration of educational, linguistic, cultural and institutional contexts that characterise EMI settings. On the other hand, affective factors (e.g., Chen & Peng, 2019; Tsui, 2018; Webster & Herington, 2021; Zhao et al., 2023) such as confidence, attitudes towards EMI and motivation should be taken into account as well as practical issues such as resources and lecturers' English language proficiency, EMI teaching experience and prior teacher training in their first language. Deroey (2023) investigated EMI teacher training worldwide to help practitioners with the design and delivery of the programs. The results of his research indicated that the programs often focus on improving language proficiency, with lacking attention to pedagogical strategies. They are unprincipled and lack a detailed pedagogical framework, which limits their efficiency. Teachers face with difficulties of complexities of teaching in an English-medium environment because of the absence of a clear pedagogical approach. Recommendations to improve these programs include the development of more structured and pedagogically supported training plans that go

beyond language proficiency to include teaching strategies, classroom management techniques and subject-specific challenges. It is emphasized that it will enhance the effectiveness of EMI teaching. Lu (2022) stated that interdisciplinary collaboration with innovative and effective EMI teaching practices among EMI teachers enhances professional development. The exchange of ideas between disciplines led to confidence and creativity among EMI instructors. The results of Lu's study (2022) also revealed that the exchange of ideas between disciplines helped teachers better understand how to communicate complex subject matter in English. The findings highlight the importance of continuous, long-term professional development rather than short-term training sessions. Interdisciplinary collaboration should be institutionalized, with support provided for ongoing professional growth. It is highlighted that effective EMI training must go beyond language proficiency, addressing the comprehensive nature of teaching in an English-medium context. This includes developing communication skills, understanding the cultural nuances of teaching in English, and applying pedagogical strategies that accommodate diverse student backgrounds.

The widespread use of EMI in higher education necessitates the support of EMI teachers from various perspectives. The main subject of this support has generally been language. However, the education to be provided in an EMI environment is inherently complex and involves more than just the language issue. In EMI environments, the intricate interplay of linguistic, pedagogical, conceptual, and cultural patterns demands thorough consideration. Equally crucial is a confident and comprehensive understanding of the motivation, self-confidence, expectations, and attitudes of both EMI students and educators.

The needs and expectations of educators working in EMI environments vary according to the economic situation of the countries, the educational policies they follow, and their cultural structures. Since this situation will affect EMI education at a macro level, it can provide important gains for the institutions responsible for developing EMI education programs to know the approaches and practices in these environments.

From a research perspective, before implementing a professional development program, self-assessment tools are both highly prevalent and valuable. Additionally, evaluating sample lesson presentations through panel observation can make significant contributions to determining the program's content and structure. It should be noted that perceived needs in needs analysis might not always coincide with real needs. Therefore, in addition to the perceived needs in determining the model content, the evaluation of the participants' sample English course presentations may contribute to the creation of a more efficient professional development model.

Evaluating the participant presentations before and after the training will most likely contribute to the reliability of professional development programs. In addition, the interviews conducted after the training may help to see the effect of the training, to make healthier suggestions and to make verified analyses. Most of the educational programs developed within the framework of needs and challenges have focused on language and pedagogy. Some of them have also addressed specific communication processes and raised awareness of EMI teachers. It is thought that

this diversity is not surprising and inevitable, since different countries and educational institutions have different socio-cultural, economic and linguistic characteristics.

The emphasis on foreign language requirements by EMI teachers has overshadowed the importance of conceptual awareness and pedagogical skills necessary for creating truly effective EMI educational environments. However, this does not mean that EMI educators have sufficient English knowledge to teach English. Although some descriptive studies (e.g., Airey, 2011; Bolton & Kuteeva, 2012; Hellekjær & Westergaard, 2003) have found that EMI students do not expect educators to have a high level of language proficiency, it should not be surprising that EMI students have certain language-related expectations from their teachers.

Therefore, it has been appropriate to design and implement professional development models that aim to ensure that educators working in EMI environments have an acceptable level of English and are well-versed in the widely accepted pedagogical knowledge and skills, principles and practices of education and that they understand EMI correctly from a conceptual perspective.

The emphasis on the language aspect of EMI education can be attributed to the fact that teachers, particularly at the tertiary level, working in this field see EMI programs as an opportunity for their personal development and professional advancement. In addition, being an engineer, doctor or health worker from a pedagogical perspective may not have allowed them to be equipped with educator awareness and knowledge, and this may also cause their sensitivity to their roles as educators to remain weak. As such, EMI teachers may not have received any pedagogical training before and learned how to teach through their experiences or by following their educators. Although EMI educators are expected to be experts in their command of English before or during their teaching process, their progress in foreign languages does not necessarily translate into effective teaching skills. Macaro et al. (2018) underline the importance of providing pedagogical training regardless of English proficiency.

The primary rationale for incorporating pedagogical elements in professional development training stems from the fact that academics in EMI across diverse disciplines—including medicine, engineering, and economics—typically lack formal training in teaching methodologies, strategies, and fundamental pedagogical principles. Consequently, higher education institutions often require these subject matter experts to teach in EMI programs without providing prior pedagogical preparation. Pedagogical training is an effective way to learn how to facilitate teaching and learning in EMI classrooms, as well as strategies to overcome language difficulties (Hartle et al., 2021). Providing EMI educators with a broader perspective, raising pedagogical awareness and increasing language use skills contribute to EMI teachers' self-confidence. At this point, the most important issue is the continuity of education. However, many recent professional development initiatives have been quite short (e.g., Huang et al., 2024; Macaro & Tian, 2023; Maíz-Arévalo & Ordua-Nocito, 2021; Zhao et al., 2023).

Another crucial aspect to consider is the expected approaches and practices of EMI educators, along with the challenges and contributions inherent in providing

education in a second language to students from both domestic and international backgrounds. This approach aims to increase EMI educators' awareness, ultimately enabling a more comprehensive conceptual understanding of English language education. EMI teacher training should not only focus on their own needs and motivations but should also provide insight into the expectations of EMI students in these educational environments. Participants must thoroughly engage with the concept of EMI education, explore its diverse approaches, understand institutional expectations, and appreciate the role of foreign languages in content-based education. By informing participants about these key aspects, the quality of EMI education may be enhanced, as corroborated by several previous studies (e.g., Cañado, 2020; Hartle, 2020; Volchenkova et al., 2022). To enhance engagement in pedagogical and conceptual domains, it would be beneficial to emphasize practical content and provide EMI teachers with greater opportunities for professional autonomy and initiative. For example, regarding the use of different assessment techniques, EMI teachers should be given the freedom to make evaluations with different options instead of predetermined multiple-choice questions.

While EMI professional development studies have similar characteristics in terms of content and application methods, since they differ in terms of cultural characteristics, economic structures, opportunities and conditions, educational practices will inevitably show differences. However, these different professional development practices may contribute to standardization among international stakeholders and will help EMI teachers in terms of needs, difficulties and expectation parameters where differences are seen.

3 Suggestions

Considering the aforementioned issues, the following recommendations can be proposed. For instance, training practices must be continuous to effectively achieve their goals, and educators working in or aspiring to work in EMI settings should engage in ongoing professional development. More qualified English language education can be provided by periodically evaluating the pedagogical and English language skills of the teachers who will teach in these programs. Although the idea of accrediting EMI teachers seems useful in theory, the lack of sufficient teachers may cause problems in practice. To solve this, options such as improving the salaries of EMI teachers, reducing their course loads, and providing them with attractive opportunities through incentives from abroad can be considered. EMI educational environments, to which almost all European countries attach particular importance, are kept alive and financially supported by many scientific and cultural projects.

When developing training models for EMI educators, it is important to go beyond just focusing on foreign language education. Training programs should also encompass pedagogical, cultural, and conceptual awareness levels. Therefore, it is essential to increase the interest and motivation of EMI educators for this purpose. When determining educational content, it is crucial to account for variations in educational

environments. The content to be developed should be created through comprehensive needs analysis, careful observation of teaching processes, and targeted survey studies. When feasible, incorporating individual mentorship practices could provide additional valuable insights. Since face-to-face training can enhance participants' motivation, engagement, and success, blended training approaches should also be incorporated when appropriate to the circumstances. For more qualified EMI training, discipline-specific training can be designed and implemented.

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A Systematic Review of Professional Development in English Medium Instruction in Higher Education



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Abstract A pressing concern in English Medium Instruction (EMI) is the necessity for professional development (PD) programs targeting lecturers in higher education institutions. These programs aim to enhance both pedagogical skills and English language proficiency, enabling educators to effectively teach academic subjects in English. In light of this, our systematic review explores national and international research addressing PD in EMI higher education contexts. Adhering to the PRISMA 2020 guidelines, we examined 15 research articles published between 2019 and 2024. Our analysis focused on research design, context, sample, data collection instruments, findings, and implications. The majority of studies (eight) employed mixed methods, while five used qualitative approaches and two utilized quantitative methodologies. The review identified key challenges faced by EMI lecturers, including language competency and the adaptation of teaching methods. These findings underscore the importance of tailored, interactive, and ongoing professional development opportunities. Our primary conclusions suggest that effective PD initiatives should integrate both language and teaching skills, be discipline-specific, and address multilingual and multicultural educational settings. Furthermore, the review emphasizes the crucial role of institutional support and well-defined policies in enhancing PD effectiveness. The implications drawn from this study can inform the development and implementation of impactful professional development programs, ultimately improving the quality of EMI in higher education institutions.

Keywords Systematic review · Professional development · English medium instruction · Higher education · Needs analysis

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1 Introduction

The use of English Medium Instruction (EMI) is expanding globally in higher education, particularly in non-native English-speaking countries (Kırkgöz & Karakaş, 2022). This rapid growth has been well-documented across various settings (Macaro et al., 2018). Traditionally, EMI has been defined as "the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language of the majority of the population is not English" (Dearden, 2015, p. 2). However, recent challenges to this definition have emerged, suggesting that EMI should also encompass English-mediated programs in international Anglophone universities (Baker & Hüttner, 2019). The practice of EMI involves teaching academic subjects in English to enhance the global competitiveness of domestic students and attract international learners (Barnard, 2018; Huang & Singh, 2014). It has become a crucial component of internationalization strategies for many higher education institutions (Bradford et al., 2022; Karakaş, 2016). Importantly, Jenkins (2020, p. 64) argues that "where a university is sited geographically is of minor relevance as contrasted with the number and range of students from non-English mother tongue countries who study in any given institution". This broader understanding of EMI acknowledges the linguacultural diversity present in both non-Anglophone and Anglophone university settings. Baker and Hüttner (2019) point out that many Anglophone universities now have multilingual classrooms where staff and students use English as an additional language to learn disciplinary content. In some postgraduate programs, these users of English are becoming the majority.

Consequently, universities worldwide, including those in Anglophone countries, need to develop sociolinguistically responsible and inclusive internationalization approaches (Morán Panero, 2022). They can no longer rely on traditional monolingual and native-speaker model-based policies and practices. Evidence of bottom-up linguistic, communicative, and pedagogical transformations aligning with EMI and English as a Lingua Franca (ELF) research recommendations is already emerging in these institutions (Jenkins & Mauranen, 2019; Jenkins & Morán Panero, 2021). This expanded view, as proposed by Dafouz and Smit (2016), defines EMI as a multilingual educational setting where English serves both as an academic language for teaching and learning and as a means of international communication, regardless of the national linguistic context.

On the other hand, university lecturers accustomed to teaching in their first language (L1) face significant challenges when transitioning to EMI. English-language instructional environments can pose considerable difficulties for subject specialists (Lasagabaster, 2018). Despite their in-depth knowledge of the subject matter, many lecturers encounter obstacles in meeting the pedagogical demands of presenting content in English, as it is not their first language (Birgün, 2024). Consequently, PD is crucial for EMI lecturers to tackle these challenges, equipping them with essential skills to teach effectively in English, adopt innovative teaching methods, and enhance their language proficiency.

The importance of professional development for EMI teachers cannot be overstated. As EMI programs proliferate globally, the need for well-prepared instructors becomes increasingly critical. In this respect, PD programs tailored for EMI contexts can address several key areas, including:

1. Language proficiency: While many lecturers may have a good command of English, teaching in a second language requires a higher level of proficiency. PD can help improve their academic English skills, including pronunciation, fluency, and subject-specific terminology.
2. Pedagogical strategies: EMI requires adapting teaching methods to accommodate linguistic diversity in the classroom. PD can introduce lecturers to effective strategies for scaffolding content, promoting student engagement, and facilitating comprehension in a multilingual environment.
3. Intercultural competence: With EMI often attracting international students, lecturers need to develop intercultural awareness and skills to navigate diverse classrooms effectively.
4. Assessment techniques: PD can guide lecturers in developing fair and effective assessment methods that consider the linguistic challenges faced by non-native English speakers.
5. Technology integration: As digital tools become increasingly important in education, PD can help EMI lecturers leverage technology to enhance their teaching and support student learning.

As EMI continues to rapidly spread around the world, there is a pressing need to determine the most effective ways to support lecturers who teach in English. Many lecturers encounter difficulties when they switch from teaching in their first language to EMI, which potentially influences the quality of education and student learning outcomes. This review seeks to address this gap by examining the PD requirements of EMI lecturers and assessing the impact of existing PD implementations.

By understanding these needs and evaluating their satisfaction, we can enhance PD programs, enabling lecturers to teach more effectively in English and increasing the overall success of EMI programs. Moreover, targeted professional development can boost lecturers' confidence, job satisfaction, and overall effectiveness, leading to improved student learning experiences and outcomes. Institutions implementing EMI programs should prioritize ongoing, comprehensive professional development for their teaching staff. This investment in faculty development is crucial for the long-term success and sustainability of EMI initiatives, ensuring that the potential benefits of internationalization and global competitiveness are fully realized.

This systematic review primarily focuses on exploring and evaluating the PD opportunities available to lecturers in EMI. It involves recognizing the different types of PD programs designed for EMI lecturers and evaluating how they affect teaching methods and student achievement. One of the main objectives of the review is to conduct a needs analysis to understand the specific needs, challenges, attitudes, and perceptions of lecturers working in EMI higher education institutions. It aims to identify barriers to effective PD by evaluating the adequacy of current programs

in addressing specific needs and challenges. Furthermore, it will offer suggestions for future PD programs and research in the field of EMI in higher education contexts. Our primary goal is to provide insights that can guide the design and implementation of more effective training programs to better equip lecturers in EMI settings, enhancing their English teaching capabilities and overall educational performance. By doing so, this review seeks to contribute to the improvement of EMI practices and outcomes in higher education institutions globally.

1.1 EMI Related PD Programs

In response to the global proliferation of EMI in higher education, numerous institutions and organizations worldwide have implemented comprehensive PD initiatives. These programs are specifically designed to enhance the teaching competencies of EMI lecturers, addressing both pedagogical skills and English language proficiency to ensure the delivery of high-quality education in EMI settings (Huang et al., 2024). The increasing adoption of EMI across various academic disciplines necessitates a multifaceted approach to lecturer preparation and ongoing support.

To meet this growing need, a diverse array of EMI-related programs has been developed and conducted on a global scale. These initiatives vary in format, duration, and specific areas of focus, reflecting the complex demands of EMI teaching and the diverse needs of educators across different cultural and linguistic contexts. One prominent example is Cambridge Assessment's Certificate in EMI Skills[1] course. This 40-h online program is meticulously designed to support higher education professionals in developing their English communication skills. The course emphasizes the use of diverse language in various academic contexts, ranging from lecture delivery to facilitating discussions and providing feedback. Additionally, it focuses on enhancing participants' English instructional techniques, equipping them with strategies to effectively convey complex concepts in a second language (Huang et al., 2024).

The 4-week 'English as a Medium of Instruction for Academics[2]' course on FutureLearn, developed by the University of Southampton, aims to prepare academics for teaching their subjects in English in international contexts. The course covers crucial aspects of EMI. Topics include the definition and contexts of EMI, the latest research findings, intercultural communication skills, effective language use in academic settings, and strategies for addressing challenges in multilingual and multicultural classrooms. The course requires about 4 h of study per week and offers a digital certificate upon completion. It is structured to help lecturers explore EMI research and practice, develop confidence in using English for instruction, identify

[1] https://www.cambridgeenglish.org/teaching-english/teaching-qualifications/institutions/certificate-in-emi-skills/about-the-course/

[2] https://www.futurelearn.com/courses/emi-academics

and address intercultural communication challenges, and promote successful communication in various educational interactions. This course appears to be a comprehensive and popular resource for academics adapting to the growing trend of EMI in global higher education.

Furthermore, The Academic Teaching Excellence (ATE) course, co-developed by the British Council and the University of Oxford's Department of Education, is a comprehensive PD program designed for non-native English-speaking lecturers who teach their subjects through EMI. This intensive 35-h course, typically delivered over 5 days or in blocks, aims to enhance the quality of teaching in higher education by improving lecturers' ability to teach effectively in English. The program covers principles of EMI teaching, advanced language skills, and various teaching practices, including microteaching sessions with peer review and trainer feedback. Key modules address topics such as managing mixed language-level student groups, effective questioning techniques, and encouraging student participation. Targeting 10–14 lecturers from diverse academic disciplines with C1 level English proficiency, the course offers benefits for both individual educators and institutions. Participants can expect to improve their lecture delivery, communication with non-native English-speaking students, and overall teaching effectiveness in EMI contexts. For institutions, the ATE course promises enhanced teaching quality, increased ability to attract diverse students, and a stronger international reputation. Upon completion, participants receive a British Council Certificate that marks their achievement in this crucial area of academic development (Zhao et al., 2023). The face-to-face nature of this course allows for more interactive and immersive learning experiences, potentially including peer teaching practice and immediate feedback.

These varied approaches to EMI PD reflect a recognition of the complex interplay between language proficiency, pedagogical expertise, and cultural awareness required for effective EMI teaching. As the demand for EMI continues to grow in higher education institutions worldwide, the evolution and expansion of such PD initiatives will likely play a crucial role in ensuring the quality and effectiveness of EMI programs across diverse academic disciplines and cultural contexts.

On the other hand, various countries and universities have developed their own EMI-related PD programs to address specific institutional needs. In Japan, for instance, EMI PD is predominantly conducted internally by individual universities. These programs typically emphasize both pedagogical and language skills, delivered through a combination of workshops and personalized sessions (Bradford et al., 2022). While Kansai University offers an EMI program, it appears to lack a well-defined focus in terms of content and target audience, potentially limiting its effectiveness. In contrast, Sophia University has implemented a more innovative approach by promoting a peer-support system. This strategy aims to foster a community of practice among EMI faculty, encouraging collaborative learning and shared expertise.

Furthermore, several Japanese institutions have expanded their EMI PD offerings beyond traditional in-house programs. For instance, the University of Tokyo, along with other prestigious universities in the country, has embraced digital

learning platforms by creating Massive Open Online Courses (MOOCs) focused on EMI. These institutions also demonstrate their commitment to faculty development by sponsoring faculty members to participate in intensive courses abroad. Additionally, they organize on-campus PD events featuring international experts in the field of EMI (Mackenzie, 2016). This multifaceted approach allows for a diverse range of learning opportunities, catering to different faculty needs and preferences in the context of EMI instruction.

In the Danish context, the University of Copenhagen has implemented a rigorous certification process known as the Test of Oral English Proficiency of Academic Staff (TOEPAS). This comprehensive assessment includes simulated teaching scenarios and peer evaluations, designed to both evaluate and enhance the speaking skills of academic staff. By maintaining high standards in EMI teaching through this certification, the university ensures the quality of instruction in EMI courses (Huang et al., 2024).

In China, Kunming Medical University (KMU) has developed a multi-stage instructor development program for EMI. This comprehensive approach begins with an intensive 5-day training session, followed by a period of practical classroom experience. The program culminates in another 5-day follow-up training, which incorporates observation and feedback sessions. This structure allows for theoretical learning, practical application, and reflective improvement, providing a well-rounded development experience for EMI instructors (Zhao et al., 2023).

Korean universities have also integrated EMI preparation into their tenure-track system. New professors seeking to renew their contracts are required to participate in instructional development programs organized by the university's Centre for Teaching and Learning (CTL). These programs offer a diverse range of learning opportunities, including orientation seminars, instructional coaching, microteaching sessions, and pedagogy-related workshops. This comprehensive approach aims to ensure that faculty members are well-prepared for the challenges of EMI teaching (Lee & Lee, 2023).

In Taiwan, the government has taken a proactive stance on EMI development through the BEST project, initiated by the Ministry of Education. This project aims to enhance English communication skills to boost global competitiveness. As part of this initiative, National Chung Kung University (NCKU) has developed an innovative EMI PD program. This program offers online modules accessible to university professors across Taiwan, focusing on improving EMI teaching approaches in various academic fields. With an ambitious goal of training 600 instructors within 2 years, this program represents a significant investment in enhancing the quality of EMI instruction nationwide (Huang et al., 2024).

In summary, this section provided a comprehensive overview of EMI PD worldwide, displaying the diverse approaches taken by various institutions and countries to prepare faculty for EMI teaching. From global initiatives like the Cambridge Assessment's Certificate in EMI Skills and the British Council's Academic Teaching Excellence course to country-specific programs in Japan, Denmark, China, Korea, and Taiwan, the range of approaches is striking. These programs recognize the complexity of EMI, addressing both language proficiency and pedagogical skills through

various formats including online courses, face-to-face workshops, and blended learning approaches. Many emphasize practical application by incorporating microteaching sessions and peer feedback. Notably, some countries have integrated EMI preparation into institutional policies, as seen in Korea's tenure-track requirements, while others, like Taiwan, have implemented government initiatives to promote EMI. This diversity in approaches reflects the growing importance of EMI in higher education globally but also suggests that there is no universal solution to EMI PD. While this variety allows for context-specific solutions, it may also lead to inconsistencies in EMI quality across institutions and countries.

1.2 Research Questions

This systematic review seeks to investigate the landscape of PD in EMI within higher education contexts. The study encompasses an analysis of relevant research published between 2019 and 2024, with the dual objectives of assessing the current state of PD in EMI higher education and conducting a comprehensive needs analysis. By addressing these aims, this review intends to generate valuable insights for future research endeavours and practical applications in the field. To guide this investigation, the following research questions have been formulated:

(a) What are the primary PD needs identified for instructors in higher education institutions implementing EMI?
(b) What methodological approaches, including research designs, sampling strategies, and data collection and analysis techniques, are employed in EMI-related PD studies published between 2019 and 2024?
(c) What are the key findings and implications derived from these studies, and how might they inform future practices and research in EMI PD?

Through a systematic examination of these questions, this review aims to contribute to the growing body of knowledge surrounding EMI implementation and instructor preparation in higher education settings. The findings are expected to offer valuable insights for policymakers, educational administrators, and researchers invested in enhancing the quality and effectiveness of EMI instruction through targeted PD initiatives.

2 Methodology

2.1 Research Design

To ensure a rigorous and unbiased review, this study employed a systematic research design following the Preferred Reporting of Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines (Page et al., 2021). The structured methodology comprised several key steps, i.e. formulating research questions, establishing eligibility criteria, identifying relevant articles, and evaluating the selected studies. The review focused on research articles published between 2019 and 2024 to ensure the inclusion of recent, high-quality scholarship. To maintain academic rigour, only peer-reviewed journal articles indexed in Web of Science (WoS), Scopus, Education and Research Information Center (ERIC), and Turk Egitim Indeksi (TEI) were considered. This careful selection process enhanced the reliability and relevance of the findings, providing a comprehensive overview of the current state of research in the field.

2.2 Eligibility Criteria

The initial database search yielded 675 academic records. However, given the specific focus of the review on PD in EMI higher education institutions, a rigorous selection process was implemented to identify the most relevant articles. The selection criteria prioritized studies examining current perceptions, attitudes, and needs related to PD in EMI contexts. Table 1 outlines the comprehensive inclusion and exclusion criteria employed in this review. Through the application of these carefully defined parameters, the pool of potential sources was refined to 15 articles. These selected studies formed the core dataset for in-depth analysis in the current research. This streamlined approach ensured that only the most pertinent and

Table 1 Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Published between 2019 and 2024	Published before 2019
Peer-reviewed articles	Non-peer-reviewed articles
Indexed in WoS, ERIC, Scopus, and TEI	Indexed in other databases
Empirical research articles	Non-empirical research articles such as review articles, books, proceedings, conference papers, and non-published research
English-language medium instruction	Not English-language medium instruction
Higher education	Not higher education

focused literature was incorporated, allowing for a more targeted and meaningful examination of PD practices in EMI higher education settings.

2.3 Data Collection and Analysis

The data collection process, guided by the PRISMA 2020 guidelines, followed a systematic approach. Initially, specific keywords such as "professional development", "PD", "English-medium instruction", "EMI", "higher education", and "university" were used to search databases, yielding 675 records. After removing 97 duplicates, the remaining 578 records underwent a two-step selection process. First, a preliminary screening based on titles and abstracts excluded 478 articles. Then, a detailed assessment of the remaining 67 articles against six inclusion criteria (see Table 1) led to further exclusions, i.e. 24 for focusing outside higher education, 8 for not addressing English-medium instruction, and 22 for being non-empirical. This rigorous process resulted in 15 papers being included in the final review (see Appendix for further details about the papers). Figure 1 summarizes this data collection process. For data extraction, Excel spreadsheets were used to record key information from each article, including title, authors, research questions, research design, sample, data collection tools, findings, and implications. Given the qualitative nature of the data, content analysis was employed as the primary analytical method (Creswell & Creswell, 2018), ensuring a comprehensive examination of the selected literature.

3 Results

3.1 Research Design

The analysis of 15 research papers revealed a diverse methodological landscape in studying PD within EMI higher education contexts. Five studies employed qualitative approaches, two utilized quantitative methods, and eight adopted mixed-method designs. Quantitative studies provided broad perspectives on EMI-related issues. To illustrate a few instances, Macaro et al. (2019) examined multi-national views on proposed competencies in relation to language challenges faced by EMI students. Bradford et al. (2022) investigated EMI faculty members' experiences and attitudes towards EMI-related PD and certification programs. Qualitative research, however, primarily focused on in-depth explorations of PD programs. These studies examined the benefits, challenges, and perspectives of EMI lecturers (Alhassan, 2021; Birgün, 2024; Chen & Peng, 2019), professional needs (Lee & Lee, 2023), and the influence of Professional Development Interventions (PDI) (Webster & Herington, 2021). Mixed-method studies addressed a range of concerns, including teacher

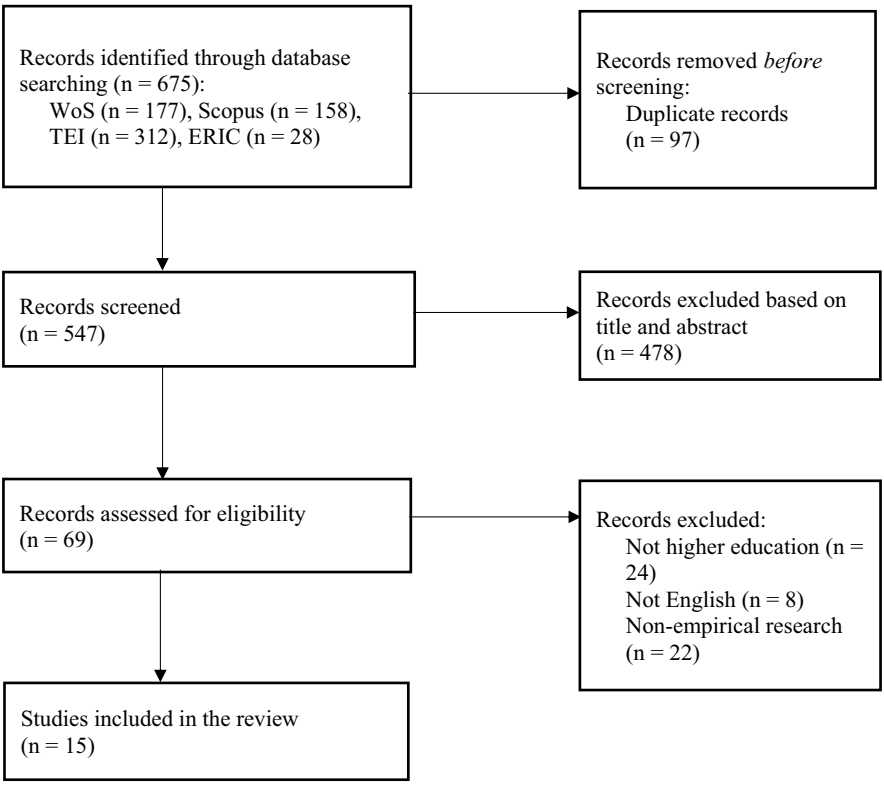


Fig. 1 Flowchart diagram of data collection based on the PRISMA 2020 guidelines

perceptions (Kim et al., 2024; Park et al., 2022), needs (Piquer-Piriz & Castellano-Risco, 2021; Uehara & Kojima, 2021), and competencies (Macaro & Han, 2020; Zhao et al., 2023). Notable contributions include Dafouz's (2021) argument for repositioning EMI teacher PD (TPD) and Huang's (2024) exploration of EMI teacher support strategies. This methodological diversity reflects the complex nature of EMI in higher education and the multifaceted approaches required to understand and further improve PD in this context.

3.2 Context

The 15 studies reviewed encompassed a diverse range of geographical contexts, involving both private and state-run higher education institutions across various countries. The research landscape was particularly rich in East Asian contexts, with six studies focusing on South Korea (Kim et al., 2024; Lee & Lee, 2023; Park et al., 2022) and China (Chen & Peng, 2019; Macaro & Han, 2020; Zhao et al., 2023).

European representation was notable, with two studies conducted in Spain (Dafouz, 2021; Piquer-Piriz & Castellano-Risco, 2021). One study (Macaro et al., 2019) adopted an international perspective, providing a broader, cross-cultural view of EMI practices. Interestingly, Bradford et al. (2022) conducted a comparative study across South Korean and Japanese contexts, offering valuable insights into regional similarities and differences. The remaining studies further expanded the geographical scope, with research conducted in Japan, the UK, Oman, Türkiye, and Taiwan (Uehara & Kojima, 2021; Webster & Herington, 2021; Alhassan, 2021; Birgün, 2024; Huang et al., 2024, respectively). This diverse geographical distribution underscores the global relevance of EMI in higher education and highlights the importance of considering cultural and institutional contexts in PD strategies.

3.3 Sample and Participants

All reviewed papers included university lecturers as their primary sample, with participants uniformly working in private or state-run higher education institutions that had adopted EMI. However, several studies employed specific criteria for sample selection, reflecting diverse research focuses and institutional contexts. For example, Piquer-Piriz and Castellano-Risco (2021) stratified their sample, categorizing participants as tenured senior lecturers, untenured senior lecturers, and professors. This approach allowed for a nuanced examination of PD needs across different career stages.

Webster and Herington (2021) offered an interesting cross-cultural perspective by focusing on lecturers from various East Asian countries within a UK higher education setting. This unique sample composition provided insights into the challenges and adaptations required when transitioning between different academic cultures. Lee and Lee (2023) specifically targeted newly hired professors, shedding light on the initial experiences and PD needs of faculty members entering EMI environments. Some studies narrowed their focus to specific academic disciplines only, as outlined below:

- Alhassan (2021) concentrated on lecturers from social sciences and humanities, addressing a gap in the literature for these fields in EMI contexts.
- Kim et al. (2024) focused on science and engineering professors, exploring discipline-specific challenges in EMI.
- Huang et al. (2024) examined lecturers in medicine and healthcare, highlighting the unique demands of EMI in these professional fields.

This diversity in sample selection across the studies underscores the complexity of EMI implementation and the need for tailored PD approaches that consider factors such as career stage, academic discipline, and institutional context.

3.4 Data Collection Tool

The studies reviewed employed a diverse range of data collection methods, varying according to their research design. Quantitative studies primarily relied on survey-based tools, with Bradford et al. (2022) and Dafouz (2021) using surveys, while Macaro et al. (2019) opted for questionnaires. In qualitative research, interviews emerged as the dominant method. Webster and Herington (2021) and Birgün (2024) exclusively used interviews, while Alhassan (2021) and Chen and Peng (2019) complemented interviews with classroom observations. Lee and Lee (2023) took an innovative approach by analysing coaching reports from coaching sessions.

Mixed-method studies showcased the most diverse data collection strategies. To illustrate, Kim et al. (2024) and Park et al. (2022) combined document analysis with questionnaires or surveys and follow-up interviews. Macaro and Han (2020) and Uehara and Kojima (2021) used surveys followed by interviews, while Piquer-Piriz and Castellano-Risco (2021), and Zhao et al. (2023) employed both quantitative questionnaires and qualitative surveys. Huang et al. (2024) utilized a pre-test and post-test design with surveys containing both open-ended and closed-ended questions. This methodological diversity reflects the complex nature of EMI research and the need for multifaceted approaches to fully capture the nuances of PD in EMI contexts.

3.5 Key Findings

Research on PD in EMI higher education institutions reveals a complex interplay of challenges and benefits in content delivery. One notable advantage is the reduced class size in EMI courses, as highlighted by Alhassan (2021) and Kim et al. (2024). This smaller student-to-teacher ratio potentially allows for more personalized instruction and increased student engagement. Administrative bodies often favour EMI courses for their ability to attract international students, thereby enhancing the institution's global profile. However, this benefit is frequently offset by a significant challenge, i.e. some lecturers' limited English language proficiency (Kim et al., 2024; Macaro et al., 2019). This linguistic barrier can impede effective content delivery and student comprehension, undermining the very goals EMI seeks to achieve. Furthermore, the effectiveness of EMI is often compromised by students' own language proficiency issues. Coupled with the need for lecturers to invest significant time in preparing EMI course materials, these factors can diminish the purported benefits of EMI, such as improved access to scientific knowledge and enhanced career opportunities (Birgün, 2024; Dafouz, 2021).

These challenges underscore a critical need for comprehensive PD programs. Such initiatives should aim to enhance both lecturers' linguistic competencies and their pedagogical strategies for effective EMI delivery. By addressing these issues through targeted PD, institutions can better realize the potential benefits of EMI

while mitigating its challenges. The outcomes of PD programs in EMI contexts reveal a complex and nuanced landscape. Programs aimed at enhancing teachers' self-efficacy in EMI have shown mixed results, with student language proficiency emerging as a significant moderating factor. Chen and Peng (2019), and Macaro and Han (2020) found that limited English proficiency among students can negatively impact the effectiveness of these PD initiatives, potentially undermining teachers' confidence and perceived ability to deliver content effectively.

Conversely, more encouraging results have been observed in specific disciplinary contexts. PD programs for faculty in medicine and healthcare have demonstrated significant improvements in self-efficacy outcomes, as reported by Huang et al. (2024) and Zhao et al. (2023). This suggests that tailored, discipline-specific PD approaches may yield more positive results in certain academic fields. Research focusing on East Asian contexts has unveiled interesting regional variations. Bradford et al. (2022) and Park et al. (2022) observed higher participation rates in PD programs among Japanese higher education institutions compared to their South Korean counterparts. These findings underscore the importance of considering national contexts and individual factors when designing and implementing EMI-related PD programs.

These varied outcomes highlight the need for a nuanced approach to PD in EMI settings. Factors such as student language proficiency, academic discipline, and national educational contexts all play crucial roles in determining the effectiveness of these programs. Future PD initiatives may benefit from incorporating these considerations to better address the specific needs of EMI educators across different settings.

Lecturers' perspectives on PD programs in EMI contexts reveal several key areas for improvement and recommended changes. A primary concern is the need for more student-oriented and interactive programs that address both language proficiency and pedagogical challenges faced by EMI lecturers (Lee & Lee, 2023; Macaro & Han, 2020; Piquer-Piriz & Castellano-Risco, 2021; Uehara & Kojima, 2021). This dual focus on linguistic and instructional skills reflects the complex demands placed on educators in EMI settings. Another significant recommendation is the shift towards continuous PD rather than relying on isolated, one-off training sessions (Webster & Herington, 2021; Zhao et al., 2023). This approach acknowledges the ongoing nature of skill development in EMI contexts and the need for sustained support. Regarding the delivery mode of PD programs, while lecturers recognize the potential effectiveness of both in-person and online formats, there is a clear preference for a hybrid model that integrates elements of both approaches (Park et al., 2022; Piquer-Piriz & Castellano-Risco, 2021). This preference suggests a desire for flexibility and diverse learning experiences in PD. Overall, these insights from lecturers underscore the importance of tailoring PD programs to the specific needs of EMI educators. By focusing on student-centred approaches, ensuring continuity in PD and offering flexible delivery modes, institutions can enhance the relevance and effectiveness of their PD initiatives in EMI contexts.

3.6 Implications

Research on EMI in higher education reveals several key implications for PD and instructional practices. Firstly, PD programs should address the language proficiency, pedagogic knowledge, and content knowledge of lecturers (Birgün, 2024; Dafouz, 2021). This comprehensive approach ensures educators are well-equipped to handle the multifaceted challenges of EMI. Secondly, institutions should focus on providing clear policies and support, taking national context and individual preferences into account (Kim et al., 2024; Macaro et al., 2019). This tailored approach can enhance the effectiveness and acceptance of EMI programs. Furthermore, PD programs should be discipline-specific, providing opportunities for continuous PD and knowledge sharing (Bradford et al., 2022; Chen & Peng, 2019; Lee & Lee, 2023; Park et al., 2022; Piquer-Piriz & Castellano-Risco, 2021). This recognizes the unique challenges faced by different fields in EMI contexts. Thirdly, PD programs should consist of interactive and student-centred methods and provide personalized instruction (Uehara & Kojima, 2021; Webster & Herington, 2021; Zhao et al., 2023), aligning with contemporary pedagogical best practices to enhance learning outcomes. Lastly, as the main aim of offering EMI courses is to attract international students, PD should emphasize multilingualism and multiculturalism (Alhassan, 2021; Huang et al., 2024; Zhao et al., 2023). This focus prepares lecturers to navigate diverse classrooms and fosters a more inclusive learning environment. By addressing these key areas, institutions can develop more effective and comprehensive PD programs for EMI, ultimately enhancing the quality of instruction and the overall success of EMI initiatives in higher education.

4 Discussion

This systematic review aimed to analyse the current state of PD in EMI higher education institutions and provide implications for future research and practice. By examining 15 empirical research articles published between 2019 and 2024, this study presents a comprehensive overview of the existing landscape of PD in EMI contexts and identifies key areas for improvement. Addressing the first research question regarding primary PD needs, the analysed studies reveal that instructors in EMI contexts require multifaceted support. Personalized, interactive, and student-centred pedagogical training is essential to increase the effectiveness of PD programs (Alhassan, 2021; Kim et al., 2024). PD initiatives should address both language proficiency and pedagogical knowledge deficits of lecturers to maximize the benefits of EMI courses (Birgün, 2024; Dafouz, 2021). Additionally, there is a clear need for discipline-specific PD programs that offer opportunities for continuous development and knowledge sharing (Chen & Peng, 2019; Lee & Lee, 2023). The studies also emphasize the importance of clear guidelines, policies, and

institutional support that consider specific teaching contexts and individual needs (Bradford et al., 2022; Park et al., 2022).

Regarding the second research question on methodological approaches, the review revealed a predominance of qualitative research designs among the analysed studies. Data collection methods primarily relied on surveys and interviews, with some studies employing mixed-method approaches. Sampling strategies varied, but most studies focused on university lecturers across different disciplines and countries. This methodological landscape suggests a need for more quantitative and mixed-method research to reach more generalizable findings. Future studies should also consider employing diverse data collection tools to provide a more comprehensive understanding of PD in EMI contexts.

Addressing the third research question on key findings and implications, the studies highlight several crucial insights. An internationalization approach in EMI PD programs, emphasizing multilingual and multicultural aspects, is recommended (Dafouz, 2021; Webster & Herington, 2021). The inclusion of both pedagogical skills and language proficiency training, rather than language alone, has been highlighted by lecturers as positively impacting EMI courses (Huang et al., 2024; Zhao et al., 2023). These findings suggest that future PD programs should adopt a holistic approach, integrating linguistic, pedagogical, and cultural components.

The review also identifies several gaps in the literature that could inform future research. There is a need to explore factors impacting the effectiveness of PD in different countries and disciplinary domains. Research on the integration of digital tools and innovative pedagogical approaches in PD programs could provide insight into the adaptability of PD to today's rapidly changing educational landscape. By addressing these research gaps, stakeholders can enhance current PD programs and increase the quality of EMI courses.

This review study also suffers from some limitations, including its focus on recently published articles (2019–2024) and the inclusion of articles from specific databases, which may limit the generalizability of the findings. Future studies should consider incorporating a broader range of sources to provide a more comprehensive overview of PD in EMI contexts. Additionally, further research is needed to explore the impact of factors influencing the effectiveness of PD and develop strategies to increase its efficacy in diverse EMI settings. In conclusion, this systematic review provides valuable insights into the current state of PD in EMI higher education contexts, highlighting the complex needs of instructors, the methodological trends in research, and key implications for practice. These findings can guide the development of more effective and comprehensive PD programs, ultimately enhancing the quality of EMI instruction in higher education.

5 Conclusion

This systematic review underscores the critical importance of PD in EMI within higher education. The findings reveal a significant demand for programs designed to enhance EMI lecturers' capabilities in teaching academic subjects in English, reflecting the growing internationalization of higher education in the twenty-first century.

Key conclusions drawn from this review indicate that effective PD programs for EMI lecturers should be:

- Tailored and interactive, addressing both language proficiency and pedagogical knowledge
- Supported by clear institutional policies that consider specific teaching contexts and individual needs
- Inclusive of multilingual and multicultural components to enhance the effectiveness of EMI delivery
- Discipline-specific, acknowledging the unique challenges across various academic fields

The review also highlights the need for continuous, rather than one-off, PD opportunities and the potential benefits of hybrid delivery models combining in-person and online elements. These findings have significant implications for both research and practice in EMI contexts. For researchers, this review identifies several areas requiring further investigation, including the impact of national and disciplinary contexts on PD effectiveness, the integration of digital tools in EMI instruction, and the long-term outcomes of various PD approaches. For practitioners and institutions, the results provide a framework for developing comprehensive, context-sensitive PD programs that can enhance the quality of EMI instruction. As higher education continues to globalize, the demand for effective EMI practices is likely to increase. Consequently, research into PD for EMI lecturers, particularly discipline-specific programs, will become increasingly crucial. This growing body of knowledge will not only inform best practices but also contribute to the broader strategies for internationalization in higher education institutions. To put it briefly, this review emphasizes the complex and multifaceted nature of PD in EMI contexts. By addressing the identified needs and gaps, institutions can better support their lecturers, ultimately enhancing the quality of EMI instruction and the overall educational experience for students in internationalized higher education settings.

Appendix. Summary of the Studies Reviewed (Tables 2, 3, and 4)

Table 2 Characteristics of quantitative studies

Author	Research design	Context	Sample	Data collection instruments	Key findings	Implications
Bradford et al. (2022)	Survey study	EMI professors in Japanese and South Korean context	92 professors from public, private and national universities	Survey	Institutional support and clear communication regarding EMI policies are required to increase EMI effectiveness	Individualized EMI programs as well as institutional support should be provided
Macaro et al. (2019)	Survey study	International EMI lecturers	463 international EMI lecturers as the participants of the online questionnaire	Survey with Lickert scale and open-ended questions	EMI instructors have limited understanding of English learning processes; however, they show interest in EMI research	EMI PD for content teachers should include information about the English learning process

Table 3 Characteristics of qualitative studies

Author	Research design	Context	Sample	Data collection instruments	Key findings	Implications
Alhassan (2021)	Research study	EMI lecturers in social science and humanities of Omani tertiary context	12 non-Omani EMI lecturers with an average of 5 years teaching in higher education institutions	Semi-structured interviews and semi-structured classroom observations	EMI content teachers face linguistic and pedagogical challenges, highlighting the need for personalized professional development programs to address specific needs	EMI content teachers need to be provided with both linguistic and pedagogical training to increase EMI course effectiveness
Birgün (2024)	Case study	Turkish EMI lecturers	30 EMI lecturers from public and private universities	Semi-structured interviews	While EMI instructors acknowledge the benefits of EMI, they believe linguistic challenges minimize the benefits	Not only linguistic but also pedagogical needs of instructors need to be addressed through PD programs
Chen and Peng (2019)	Case study	EMI lecturers in Chinese context	Five EMI lecturers holding their doctorate degrees in different subjects from oversea universities	Interviews	Effective PD programs increase instructors' self-efficacy	Customized PD programs for different disciplines should be provided
Lee and Lee (2023)	Case study	EMI professors in South Korean context	Newly-hired professors	Observation of semi-structured coaching sessions	Content teachers lack pedagogical knowledge required to teach EMI courses effectively	Content teachers should be made aware of EMI courses' needs and more effective training should be provided

(continued)

Table 3 (continued)

Author	Research design	Context	Sample	Data collection instruments	Key findings	Implications
Webster and Herington (2021)	Evaluation study	EMI lecturers in UK	Seven participants (six from Japan and one from South Korea) who were currently teaching or preparing to teach in EMI. Also, all of whom had a self-certified level of proficiency in English at B2 or above on the CERF	Semi-structured individual interviews	PD increases content teachers' instructions positively by introducing innovative teaching pedagogies	Institutional support should be provided to encourage continuous professional development

Table 4 Characteristics of mixed-method studies

Author	Research design	Context	Sample	Data collection instruments	Key findings	Implications
Dafouz (2021)	Mixed-methods	EMI lecturers from Universidad Complutense de Madrid, Spain	2091 responses to the Teacher Professional Development survey, 46% of which were from male lecturers and 54% from females	The Teacher Professional Development Survey	Internationalization is seen as a benefit of EMI by instructors; however, it is not promoted enough	Internationalization initiatives in higher education should be promoted by institutions
Huang et al. (2024)	Mixed-methods	Lecturers in Taiwan	27 lecturers from medicine and healthcare, 68% (n = 17) of which did not have previous EMI experience, while 32% (n = 10) had EMI experience before engaging in the PD program	Pre- and post-program survey and a focus group discussion	PD programs targeted specifically for faculty of medicine and healthcare instructors increased positive outcomes	There is a need for interaction between content teachers and English teachers when designing EMI PD programs
Kim et al. (2024)	Mixed-methods	EMI professors from the higher education institutions specialized in Science and Technology in South Korea	Among the 117 survey respondents, 22 professors volunteered to participate in the follow-up interviews	A questionnaire survey and follow-up interviews	While instructors regarded PD as influencing their self-efficacy positively, they had negative attitudes towards certification	Individualized, flexible, and hybrid PD programs should be provided to instructors
Macaro and Han (2020)	Mixed-methods	EMI lecturers in China	133 survey returns (only 3 of them reported they taught at a private institution, others taught at a state-owned university) and 12 semi-structured interviews with the EMI lecturers	A survey and semi-structured interviews	While EMI instructors value EMI certification, they have limited willingness to invest time and resources to acquire it	Institutional support should be provided to increase willingness among EMI instructors to receive certification

Park et al. (2022)	Mixed-methods	EMI lecturers from two Comprehensive universities and three Science and Engineering universities in South Korea	The survey had a total of 245 responses and 32 participants participated in the follow-up interviews, 10 from CUs and 22 from the SEUs; 25 e-mail respondents and 7 online oral interviewees	A questionnaire survey and follow-up interviews	Instructors believe PD can be effective both online and offline. Moreover, they believe flexible PD programs should be provided	Instructors should be provided the option of attending PD programs both online and in-person
Piquer-Piriz and Castellano-Risco (2021)	Mixed-methods	EMI lecturers from the University of Extremadura, Spain	27 EMI lecturers, 11 of which were tenured senior lecturers, eight of which were untenured senior lecturers, and five were professors. Also, 14 of them were males and 13 of them were females	A semi-structured written survey, and a quantitative questionnaire	EMI instructors encountered mainly challenges in English proficiency and instructional methodology selections	EMI policies should not be implemented top-down, they should be created with both content and language teachers input
Uehara and Kojima (2021)	Mixed-methods	EMI lecturers in Japan	A total of 38 EMI lecturers answered the questionnaire. Their first language was Japanese, language teachers were excluded	A questionnaire	EMI instructors recognize that EMI not only consist of not only English proficiency, but also of pedagogical and cultural aspects	PD programs should address all aspects of EMI: culture, language and pedagogy

(continued)

Table 4 (continued)

Author	Research design	Context	Sample	Data collection instruments	Key findings	Implications
Zhao et al. (2023)	Mixed-methods	EMI lecturers in Kunming Medical University in China	A total of 84 trainees (76.19% of them were female) coming from different departments of KMU participated in the EMI training. The trainees who took part in all activities of each stage of the EMI training program and were available at the time of the study were invited to participate in this study	A questionnaire and classroom observations	PD programs increased instructors' pedagogical knowledge and self-efficacy	PD programs should focus on introducing innovative instructional methods and approaches to increase EMI effectiveness

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Considering the Implementation of English as a Medium of Instruction: Between Ambitions and Risks



Amira Benabdelkader

Abstract Language policies in Algeria, like in other contexts, largely project the socio-political situation within the society as well as the political relations with foreign countries. With the existence of five languages in modern Algeria—namely Algerian Arabic, Standard Arabic, Tamazight, French, and English—there is competition among them to attain a recognizable status in Algerian society, education, and the constitution. As a post-colonial French territory, since independence in 1962, Algeria has adopted French as a medium of instruction (FMI) in higher education (HE) institutions, especially the scientific and technical disciplines. However, the unstable relations with France are triggering agendas to replace FMI with English, hence using English as a medium of instruction (EMI). Adding to that, the ever-growing use of English in education and academia, which surpasses French, urges students and researchers to develop their English language skills. It is worth noting that English has been introduced to primary school since September 2022 as a second foreign language after French. Given that multilingual Algeria imposes a delicate consideration for adopting a new language policy, this paper attempts to analyse the sociolinguistic situation in Algeria and the language policies in its higher education. Moreover, it draws from the outcomes of the use of FMI in Algeria and EMI in other (post-colonial) contexts, namely Pakistan, Saudi Arabia, and the United Arab Emirates, to suggest a roadmap for policymakers in order to foresee the risks and to highlight affordances EMI would attribute to the Algerian higher education.

Keywords English-medium instruction (EMI) · Language policy · Multilingual Algeria · Algerian higher education

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1 Introduction

The growing spread of English has pushed governments, or at least institutions in the sectors of education and higher education (HE), to join the transformations triggered by neoliberalism and internationalisation, as well as Englishisation. As Xu (2020) asserts, "the world of academic knowledge is not a level playing field but more closely approximates the centre-periphery dynamic described in world systems theory" whereby periphery countries are obliged to operate "within a world system framed by the centre countries" (pp. 157–158). That is, internationalisation involves urging these institutions to adhere to certain policies, among which language policies are paramount. That is, internationalisation is equated to Englishisation by several scholars such as Jenkins (2019) and Kirkpatrick (2011). Indeed, Algeria represents no exception as its motivation to internationalise HE institutions has been made explicit by considering their Englishisation. From September 2022, the ministry has communicated several decisions unveiling the agenda that would ensure the implementation and reinforcement of the use of EMI. Nonetheless, the echoes that followed this decision fluctuate between a massive resistance to an appraising embrace. The resistance returns to the nature of the decision as it aims at a monolingual language policy in a highly multilingual context. The embrace, however, is justified by the status of English as the international language for science and technology and as the lingua franca.

In a context where language policies have failed to offer some imprints of the sociolinguistic reality of Algeria, the implementation of EMI in HE should be proposed and executed with caution in order not to cause another 'linguicide' (Saadi-Mokrane, 2002). The Algerian society has always been multilingual, yet language policies have always failed to foster, reflect and cope with multilingualism. That is, those policies never ceased to emphasise the use of one of the spoken languages in Algeria (Arabic, Tamazight/Berber, French, and the Algerian dialect) over the others (see Benabdelkader (in press) for an extensive account). Starting from the independence in 1962, French had ever been the ad hoc choice since "newly-independent states have no option but to use the colonial language" (Cooper, 1989, p. 102). Arabic was the identity marker because it goes hand-in-hand with Islam—the religion of the country—and it emphasizes the sense of belonging to the Arab world.

Relying on FMI in HE mainly returns to the societal structure back then. Most of the only 10% of the population who were literate were francophones among whom only 3% could use "Algerian Literary Arabic" (Gordon, 1978). The remainder of the population, i.e. 90% could neither read nor write in any language (Benrabah, 2007). In the meantime, Arabic was recognised as the official and national language, which then caused the adoption of the Arabisation policy to foster Arabic literacy in the country and ensure schooling in Arabic while keeping FMI in scientific and technical domains in HE. Given the unstable relations with France in recent years, English is suggested to replace it in HE. Introducing EMI in HE would hint at another favouritism of a language, English in this case, over Arabic and French, the languages used in HE.

Navigating the Algerian sociolinguistic landscape while accommodating internationalization, i.e., Englishisation, presents a nuanced challenge wherein the advancement of one linguistic domain potentially undermines the integrity of another. Given that the Algerian context necessitates special attention and consideration when language use is concerned, drawing from other countries' experiences might considerably help in setting a realistic roadmap for the implementation of EMI in Algerian higher education. Moreover, this might, at least, evaluate this ongoing process of implementation and reduce its limitations so that the affordances of EMI can be maximised without destroying the multilingual landscape. For that, this chapter aims to critically review the experiences of some of the post-colonial contexts in the implementation of EMI and provide some recommendations to policymakers.

2 English in Algeria

The English language has come to the forefront due to certain political and global motives. The politics of introducing English initially and primarily can be traced back to the late 1980s' Black Decade, also known as the Civil War. Globalisation, however, was the argument adopted to legitimize the use and dominance of the French language, which remains inextricably linked to the brutal colonial history. Subsequently, the internationalization of HE has necessitated an urgent and serious adoption of EMI.

2.1 English as a Political Tool in the Black Decade and Beyond

While French was perceived as 'the language of the enemy', English enjoyed the status of the 'de-colonising' language given its non-colonial history in Algeria. According to Benrabah (2009), for countries that were not former British colonies—and Algerians specifically—English is perceived as a 'de-colonised' and 'de-ethnicised' language. In a context where there exists an accentuated rivalry between Arabic and French, it is necessary to call upon a *somehow* neutral ground, which is English. French advocates, primarily francophones educated in French, perceived this as a threat to their legacy, given that French was the only language they fully mastered and English remained merely a second foreign language. Arabic, by contrast, did not lose its standing because its proponents were simultaneously supportive of English as their foreign language. At the fourth-grade level, pupils were presented with a choice between French and English as their foreign language, with the requirement that they discuss this option with their parents before making a final decision.

The implementation of English in the 1990s failed due to several fundamental factors. Primarily, its introduction was inherently political, albeit superficially disguised with religious aspirations (Miliani, 2000). English was suggested amidst a political conflict that led to a civil war. While the society was more leaning towards French than Arabic, a side of the conflict, pro-Islamism, was attempting "to diminish the spheres of influence of the Francophone elites" (Miliani, 2000, p. 22) and hence promoting anti-French ideologies by emphasising the French brutal colonial history in Algeria. This argument did not seem to persuade the Algerian society which then considered the French language as the gate to the West, mainly Europe, and a valid visa to that continent (Benrabah, 2014). Moreover, pupils' language choices predominantly reflected their parents' attitudes and perceptions towards French and English. With French being widely used and easily accessed through mass media, literature, science, and other domains, English remained a 'shadow' language, existing primarily within classroom boundaries. Its limited appeal, except among a select few, resulted in French being taught to over two-thirds of Algerian schoolchildren, while English was introduced to only a third. The number of students choosing English was considerably low (Miliani, 2000), which ultimately implied the failure of this language policy.

The reinforcement of 'Algerianity' was predominantly limited to diminishing the status of French in favour of Arabic, and proposing an alternative means of global exchange and communication. Consequently, English was merely a component of a political agenda (Medfouni, 2020), albeit presented as an instrument of decolonization. The rejection of English could be traced to identity-related considerations, particularly given that French was deeply embedded in Algerian society and served as an identity marker for thousands, if not millions, of Algerians. Moreover, resources for developing English language skills were extremely limited in the 1990s, especially since technology was not yet readily accessible to the general population.

2.2 English Courses as a Politically-Driven Reform

Approximately 30 years after failing to introduce English as a first foreign language in primary education, the project has been revived using a different approach. In an attempt to create educational reform, foreign languages are now presented in a way that acknowledges the coexistence of both. As President Abdelmadjid Tebboune articulated, French remains a war asset, while English is recognized as the global language. Specifically, French and English will be introduced in the third year of primary school as foreign languages, with equal allocated class hours. Being politically motivated, this policy elicited both positive and negative responses. Positive reactions emphasized the necessity of a global language in the Algerian sociolinguistic landscape. This perspective was further reinforced by the President during the policy announcement at a press conference (Guidoum, 2022). However, the negative responses primarily centred on the political and pedagogical implications

of this decision. Given the historically complex and unstable Algeria-France relations that require careful cooperation, the introduction of this policy was scrutinized. From a pedagogical standpoint, both parents and researchers perceived the implementation as sudden and abrupt, raising concerns about the feasibility and potential success of such a rapid educational transformation.

Conversely, the government committed to this policy and planned its implementation at the start of the academic year. However, this top-down policy, which was abruptly announced and scheduled for implementation within less than 2 months, attracted significant criticism regarding the quality of content, teacher training, and recruitment processes. It is worth noting that most primary education teachers receive their higher education training in specialized institutions, known as *école normale supérieure*, yet English was not included in their training curriculum when this policy was declared. That is, all teachers who were recruited received their higher education in departments of English, not necessarily focusing on training teachers. The recruitment process was ensured by administrators and was based on the oldness of the diploma, which resulted in recruiting graduates of the 1990s. This created another dilemma since there is no guarantee that those recruited still have a good command over the language and whether they are aware of any teaching methods. On top of these drawbacks, parents were concerned with their ability to assist their children in learning English and hence ensuring a successful learning journey of English.

2.3 English-Medium Instruction in Algerian Higher Education

EMI was first brought to the scene in 2019 when the minister of HE at that time, Tayeb Bouzid, put forward various decisions and actions and launched online surveys "focusing on public attitudes, including the attitudes of academics at universities" (Medfouni, 2020, p. 7). These surveys were heavily criticised for lacking reliability because more than one response was allowed and investigating language policies requires more time and rigorous tools (Medfouni, 2020). Moreover, these methodology-related critiques accompanied others questioning the timing of thinking about English. February 2019 marks the beginning of the street marches 'Hirak' protesting against President Abdelaziz Bouteflika and his ruling party. This coincidence was interpreted to be underlying a political hidden agenda (Slimani, 2019) or igniting ideological divisions between speakers and advocates of different languages (Medfouni, 2020). Consequently, the political atmosphere was not encouraging to delve into a somehow controversial language policy.

In October 2022, the minister of higher education and scientific research, Kamel Baddari, instructed Algerian higher education institutions to shift to the use of English-medium instruction starting from the academic year 2023–2024. Unlike in primary school, higher education is substituting French with English in the domains

of science and technology as a first step. Though political in its essence, other motives endorsed this shift, such as internationalising higher education institutions, openness to the global academia, international mobility of students and teachers, improving visibility and ranking, etc. In his meeting with the UK ambassador on March, 22nd, 2023, Baddari further stated:

> in order to upgrade the level of Algerian instructors and students, stressing the ministry's efforts to form unique students open to other cultures, and enable university instructors to master English perfectly, and gradually use this language in teaching scientific and technical disciplines, besides working on common interest research projects […] open branches for major British universities with the view to provide scientific and technological training in Algeria, and enable intensive language learning schools to conduct the international worldwide English exam IELTS. (Belkhodja, n.d.).

These motives sound valid and timely to some students and teachers while late and ambitious to others. To put it differently, Algeria is considered a relatively latecomer to the EMI policy as lots of countries at the periphery have had a considerably long experience with EMI. This implementation has then been perceived as highly needed to connect the Algerian higher education sector with foreign ones. Alongside the introduction of EMI, the ministry is actively working to enhance Algeria's international educational appeal. This includes creating a 'Study in Algeria' branding initiative and implementing various strategies, with EMI serving as a key approach to attract a significant number of international students.

3 English-Medium-Instruction in Algeria

Although the flexibility in its implementation returns to the institutions' particularities, it resulted in some ambiguities in terms of designing and delivering these courses. The ministerial decrees, as already discussed, are characterised by ambiguity. That is, Algerian EMI policy lacks a clear, detailed roadmap leading to misinterpretations. Attempting to diminish these ambiguities and reach a coherent and unified implementation across universities nationwide, the Ministry of HE called for setting up committees in each HE institution and a national commission to liaise and coordinate between these committees. Being a member of a committee, each correspondence was subject to a thorough discussion to ensure a correct interpretation and contextually effective ways to apply it. In my previous discussions, I only briefly mentioned EMI in Algeria without exploring its implementation process, the perspectives of teachers and students, or the challenges encountered during its adoption. This section provides further insights into the processes involved in this implementation and discusses the attitudes that followed the announcement and use of EMI in Algerian higher education.

3.1 Processes of Implementing EMI

The first step into the introduction of EMI began in October 2022 upon the official courier of the Minister, Kamel Beddari. This highlighted the need to foster the use of English in higher education through mobilising the Centre for Intensive Teaching of Languages (locally abbreviated as CEIL, centre d'enseignement intensif des langues) and departments of English to equip Algerian university teachers with a B1 to B2 level of English. The urge to foster English, though explicitly expressed, did not articulate any roadmap or a plan to execute it. What was asserted were two points: the organisms involved and the targeted proficiency level. The following couriers attempted to demystify the steps to ensure a fairly unified process across Algeria to secure the implementation of EMI in the first two targeted domains: science and technology. Language proficiency training courses were adopted either online or on-site depending on the institution's affordances and the number of teachers concerned.

While the ministry was hoping to set some steps to guarantee a 'smooth' transition to EMI, it may seem to neglect that "all the countries witness similar problems in course of the EMI adoption, which include: funding, lack of qualified teaching staff, lack of students' understanding and interest, and cultural opposition" (Tamtam et al., 2012, p. 1423). To start, funding was not thought of because involving a quasi-independent organism like CEIL implies the creation of a financial plan to cover the fees of these courses including their design and delivery, which was not the case. This has led to the non-involvement of this centre in some Algerian universities. The qualified teaching staff were already overwhelmed with their usual workload as well as with the huge demand for English among fresher students. Catering for another community, their fellows, was hard if not, at times, impossible.

Moreover, the diverse disciplines in some institutions require not only teaching general English but also adequate English to instruct and study in a plethora of domains. The courses provided, in CEIL, for instance, were crafted to improve general English skills. In Mahi (2024), medical lecturers have signalled that the English course suggested by CEIL does not really respond to their linguistic needs as it focuses on general English rather than English for medical purposes. Students were also concerned with English proficiency courses. Fresher students benefited from an online course, while PhD students received hybrid training. However, these courses do not take into consideration their disciplinary domains but adopt a one-size-fits-all perspective. PhD students, just like lecturers, were supposed to attain at least a B2 level. Moreover, as per students, although some of them showed interest in improving their English proficiency, there was a huge reluctance to pursue the online course dedicated to them.

At last, the academic year 2023–2024 witnessed the first cornerstone of the EMI policy in Algerian HE. Some of the modules in the scientific and technical domains were taught in English. This was mainly ensured by lecturers who made individual efforts to learn English, graduated from an English-speaking country, or who could diligently attend the English proficiency course offered by their institution.

3.2 Attitudes Towards EMI in Algeria

As already stated, positive and negative echoes have accompanied the announcement of adopting EMI in HE as well as its implementation. To begin, students were mainly optimistic about this shift. The status of English worldwide shaped the perceptions of the Algerian students and youth in general. Indeed, "English becomes equated to a 'language of [the] future' through its discursive association with the internet, self-improvement, popular science and academic publishing, and emigration" (Jacob, 2020, p. 1026). In addition, English helps open up to the whole world and offers new migratory trajectories and opportunities for academic mobility beyond France or French-speaking countries (Benabdelkader, in press; Jacob, 2020). Belmihoub (2018) asserted that English represents to students "a vehicle of economic opportunity and knowledge acquisition" (p. 165). Nonetheless, French could not lose its legacy because, for teachers, "teaching in French is considered prestigious", and for students, it is "a source of success and privilege, which in turn contributed to reproducing FMI over generations of teachers" (Medfouni, 2020, pp. 303, 340).

Cultural opposition was nurtured by two factors: teacher superiority and age. Discussions with lecturers around the adoption of EMI often highlighted some concerns related to teacher superiority. The latter was framed as an indispensable teacher identity marker that maintains the traditionally drawn image of the sole knowledge holder and transmitter in classroom encounters. In one of my talks with subject matter lecturers, they expressed their rejection of using a language that their students presumably master better than them, and even afraid of being mocked if making mistakes in grammar and/or pronunciation. This, however, does not reflect practice. That is, even with FMI, classroom interaction is mostly held in the Algerian dialect rather than French per se (Medfouni, 2020). Furthermore, "Arabic was more preferred as a MOI by students enrolled at a lower level of education as well as teachers with lower academic rank for understanding reasons" (Medfouni, 2020, p. 341).

Another opposition also comes from lecturers of French who are advocating for the need to keep FMI in HE in order not to dismantle the sociolinguistic landscape and create new conflicts. Mokdad attributed that,

> substituer du jour au lendemain l'anglais au français—en principe-comme langue d'enseignement de toutes les matières notamment scientifiques serait une décision aléatoire, voire idéologique qui pourrait engendrer des conflits sociolinguistiques lesquels rendraient la question de trancher pour les langues en Algérie (statuts et fonctions) une tâche encore plus difficile. (Mokdad, 2021, pp. 2050–2051) "*substituting French with English overnight—supposedly—as a medium of instruction for all subjects, notably the scientific ones, would be a random decision, if not ideological—which may cause sociolinguistic conflicts that could make it even harder to settle the functions and status of languages in Algeria.*" (my translation)

The sudden shift, equating to dismissing French and adopting English, is seen to be the founder of a 'new' rivalry between the two languages. For that, Mokdad (2021) suggested a midway solution to take advantage of both, whereby English

existence is celebrated through its global position, functions and affordances, and French is protected to maintain its status, position and presence in the Algerian sociolinguistic landscape.

Others have more flexible attitudes towards the use of EMI. They call for a more 'democratic', natural and spontaneous use of languages. Some of the actual practices within EMI policy underpin bridging up policy with the context in which it is (to be) applied. In other words, the one-language-only policy does not conform with some contexts, namely the ones. Cherishing the sociolinguistic palette existing in these contexts would absorb the tensions, ideally the ideological, as well as the pressure exerted on stakeholders. Given their effectiveness, whether officialised or restricted to classroom interaction, multilingual practices dominate the scene and involve the linguistic repertoires of students and teachers to ensure a better grasp of the subject matter.

3.3 Scattered Efforts vis-à-vis Teacher Development Training

It is true that Algeria did not invest much when announcing the adoption of EMI and it was rather sudden. However, some efforts have been made, whether or not linked to the implementation of EMI policy, which could be beneficial amid the application of EMI. To begin, the UK government and the Algerian Ministry of Higher Education and Scientific Education signed an agreement that consisted of providing, starting from 2014, PhD scholarships fully funded by the Algerian government to 500 students over 5 years in the fields of "English literature, linguistics and language teaching" (British Council Algeria, n.d.). Upon the end of this agreement—in 2020, the Algerian ministry signed another agreement with an Irish university—the University of Limerick—to ensure PhD training of 400 students in the same aforementioned fields (Medfouni, 2020). According to the Irish Times, "Algeria has decided to change the official language of its higher education system from French to English to increase the visibility of research in its higher education institutions" (O'Brien, 2020). Surprisingly, the ministry did not involve any of these PhD holders neither in its policy nor in its practice.

Around a year later, the Algerian government signed an agreement to create a partnership with the U.S. embassy in Algiers and Teachers College of Columbia University. This partnership aimed to transform teaching English in science and technology. That is, it consisted of "a long-term strategy for enhancing English in higher education in Algeria that includes developing a training program on how to teach English in science and technology and organizing joint workshops with Algerian English teaching experts." (U.S. Embassy in Algiers, 2021). The programme lasted over 3 years dedicated to three cohorts of Algerian university lecturers from different parts of Algeria to provide adequate knowledge for the integration of content and language (ICL) in instruction. To put in detail, "In the ICL instructional approach, the focus is not just on the development of linguistic resources, but also on the simultaneous development of topical or disciplinary understandings

needed to display real-world professional competencies" (Integrated Content & Language in Algerian Higher Education, n.d.) The essence of the training centres is bringing together English language instructors, language teaching trainers and subject matter instructors and engaging them in collaborative learning journeys and projects. After the end of this training, another course was launched to thoroughly cover assessment in ICL. The fourth cohort's trainees in this course were selected from the three cohorts—I was in the third and fourth cohorts—and were supposed to design a language proficiency test for placement purposes. This test was hoped to be a prototype to be suggested to the ministry as an English proficiency assessment tool for university fresher students.

In sum, either of the UK, Irish or American partnerships were excluded from the ministerial agenda of implementing EMI. The decrees and all the correspondences did not include the tiniest hint to those returnees with a PhD degree from a British or an Irish university nor to those successfully completing the ICL course only or with the ICL assessment. Hence, the developed (or acquired) skills in these programmes contributed to a development which is rather personal than local, regional or national.

4 Comparing Algerian EMI with Other EMI Global South Contexts

Be it in Algeria or elsewhere, EMI can be perceived as an imposed policy on non-English speaking countries. To quote Rose et al. (2020):

> In the TESOL industry, various powerful 'centres of English' (i.e. native speakers and native speaking countries) have the lion's share of influence, while others are relegated to the 'periphery'. There is an imbalance in power between the centre and periphery, which feeds into all related decisions in language teaching policy and practice (p. 8).

The power imbalance and the ability to influence the periphery countries have resulted in enduring the challenges associated with the implementation of EMI whose popularity in different corners of the world is extremely undeniable. Global South needs to rethink how EMI policy is implemented and explore the appropriate tools, methods, mechanisms and timelines to make the best of EMI as a policy. This can be possibly attained "by disrupting the current world system by looking to local and neighbouring sources of knowledge for policy-making and best practice" (Rose et al., 2022, p. 167). Indeed, research across different contexts in the Global South has showcased that EMI is context-specific in nature, and "one-size-fits-all" (Sahan et al., 2021) EMI model must be delusional.

4.1 Algeria Versus KSA and UAE

Generally speaking, the challenges encountering EMI policy may lie in the national policy (the macro-level), in the university policy (the meso-level) and among students and lecturers (micro-level), as stated by Hult (2010). Adopting EMI in Algeria came as a political reaction to the unstable relations with France and caused some discomfort amongst the Algerian people who relatively alienated English whether socially or academically. Yet, the politics behind the use of EMI has been coated with global connectivity and mobility of the academic staff and students, internationalisation, and international ranking and visibility. Since Algeria is officially categorised as an Arab Country, Saudi Arabia and the United Arab Emirates are selected to project some of their experiences with EMI on the Algerian HE context. The two countries have long delved into the adventure of using EMI for several motives.

At the national level, as discussed earlier, different languages are competing and this competition is fuelled by different ideologies. Unlike the United Arab Emirates where it exists a dual ideological divide between English and Arabic (Hopkyns & Elyas, 2022) and is mainly induced by globalisation and business, the Algerian ideological divide is actually triadic involving, Arabic, French and English, and is fostered by (post-)colonial motives, political and religious agendas (see Sect. 2). Moving to the meso-level, the universities were put under the pressure of planning, designing and delivering English language courses without being provided sufficient time and adequate means. The absence of needs' analysis as well as the equitable access to human resources and equipment across universities caused improvisation and push-and-pull mechanisms between the ministry and universities vis-à-vis responding to the national policy.

Somehow similar to Algeria, internationalising HE programs and institutions, improving ranking, responding to the job market's needs, developing the economy and expanding the sphere of business represent the main motives for Englishising UAE's and Saudi Arabia's HE (Elyas & Al-Ghamdi, 2018; Elyas & Al-Hoorie, 2024; Hopkyns, 2023; Phan & Barnawi, 2015; Tsou & Kao, 2017). Admittedly, there are undeniable differences between these two nations and between them and Algeria, especially when it comes to the composition of these societies. UAE is strongly marked by its super-diverse population. It consists of 90% of foreigners, which makes it one of the world's most diverse countries and second in the Gulf region after Qatar (Hopkyns, 2023). Saudi Arabia hosts about 42% of foreign residents, according to the 2022 census (SaudiCensus, 2024). The boom of foreigners in Gulf countries is triggered by the oil industry, generous wages and tax-free living (Almayez, 2019; Elyas & Al-Hoorie, 2024; Hopkyns, 2023). In a society like the Emirati, English is used as a lingua franca to facilitate communication between people from diverse linguacultural backgrounds. The need for English has actually surpassed HE to reach schools (Hopkyns, 2023). Saudi Arabia targets English for its substantially crucial role in achieving a governmental agenda, i.e. Vision 2030 (Alqarni et al., 2024; Elyas & Al-Hoorie, 2024). As Elyas and Al-Hoorie (2024)

posit, "Saudi universities are likely to internationalize their educational services in relation to the Saudi government's 2030 Vision" (p. 264).

Despite the socio-economic motives, political agendas, globalisation, and the fertile ground to adopt EMI, things that Algeria lacks, there are unanimous drawbacks in UAE and Saudi Arabia at the meso-level of the EMI policy. In the latter, Alqarni et al. (2024) highlight that "Some scholars contend that the EMI policy in Saudi Arabia lacks a robust foundation" (p. 30). Starting from recruitment, it was a great challenge to recruit "a qualified and proficient workforce capable of delivering content effectively in English" (Alqarni et al., 2024, p. 31). Stakeholders, including lecturers and parents, were not involved in the implementation and hence created discrepancies between policy and practice (Louber & Troudi, 2019). Lack of transparency and clarity when articulating policy shifts raised concerns since no justification was provided to back up such changes (Barnawi & Al-Hawsawi, 2017). Similarly, the UAE communicated EMI policy to HE institutions with a prevalent implicitness, which then left it to these institutions to make their own interpretations. This makes Saudi Arabia and UAE in terms of EMI policy no different from Algeria. In essence, Algeria is uncritically adopting the EMI approaches of other Global South contexts without conducting a thorough, critical analysis. By failing to examine the experiences of these countries, Algeria risks replicating their challenges and may not be adequately prepared to address potential shortcomings in EMI implementation.

The micro-level reflects most of the challenges listed above. Stakeholders, students and lecturers—and even parents, are put in le fait-accompli. They are seen to be in a by-default agreement with any change in the language policies. From the government's perspective, higher education institutions are expected to cultivate global citizens (Baker & Fang, 2021), rendering internationalization an essential pathway to achieving this goal. However, the pursuit of internationalization through EMI often overlooks the critical step of examining the preferred language of instruction. In the UAE context, it is believed that, if they were asked, "Emirati students in government universities would prefer to have both English and Arabic, with many stating they wanted the right to choose the medium of their courses above all else" (Hopkyns, 2023, p. 75).

Saudi students expressed discomfort with regard to transiting to EMI, especially since it is not their first language. Moreover, there are also "concerns regarding [their] academic achievements" (Alqarni et al., 2024, p. 31). To navigate this discomfort, students tend to request their teachers to switch to Arabic to ensure a better understanding and to save themselves the time and burden of translating their lectures from English to Arabic, which makes Arabic a de facto medium of instruction (Louber & Troudi, 2019). Deploying L1, in this case, can facilitate an effective co-construction of meaning in classroom interaction (Lin & Lo, 2017) and students' understanding since they rely on Arabic to take notes as pointed out by one of the Saudi students in Barnawi (2021). Nevertheless, when taught by non-Arabic speakers, Saudi students felt the pressure of having to study, understand and read technical content in EMI. One of the Engineering students reported as follows: "Our

Indian professor does not speak Arabic. So you have to be awake every time and find your way" (Barnawi, 2021, p. 222).

Considering Arabic while using EMI policy in HE might be attributed not only to its functional role but also to its symbolic meaning. Different meanings, fuelled by ideologies, have been attributed to Arabic and English in the Gulf countries. Arabic is associated with home, family and religion whereas English is attributed to university (Findlow, 2006; Graham et al., 2021; Hopkyns, 2020; Hopkyns & Elyas, 2022). Moreover, as Hopkyns (2023) contended, "the dominance of English as the 'language of education', especially in HE, has positioned Arabic as 'other' in educational domains" (p. 77). As a result of this, conservatives consider EMI as a threat to Muslim societies' identity because it is believed that English attempts to westernise these societies (Elyas, 2008, 2011). Similarly, some Algerian lecturers and students consider Arabic-medium instruction as "the 'true' MOI because both English and French were believed to be a continuation of imperialism […]" and is "identified by its symbolic value because of its connection to cultural, linguistic, ethnolinguistic and national identity" (Medfouni, 2020, p. 338). Giving a 'higher' status to Arabic is believed to protect it from Attrition and preserve local identities (Hopkyns, 2020, 2023). Some scholars, such as Ebad (2014), went further and emphasised the need "to establish a flexible language policy and establish new strategies for protecting and developing the Arabic language and having English as the language of communication for international business and communication." (p. 146). Others, namely Hopkyns et al. (2021), call for linguistic hybridity to embrace the two dominating languages and to encourage linguistic creativity to the detriment of linguistic purity.

4.2 Algeria Versus Pakistan

With the introduction of EMI, some voices are calling for using Arabic-medium instruction to avoid the dilemma of introducing a relatively alien-like language basing their view on the 'failure' to form French-fluent or French-user graduates (Amorouayach, 2009; Cortier et al., 2013; Medfouni, 2020). However, the aim of switching to English was not to bring some change to the university linguistic landscape but to join the global trend, i.e. internationalisation through Englishisation. Unfortunately, and similar to other English postcolonial contexts, FMI has never been put under scrutiny to deduce lessons as per the policy and its application. Perhaps, one possible interpretation of the scarcity of research on FMI in HE can be the history of the language in Algeria—being a colonial language to Algerians. Pakistan, for instance, has long ignored researching the use of EMI in HE although it has been adopted since its independence in 1947, as documented by Sajjad (2020) and Mahboob (2017). In Pakistani higher education, English has been the sole and primary language of instruction (Mahboob, 2017), while at the school level, instruction varies between English, Urdu, and, in some schools in Sindh and Khyber Pakhtunkhwa (KP) provinces, the provincial language (Sajjad, 2020, p. 70).

Restricting multilingual societies to a one-language policy in HE characterises other contexts, notably Algeria.

Indeed, the mismatch between education and HE vis-à-vis the medium of instruction also exists in the Algerian context. That is, the three educational levels rely on Arabic as the only medium of instruction whereas French and Arabic are the languages used in HE in the domains of science and technology, and social and human sciences, respectively. This mismatch creates the unpreparedness of students and leads to their failure not only in mastering the medium of instruction but also in the subject matter (Medfouni, 2020). Despite this long history, familiarity with English as well as little research on EMI, findings point out that the disadvantages of EMI outweigh its advantages. Accessibility to English courses as well as to resources nurtured inequalities and made the underprivileged disadvantaged. This has been emphasised when the Pakistani private sector engaged in offering EMI courses. Nevertheless, the scattered efforts of the Pakistani HE private sector to assert and maintain EMI cannot be deemed satisfactory in attaining twenty-first-century education standards (Awan, 2022). These inequalities are established in Algeria, not due to the private HE institutions which are inexistent, but in accessing language schools to improve their English proficiency. Drawing from the experience of Pakistan, EMI in Algerian HE and its misalignment with schools' language policy are likely to accentuate the socio-economic class differences and result in unequal chances to excel academically, especially since mastering English influences the academic performance of students in EMI settings (Alqarni et al., 2024; Sajjad, 2020).

5 Discussion and Conclusion

This chapter has discussed the means, motives and reactions of implementing EMI in Algeria HE. It has also provided some narratives, experiences and evaluations of the EMI policies in Saudi Arabia, UAE and Pakistan. Overall, without providing much consideration to the historical and sociolinguistic characteristics of these countries, Algeria is induced by the same motives, is following a similar path, and is hence falling into the same shortcomings and issues these countries have been encountering. It is disappointing that Algeria has not been a pioneer in implementing EMI, particularly given its failure to learn from the experiences of other countries or draw meaningful insights. The EMI implementation in Algeria can be characterized as sudden, ill-conceived, disruptive, urgent, ambitious, belated, and poorly planned—despite some scattered potentially useful efforts.

Through the EMI policy, the government hopes to align with global educational standards, though attempts to address local challenges may ultimately prove ineffective. Replacing French with English, especially as a medium of instruction, stimulated various, if not opposing, reactions. In a context fuelled with language ideologies and conflicts, introducing a 'new' language to compete with a language that has long been seen as the connecting tool to the West sounds controversial. The uncritical adoption of EMI may engender "the colonisation of minds of those

working and studying within these systems" (Rose et al., 2022, p. 167), so a thorough pre-analysis of the Algerian context is of high importance. The Algerian sociolinguistic landscape is known to be so rich, complex and historically rooted that adding another language is, by some, perceived as disturbing to the linguistic mosaic and contributing to the societal language ideologies rivalries, whereas it is welcomed, for others. Nevertheless, there has been a growing consensus that English, as the global lingua franca, was the desired language to enable society to connect with Europe and, by extension, the entire world.

Despite the lack of comprehensive groundwork to ensure effective implementation, policymakers continue to promote the EMI policy. While aiming for internationalisation, openness to different cultures, good ranking, academic mobility and global market, EMI programmes are dedicated to Algerian students, i.e. locals. In other words, internationalization is targeting local students (Rose et al., 2022) through local teachers who have predominantly been using French as the medium of instruction (FMI). Using general English proficiency courses does not suffice to 'recycle' these lecturers and ensure effective use of EMI. EMI teachers are aware of the need for different English proficiencies when, for instance, delivering a conference paper and teaching courses in English (Macaro et al., 2021; Macaro & Han, 2019).

Any one-language policy has never found welcoming grounds nor achieved effectiveness and success for it can be only believed in theory but never put into practice, especially in multilingual contexts. Algeria, being multilingual *par excellence*, could not succeed with French, let alone English. Indeed, "the positive image of EMI in Algeria is a result of aspirations and unrealistic expectations about what might be achieved by promoting English at the expense of French in Algerian HE, where even the de facto MOI French is not exclusively used in classrooms" (Medfouni, 2020, p. 347). Hence, the inclusion of the multilingual repertoires of the Algerian lecturers and students through translanguaging is considered to be effective in classroom interaction (Rose et al., 2022).

To conclude, the initial steps towards adopting English as a Medium of Instruction (EMI) in Algeria require careful review and consideration of experiences from other Global South contexts. All current efforts, which are currently fragmented, should be consolidated with critical reflection, nuance, and a well-thought-out roadmap. This approach must be grounded in a rigorous needs analysis and incorporate the perspectives of key stakeholders.

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EMI Course Process in the Turkish Higher Education Context and Pedagogical Implications



Mehmet Birgün and Yasemin Kırkgöz

Abstract The implementation of English Medium Instruction (EMI) often involves the top-down imposition of policies, frequently overlooking the potential educational benefits for instructors, especially those whose teaching effectiveness may be compromised when delivering courses in English as a second (ESL) or foreign language (EFL). This research addresses this oversight by examining the EMI course process in terms of subject content delivery, instructional methods, and linguistic adaptability. Thirty Turkish native-speaking EMI lecturers were selected through purposive sampling and interviewed. The qualitative data obtained were subjected to content analysis. The findings reveal that instructors do not consistently adhere to specific teaching methodologies and largely rely on instructional tools such as PowerPoint presentations and brief video materials. During the EMI course process, several challenges became evident, including learner-related and lecturer-related problems. Notably, both learners and lecturers exhibited low levels of language proficiency, and there were significant measurement and assessment challenges. These findings underscore the need for improvements in language proficiency and pedagogical practices related to instruction and assessment. Stakeholders in higher education are urged to take necessary actions to address these issues, enhancing the overall effectiveness of EMI courses.

This chapter was largely generated from the data collected for the first author's PhD project entitled 'A proposal for EMI lecturers' professional development program in Turkish higher education', which was completed under the supervision of the second author.

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Keywords English medium instruction (EMI) · EMI implementation · EMI classroom · EMI pedagogy

1 Introduction

English-medium instruction (EMI) has become a key strategy in the global educational landscape, particularly for delivering science, technology, engineering, and mathematics programs (Carli & Ammon, 2007; Tonkin, 2011). Its prevalence is clear, as EMI is now standard practice at tertiary and post-graduate levels worldwide. In the past two decades, the adoption of EMI has steadily increased within Turkish higher education, receiving substantial institutional support (Karakaş, 2019; Karakaş & Bayyurt, 2019; Kırkgöz, 2014). Currently, EMI is fully or partially implemented by 66 public universities and 67 private universities in Turkiye (YÖK Lisans Atlası, 2024). Despite extensive research on EMI, covering areas such as learner needs, motivation (Kırkgöz, 2005), and learner challenges (Arkın, 2013; Coşgun & Hasırcı, 2017; Pun & Jin, 2021), there remains a notable gap concerning the pedagogical needs of lecturers since lecturers often experience significant stress due to the high demands of EMI (Byun et al., 2011). Yet, the pedagogical practices in EMI settings, particularly in Turkiye, remain underexplored (Gökmenoğlu & Gelmez-Burakgazi, 2013). Additionally, despite the increasing prevalence of EMI courses, there is a concerning lack of structured professional development initiatives for EMI lecturers (Birgün, 2022; Macaro et al., 2019).

This study aims to address these gaps by focusing on the classroom practices of EMI lecturers with an emphasis on professional growth. Specifically, it explores how EMI lecturers enhance their methodological competencies, adapt to linguistic challenges, and integrate cultural sensitivities into content delivery. By examining the EMI course process within the Turkish higher education context, this research aims to propose developmental strategies that support lecturers in improving their instructional practices and professional capacities. This approach not only seeks to enhance educational outcomes but also aims to create a supportive environment for educators navigating the complexities of EMI.

2 Literature Review

EMI programs have been rapidly expanding throughout Europe. According to Sandstrom and Neghina (2017), there are 1617 higher education institutions currently offering 68,000 bachelor's programs and 54,000 master's degrees in English. In discussing the learning and teaching aspects of EMI classrooms, the concept of pedagogy, which encompasses both the philosophy and practical implementation of instruction in relation to student learning, emerges as fundamental. Pedagogy involves a range of approaches and procedures that lecturers use to inform their

instructional decisions and activities. These pedagogical competencies are broadly categorized into linguistic and behavioural pedagogy. Linguistic pedagogy focuses on using language skills to guide learning processes, including pragmatics, turn-taking, tone of voice, and fluency. Behavioural pedagogy, on the other hand, addresses classroom management aspects, such as the utilization of space, eye contact, and the integration of visuals and technology (TAEC EMI Handbook, 2019).

Given the exponential growth of EMI, Macaro et al. (2018) argue that EMI lacks pedagogical dimensions. Similarly, Greer et al. (2016) claim that lecturer training in higher education often focuses on developing content knowledge rather than pedagogical skills, which are either undervalued or neglected. Although EMI lacks a specialized pedagogy, certain pedagogical applications can be found in the literature. Academics in EMI classes must balance their roles as both educators and proficient English users while instructing courses across various disciplines (Wilkinson, 2013).

Studies have been conducted to fully understand how and why lecturers employ specific linguistic strategies in the EMI classroom when delivering instructions. Employing linguistic strategies such as translanguaging and codeswitching helps overcome comprehension barriers, enhancing the lecturers' ability to convey complex concepts and engage students with varying English proficiency levels (Karakaş, 2023; Kırkgöz et al., 2020, 2023). Understanding the specific literacies and cultural contexts of their disciplines helps lecturers make their teaching more accessible and engaging, ensuring students can deeply connect with the content. Developing robust assessment practices is crucial for effectively measuring student understanding and tailoring instructional approaches to meet diverse learner needs. Each discipline possesses its own distinct genre and literacy, which Airey (2013) terms disciplinary literacy—the ability to participate seamlessly in a discipline's communicative practices. EMI courses often do not adequately address disciplinary literacy; however, the expertise of ESP/EAP can bridge this gap by teaching students how to learn content effectively (Bowles & Murphy, 2020; Karakaş, 2024).

According to Zhao and Dixon (2017), lecturing (teacher-oriented) rather than classroom engagement (student-oriented) constitutes a significant portion of how English content knowledge is delivered. This proposition, supported by Jensen and Thogersen (2011), indicates that the teaching approach in English-medium education tends to be more monological and less interactive. In other words, the methods by which information is presented, content understanding is fostered, and assessments are conducted are not clearly defined in the delivery of EMI courses. Jenkins (2019) highlights the ELF (English as a Lingua Franca) approach, which employs code-switching and translanguaging techniques to address comprehension issues during EMI course delivery. Additionally, supporting students in asking questions on their own initiative is recommended (Guarda & Helm, 2017), despite students' hesitation due to a lack of productive linguistic abilities (Jensen & Thogersen, 2011).

Furthermore, EMI literature has comparatively little to say about assessment techniques (e.g., Lo & Fung, 2018; Moore, 2017; Şahan & Rose, 2022), despite Smith (2006) emphasizing formative assessment procedures as a way to boost motivation and learning in EMI programs. Considering that the majority of EMI

lecturers lack formal pedagogical training, they may not be aware of the most effective teaching strategies for EMI (Herrington, 2020). To increase comprehension of EMI, a more engaging alternative pedagogy is required (Dearden & Macaro, 2016). Consequently, both short-term and long-term programs should be designed to better equip lecturers for their responsibilities in the English medium, addressing both linguistic and pedagogical challenges (Kaur, 2020).

The EMI course process for EMI lecturers involves enhancing instructional skills, deepening linguistic capabilities, and understanding cultural and disciplinary aspects. Lecturers can benefit from developing advanced instructional methods, effective classroom management techniques, and interactive teaching strategies. These skills are essential for improving teaching efficacy and adapting to multilingual and multicultural classrooms. With those in mind, the present study aims to investigate the following research questions:

- How is a typical EMI course delivered within the context of Turkish Higher Education?
- What challenges do lecturers face in the implementation of EMI courses?

3 Methodology

In the present study, a qualitative case study design is employed since it provides a concrete real-world example of the topic investigated (Baxter & Jack, 2008; Yin, 2009) namely, the course process and pedagogical practices of EMI lecturers within Turkish higher education. This method is particularly suited for examining the instructional strategies employed in environments constrained by specific linguistic, cultural, and institutional factors. In other words, the use of case study research allows for an in-depth examination of current, real-world practices within a certain system—namely, the Turkish higher education system—over time by collecting extensive data (Creswell, 2009). By focusing on specific instances of EMI teaching, the research aims to gather comprehensive insights into how pedagogical skills are applied, how linguistic challenges are navigated, and how lecturers adapt to the multicultural aspects of their classrooms. This approach also enables us to understand the pedagogical complexities thus giving insights into professional development among EMI lecturers in Turkiye.

In the current study, "purposeful sampling" is used (Patton, 2002). Data were collected using semi-structured interviews held with 30 EMI lecturers who work for private (foundation) and public universities. The academic titles of the participants ranged from professor for 8, associate professor for 5, doctor for 15, and lecturer for 2. These participants have between 1 and 25 years of EMI experience. These lecturers were teaching in the disciplines of Engineering, Arts and Sciences, Economics and Administrative Sciences, Medical Sciences, and Health Care.

The interview questions were organized into two sections: the first focused on gathering demographic information, while the second aimed to capture lecturers'

perspectives on EMI course structure and classroom instruction. Participants were informed about the research objectives before the interviews, and their participation was entirely voluntary. Interviews were conducted online and face-to-face, and they were recorded, using platforms chosen by participants to ensure a secure and comfortable meeting environment (Ersoy, 2016). Confidentiality was assured by assigning pseudonyms, and participants' rights were respected, including consent for recording interviews. It was guaranteed that audio and video recordings would not be shared with third parties, and participants' identities would remain confidential throughout the study.

To analyze the qualitative data, content analysis was employed, i.e. a method that involves systematically examining and interpreting various data sources, including written materials, spoken interactions, and visual data collected during the research (Cohen et al., 2007). Content analysis was particularly valuable for analyzing interview transcripts about classroom practices, and evaluating lecturer instructional materials used by EMI lecturers. The data analysis process involved sorting and categorizing emerging codes, and comparing them in order to draw theoretical inferences (Cohen, 2007). In this study, a latent analysis approach was utilized, focusing on interpreting deeper meanings embedded within the data (Bengtsson, 2016; Dörnyei, 2007). The findings of the content analysis were presented in tables with direct quotations, aiming to uncover how EMI lecturers manage linguistic and cultural diversity in their classrooms, their employed pedagogical strategies, and areas where enhanced professional development could be beneficial. Steps were taken to enhance the trustworthiness of the qualitative data. Expert opinion was consulted during the development of the interview guide, incorporating their feedback into its preparation. The expert opinion continued to inform various stages of the research, ensuring methodological rigour. Participants were selected through purposeful sampling aligned with the study's objectives. Data collection proceeded until saturation was achieved, ensuring comprehensive coverage of interview insights. During interviews, a flexible approach was adopted to encourage participants to express themselves freely, with interviewers actively reflecting participants' viewpoints. Interviews were conducted without interruptions, allowing for in-depth exploration of topics. Careful attention was paid to comprehensively exploring each issue in the study.

4 Results

In this section findings from the present study are presented in accordance with each research question.

4.1 The Delivery of a Typical EMI Course

The first research question aimed to explore instructors' experiences of their practical applications of EMI in their courses in terms of the materials and techniques they employed, whether they linked their practices to learning theories and approaches, and their overall application of EMI principles.

The course procedure used by EMI lecturers is categorized into several key areas, as detailed in Table 1. In the initial session, instructors typically introduce activities such as providing an overview of the lesson, capturing students' attention, and reviewing previous knowledge. Regarding instructional methods and techniques, many lack a systematic approach, while others utilize questioning, drama and role-playing, group work, case studies, and gaming. A significant number of lecturers incorporate codeswitching and exclusively use English during instruction. They commonly employ teaching tools such as PowerPoint presentations, short videos and films, traditional boards, and educational games. Emphasizing effective classroom management, they focus on motivating students, fostering cooperation,

Table 1 EMI lecturers' experience with the EMI course process

Categories	Sub-categories	f-file	f-reference
Planning the lesson	Lesson plan	2	2
Introduction to lesson	Lesson overview	3	3
	Taking attention	2	2
	Reviewing previous knowledge	1	1
Methods and techniques	No specific method	9	10
	English exclusively	6	7
	Codeswitching	5	7
	Questioning	4	4
	Roleplaying	3	3
	Group work	2	3
	Case studies	2	2
Materials	PowerPoint presentations	7	7
	Short videos and films	6	7
	Board	4	5
	Games	2	2
Classroom management techniques	Motivating students	6	6
	Cooperating with students	2	2
	Coping with undesired behaviors	2	2
Evaluation and assessment	Multiple choice tests	4	7
	Feedback on exam	4	6
	Formative assessment	3	3
	Essay type exams	2	4
	Summative assessment	2	2
	Quizzes	1	1
	Homework	1	1

and addressing behavioural issues. In terms of evaluation and assessment, EMI lecturers employ a variety of methods including multiple-choice tests, feedback on exams, formative assessments, essay-type exams, summative assessments, quizzes, and homework assignments.

The participants shared diverse experiences with EMI, offering insights into the "EMI course process" within the classroom. Here are direct statements from participant comments regarding this process:

One lecturer mentioned planning the lesson before starting each class:

> …It becomes a habit after a while, at the preparation stage for the lesson, I regularly update the lecture notes, I always do my lecture via PowerPoint. As I said, I update these presentations regularly. I make a case evaluation, if I have no shortcomings, I go on this way. (**Enis—***Faulty of Engineering*).

Several lecturers discussed their approaches to course introductions and lesson organization. For instance, to ensure student comprehension throughout the course, some lecturers (n:3) consistently provided a lesson outline at the start of nearly every session

> At the beginning of the lesson… I say how your day or week is going. I actually make them share a little bit like this. Afterwards, I tell them the objectives of that lesson, what they need to learn in this lesson, what those achievements will be, that is, what I expect them to gain at the end of this lesson, I definitely say that. It's my first slide anyway. (**Sinem**—*Faculty of Engineering*)

Some lecturers mentioned that they made an effort to capture students' attention to sustain their interest in the lesson (n: 2):

> I ask questions. I ask surprising questions to get the student's attention, especially when online, it is more difficult, but I try to follow. I try to raise interest in my lesson with those questions. (**Enis**—*Faculty of Engineering*).

One of the lecturers reviews previous material in their class, as shown in the following excerpt:

> For the sake of socializing for a minute or two, I try to have a conversation or give them a very up-to-date non-book menu before going to class. Then I make a very short summary of the last week or the past weeks, just like in television series because the topics always follow each other. Here, the lesson is not a mathematical thing, you are talking about a social thing. What you are going to tell must be based on the past. That's why I repeat the past in one or two slides and ask them if there is a place where you hang out on these issues. Now, this also has an advantage. You may be a student who is late for the lesson at 08:45 in the morning, may not wake up, and you spend their three-five minutes late time with such a trailer (**Cem**—*Economics and Administrative Sciences*).

When asked about the methods and techniques they used, the majority of lecturers discussed activities that were more general rather than specific strategies. Many (n: 9) indicated they did not adhere to any particular methods or techniques:

> In fact, there are many different teaching techniques… They have different names that will always keep the interest of our students alive. I consult with my educator friends from time to time, I would like to emphasize this, as well. But I mean, what am I doing, I ask different questions that make them think at that moment, as long as they don't get distracted. Other

> than that, I don't apply such special techniques, but I wish we had time, if only our educator friends had time, so we could learn… So what do I pay attention to, the most important thing for me is that the students understand the subject… Therefore, simple language is used with clear examples, but fluent, in the clearest way for them to understand… (**Zerrin**—*Faculty of Arts and Sciences*).

While it seems that the majority of lecturers do not adhere to any specific methodology, a few mentioned using certain methods such as employing questioning (n: 4) and group projects (n: 2).

> I always try to teach through question and answer. (**Tarkan**—*Faculty of Engineering*).

> For example, the best thing is this group work. What I do is to create a group and bring an article or a set of research questions and have students do research on the computer at that time. (**Suzan**—*Economics and Administrative Sciences*)

Moreover, although lecturers refrained from using specific names to describe course procedures, it was evident from the narratives that they employed code-switching (n = 5) and exclusively English strategies (n = 5).

> Last year, I was stubborn in a lesson and did not speak Turkish at all. Since the students came here knowing that it was in English, I forced them to try to understand on their own. The result was that both Turkish and English made me tired twice a much… I say it is strictly forbidden to speak Turkish in class, but after finishing… I ask them once again in Turkish to see if there are any points that they do not understand. Then they frankly say: Yes, sir, I did not understand this; we did not understand that, can you explain this again? We did not understand the law of supply and demand, etc. I often explain them in Turkish once again. I don't do this in every lesson, but I do it in some of my classes. (**Cemre**—*Economics and Administrative Sciences*)

Furthermore, two lecturers mentioned that they greatly benefited from using case studies when delivering courses (n: 2).

> I also made use of a case study and today there is a centre called a case study centre, the national centre for case study, there are case studies there. So, a semester is 14 weeks, 5–6 weeks out of 14 weeks I use those case studies. (**Selim**—*Faculty of Arts and Sciences*).

In addition to case studies, lecturers also benefitted from other strategies such as role-playing (n: 3).

> I do that. I will teach for 6–7 weeks, while I am instructing this, I will choose a person, I will read the works of the person I have chosen, you will know his life, you will know the conditions and background of that person, after a certain point in the semester, I will ask the class a question. Whichever philosopher you took, you will get a print of his face, you will put it on your face. You will not be Ali or Ayşe there, you will be Russo and what would Russo answer to the question I ask, if Russo lived there, you will speak as if you were in the shoes of Russo. You will speak as Russo… How he would behave in that discussion, what kind of arguments would he put forward (**Burak**—*Economics and Administrative Sciences*).

The most frequently used materials in EMI courses were short movies and films (n = 6), followed by PowerPoint presentations (n = 7), as evidenced by the following excerpts from some of the lecturers:

> I have PowerPoint presentations in teaching, but they are extremely colourful, so if I prepare the presentation in an hour, it takes two hours to look for pictures and animations, frankly. Because I try to code the information I give with pictures on PowerPoints, my son also contributes to this, for example, he is a visual learner, since I know that he is learning through visuals, I always have to combine the text with a visual and explain it (**Meryem**—*Health Care Vocational School*).

Some lecturers also preferred using games because they helped students grasp the material and fostered productive discussions throughout the class. In their EMI courses, a few lecturers (n = 2) utilized games such as Taboo and Kahoot:

> We are playing Kahoot in class. It's like having the tests done or something. Or, having groups of two and having them discuss, what kind of a conclusion they come to. Such classroom activities (**Suzan**—*Economics and Administrative Sciences*).

The following excerpts illustrate how lecturers strive to manage the classroom, in addition to discussing the methods and materials they use (n: 6):

> But of course, I always say, I always say to them, children, look, your English has to be your mother tongue now, it's not a foreign language. That's why I say, if you write fluently, your grades will be higher in all subjects. This is also clear, so I encourage it, but for example, I say write whatever you know to those who say my English is insufficient. How do you know, write, I say (**Pınar**—*Economics and Administrative Sciences*).

> I am a student-oriented person. I think that I am in favor of involving the student in the process and making him/her a decision mechanism. Maybe I approach it a little bit differently than other lecturers. The lecturer is here, the student is here, we are here, we both exchange information. I have things to learn from them. I think evaluating the needs of students and evaluating the needs of a lecturer are the things what a lecturer should do… (**Meryem**—*Health Care Vocational School*).

Lecturers were also asked about their approaches to assessment and evaluation in EMI courses. They utilized a variety of assessment strategies, reflecting a diversity of methods. Due to overcrowding classrooms and for more objective evaluation, some of them (n: 4) opted to use multiple-choice tests, as indicated in the following excerpts:

> Since we have a large number of students, I usually take the exams in the form of tests. But I am not asking "what is this?, what is that?", I am giving an event based on interpretation, for example in theory, I am trying to make test questions from that event and asking more based on interpretation, how should these states behave according to realism?, for instance (**Yağız**—*Economics and Administrative Sciences*).

While evaluating students, some lecturers incorporated feedback from exams (n: 4), which provided insights into a learner's current performance that could be utilized to improve future outcomes:

> After each midterm, I always answer my own exam in the first hour of the first meeting. I ask the English question of my own exam. That's the question, that's the answer. I want those who have such thoughts to come to me or those who cannot come, I want them to see what kind of answer I expect everyone to give in that question (**Arif**—*Economics and Administrative Sciences*)

Similarly, lecturers (n: 3) stated that they use formative assessment to monitor students' development and progress throughout the course and summative evaluation (n: 2) as they find it facilitates tracking students' progress based on their performance at the end of the course:

> I think the evaluation should not depend on only one exam, that is, we are already doing midterm and final exams. They are mandatory already. But apart from them, I try to give homework every week or every two weeks. Or, for example, I do a question and answer session in the classroom… saying that I will give 5 points to anyone who knows this question. I always show that I always add them… I evaluate not only midterms and finals, but also, I give homework and grades in the lesson, and evaluate together with them. (**Özlem**—*Economics and Administrative Sciences*).

> Finally, I do an all-encompassing exam. Sometimes I give multiple choices, it's easy, you give an exam to a large number of students, you mark 80–100 and so on. I'm a fan of being holistic. So, I want to see this in the student whether he learns or not to a great extent the things we are trying to teach and the goals we set in the learning outcomes. (**Ünal**—*Economics and Administrative Sciences*).

4.2 EMI Course Problems

The lecturers emphasized both the challenges encountered in the course teaching process and how the course materials were delivered. Table 2 outlines the course issues addressed by EMI lecturers.

Table 2 EMI lecturers' experience with EMI-course problems

Categories	Sub-categories	f-file	f-reference
Learner related problems	Low level of English proficiency	7	9
	Low level of linguistic self-confidence	7	8
	Disinterest in course	3	5
	Lack of learner responsibility	3	3
	Low attendance rate	1	2
	Disciplinary problems	1	2
	Having to work	1	1
	Poor level of academic knowledge	1	1
Lecturer related problems	Poor level of English proficiency	8	8
	Evaluation and assessment challenges	5	6
	Course preparation in Turkish	2	2
	Lack of course preparation	2	2
	Teaching by telling (Lecturing)	2	2
	Lack of disciplinary terminology	1	1
	Lack of self-confidence	1	2
	Anxiety	1	1
	Lack of communicative skills	1	1

Table 2 demonstrates the challenges faced by EMI lecturers, categorized into learner-related issues and lecturer-related issues. Implementing EMI presents various challenges. Among learner-related problems, "low level of English proficiency" and "low level of linguistic self-confidence" are the most prominent. Subsequently, issues such as "disinterest in the course," "lack of learner responsibility," "low attendance rate," "disciplinary problems," "having to work," and "poor level of academic knowledge" are also noted.

When considering the adoption and execution of EMI, a range of challenges emerges concerning lecturers' personal attributes. Language proficiency concerns, particularly "poor level of English proficiency," and difficulties related to "evaluation and assessment" are frequently cited. This is followed by concerns about "course preparation in Turkish" and "lack of course preparation." Other challenges attributed to lecturers include reliance on traditional lecturing methods, "lack of disciplinary terminology," "lack of self-confidence issues," "anxiety," and "lack of communicative skills."

The most significant source of complaint from the lecturers is the poor level of English proficiency (n: 7) of the students. The following excerpts reflect the participants' views in this regard:

> For example, an incident I had years ago: When I saw that the responsibility was not fulfilled by the class, I dismissed the entire class in English. No one got up and came out because no one realized that they were expelled from the class. Then they went out when I said in Turkish. So you may encounter such situations (**Arif—***Economics and Administrative Sciences*).

Lecturers also expressed concerns about students' linguistic self-confidence during the EMI course process. Low levels of linguistic self-confidence lead to reluctance to use English for learning purposes and difficulty speaking in public, despite possessing knowledge of the language (n: 7).

> In our country, there is a different situation regarding English. I've been to many different countries, I've been in the school environment, and I've been in the private sector. You know, when people need to speak English in an environment, no matter how much they know, they feel uncomfortable speaking it. But I mean, we have an incredible prejudice, for example, students are very embarrassed and have difficulties in speaking (**Suzan**—*Economics and Administrative Sciences*).

One of the primary emphases in teaching through EMI has always been interaction. In the excerpts that follow, the lecturers highlight their concerns regarding students' lack of interest in the course (n: 3).

> Regarding extra resources, no student says anything like "Let's research from different sources". They copy and paste the assignments I give, so there is no one who says I should write it myself. In other words, this reduces academic success a lot. One of the things that bothers me most is their inability to concentrate on the lesson. It's one of the things I'm most worried about. (**Yağız**—*Economics and Administrative Sciences*).

According to the lecturers, students' lack of interest in the lesson is also attributed to their failure to fulfil their responsibilities (n: 3) towards the course:

> If your name turns out to be bad (tough lecturer), no one will choose your course again… It forces you to do marketing. In other words, every lecturer is looking for a way to make the mission easier, this time, this approach, that is, when this is the case, no one can achieve their goal… I am afraid that the student will not choose me there. Because when I give a little amount of homework, the noises arise right away. And after a semester, you see that three people have signed up, so I say, let's… not make it too hard, the aim is to be together, they have come to a school, at least they should listen to a good lesson. (**Baha**—*Economics and Administrative Sciences*).

Additionally, one lecturer mentions discipline issues (n: 1):

> The assignments I gave were (done through) copy and paste, so there is no one who wants to write it "on my own" or "by myself". In other words, this reduces academic success to a great extent. Of course, the lecturers who see this will assign homework, but most of them do not assign homework because learners will either copy or copy paste. (**Yağız**—*Economics and Administrative Sciences*).

Some students face financial challenges that require them to work, which is a significant concern from the viewpoint of one lecturer, as evidenced in the following excerpt.

> Too many students started to work (in a job)… I do not keep attendance for myself. But unfortunately, yes there is such a problem (**Elif**—*Economics and Administrative Sciences*).

Because of their language difficulties and reluctance to participate in EMI courses, learners exhibited a low level of academic knowledge (n: 1).

> There are exceptions, but when we look at education in general, it is not very productive. I don't think that English medium graduates can reach the knowledge level of a Turkish medium graduate. Oh, they learn the original terms, but I think most of them are missing because their English is not enough and never enough (**Yağız**—*Economics and Administrative Sciences*).

Among the lecturer-related problems, one prominent issue mentioned is the low level of English proficiency among lecturers (n: 8). The following excerpts represent the lecturers' self-narratives:

> I really had a hard time preparing questions in English, and I still think this is our biggest shortcoming. I don't have any problems when making a normal straight sentence, but at the point of asking questions, I stop at the point of creating a question. (**Seçil**—*Medical Sciences*).

The evaluation and assessment issues (n: 5) in the EMI course process were also clearly highlighted. The following excerpts are direct quotes illustrating these concerns:

> Well, let me be very honest. When the English exam paper is in front of me and the Turkish exam paper is in front of me, my perspective on English paper is more tolerable in terms of linguistic structures and errors. In other words, it's a little stricter in Turkish. (**Burak**—*Economics and Administrative Sciences*).

Additionally, as indicated in the following excerpt, some instructors claim that lecturers do not adequately prepare for their classes (n: 2).

> One day, a teacher from another university asked, "Do you have the PowerPoint of the X lesson? Do you have its book?" he asked. I said yes. He said, "Since we switched to this distance education, I need them. Come on, sir, I asked him what week we are in", he said, "We're in March, April is coming." So when I asked how you taught this lesson until now, he replied that the students have a thirst for knowledge, they get what you teach in the class. In other words, he went to class without a book, without PowerPoint, and I don't think he spoke a word in English, so the man spent two months like that, making a fuss. Now that the lesson has been recorded, he has started looking for the PowerPoint of the lesson so that there will be no problem in case of any inspection, so the situation in the country is dire. (**Baha**—*Economics and Administrative Sciences*).

In addition to course preparation, one lecturer claims that some lecturers prepare their lessons in Turkish (n: 2) before delivering them in English. This practice creates challenges in communicating terminology and the subject matter effectively:

> My first class at the X University was difficult. And it has always been a lesson for me. It is because of this: I want to make a big performance, show in my first lesson, I want it to flow wildly, so I got prepared in Turkish. It is the biggest mistake of my life. To prepare in Turkish for a lesson that I will teach in English. I'm confident. There, my notes did not work, it did not work; I mean, of course, we're talking about 12 years ago. You are just at the beginning. If I am going to teach the lessons in English from now on, it is useful to go through the English resources. I have never had a problem after that (**Burak**—*Economics and Administrative Sciences*).

One crucial aspect of lecturing is to minimize the lecturer's speaking time so that students have ample opportunity to learn through speaking themselves. Some lecturers note that during lessons, there is often excessive lecturing (n: 2):

> (It is thought that) If you can use the language adequately, other things are secondary. No, I think other things become more important. For example, I think the biggest problem of education right now is the situation of only teaching by telling. No matter how good your English is, it's pretty bad if you're just teaching by telling. (**Selim**—*Faculty of Arts and Sciences*)

Some lecturers mention struggling with field terminology (n: 1) and lack of confidence in teaching the subject:

> When I first entered, my whole class consisted of Turkish students. So you feel a relief. The next year, foreign students started to come, and when I saw those foreigners on my class list, I felt uneasy. I swear, I am. How are we going to get along, I mean, will they be able to understand what I'm really talking about? (**Burak**—*Economics and Administrative Sciences*).

One lecturer particularly emphasizes anxiety, which is another significant factor:

> There has never been a period in my life as much as I experienced anxiety in the lessons I teach in English, including my assistantship. I had a very serious anxiety, the anxiety I experienced was not related to the subject I was going to talk about, but it was the fear of not being able to answer if the student asked a question. In order for us to overcome that fear, it must become commonplace even before language proficiency in that sense, so speaking should not be a scary thing in another language (**Hale**—*Faculty of Nursing*).

For teaching to be successful, communication flow must be developed between the lecturer and the learner. Lecturers must take appropriate steps to develop the

communication abilities necessary to establish these connections. One lecturer asserts the following about lecturers' communication skills with students in this context:

> I think, unfortunately, I see that many faculty members have problems in communicating with students. I mean, students come and talk about it (**Nalan—***Faculty of Engineering*)

5 Discussion

Participants shared their EMI experiences, highlighting various aspects from lesson planning to evaluation and assessment concerns. Out of 30 lecturers involved in the study, only two reported planning their EMI courses. Lesson planning acts as a roadmap for student learning and achieving effective outcomes (Shen et al., 2007). It is seen as a professional responsibility and a form of development (Milkova, 2012), with a positive correlation between the quality of lesson planning and course implementation (Dorovolomo et al., 2010). Thus, lecturers must explore methods for creating high-quality lesson plans, which prompt them to consider what to teach, how to teach it, and how to assess their students (Milkova, 2012). Reflecting on these plans can enhance awareness and identify areas for improvement (Tarrant, 2013). Similarly, few participants mentioned using a lesson outline, which clarifies the structure of a lesson by listing previous, current, and upcoming topics. This overview helps students follow along and provides lecturers with a useful course framework. Capturing students' attention during course introductions can be challenging, as they may be distracted by past or future events (Lupia, 2016).

Reviewing previous material at the start of a session is crucial, yet only one lecturer reported doing this systematically. This review helps students feel comfortable with earlier concepts before tackling new and complex topics (Cook, 2014). Connecting new knowledge to prior learning enhances comprehension (Meyer, 2004), making it essential for achieving course goals. These insights underscore the importance of expert guidance in lesson design and course structure among participants.

Some lecturers employed code-switching to enhance student comprehension. In the Turkish EMI context, there is no official stance on code-switching, nor guidelines for its appropriate use. English is the primary instructional language, but the setting remains multilingual due to code-switching among predominantly Turkish-speaking stakeholders (Baker, 2011). Lecturers often switch languages within sentences or conversations to clarify concepts, create a relaxed learning environment (Karakaş, 2023; Şahin & Şahin, 2019), facilitate communication of complex ideas, and accommodate learner preferences, and build rapport with students (Sert, 2005). Several lecturers mentioned transitioning between languages while lecturing, as identified in previous studies (Kırkgöz et al., 2020, 2023; Kırkgöz & Küçük, 2021). Conversely, others preferred lecturing exclusively in English, considering it fairer to non-Turkish-speaking students and more appropriate for classes with international

students. Some participants view a lecture split between Turkish and English as less effective, possibly due to perceptions that code-switching diminishes learning outcomes (Karakaş, 2016; Martin, 2003).

Many lecturers in EMI classes use short movies and films to share experiences, exhibit creativity, and convey concepts as in the study of Bell and Bull (2010). These quick videos effectively demonstrate the breadth and depth of topics (Sexton, 2006) and can be tailored to the course's needs. Lecturers often use a combination of the blackboard, PowerPoints, quick videos, and films to enhance their courses. Additionally, games like Kahoot and Taboo are employed to make classes more engaging. However, an examination of EMI course materials revealed that lecturers did not use real objects (realia), which could help students better remember what they had learned (Argawati, 2009).

In EMI courses, lecturers use various evaluation and assessment methods, including multiple-choice tests, essays, quizzes, and exam feedback. Due to workload and large class sizes, traditional methods like paper-and-pencil tests are more common, while formative assessment methods for evaluating higher-order skills are less frequently used. This study supports Kao and Tsou's (2017) observation that written final exams and quizzes are frequently used by EMI lecturers. Li and Wu (2018) found that lecturers felt less capable of creating exam items measuring higher cognitive abilities.

Lecturers outlined their course procedures, revealing various issues divided into learner-related and lecturer-related categories. Participants primarily focused on language competency issues for both themselves and their students. Understanding these learner-related issues can aid EMI lecturers in professional growth and taking action to improve EMI implementation. Additionally, the findings highlight common global challenges such as poor English proficiency, diverse learner needs, questionable learning materials, and a mismatch between academic requirements and available resources (Wang, 2015), as well as context-specific elements.

Findings from the present study showing lecturers' concerns about students' low language competency confirm the findings of other studies (Choi, 2012; Hu & Lei, 2014; Macaro et al., 2018; Malavska, 2017; Sampson, 2012; Tytarenko, 2021). This low competency impacts lecturers' perceptions of EMI implementation and influences their teaching methods. One approach might be for lecturers to use simpler English to aid student comprehension (Hellsten & Prescott, 2004). Lecturers also express concern about students' low linguistic self-confidence, noting that students are often reluctant to articulate ideas during class. Linguistic self-confidence refers to a person's judgment of their ability to communicate effectively in a second language and is linked to low anxiety and perceived communication skills. Listening comprehension skills and knowledge of alternative expressions are crucial for developing linguistic self-confidence (Edwards & Roger, 2015).

The EMI course procedures revealed lecturer-related issues alongside learner-related ones. A key concern is the lecturers' poor English proficiency, an essential skill for EMI teaching (Macaro & Han, 2020). There is no standard language competency requirement for EMI lecturers (Macaro et al., 2018; O'Dowd, 2018), and little research exists on evaluating their language proficiency (Hultgren et al., 2022).

Thus, there is a growing need for suitable EMI teaching methods (Pilkinton-Pihko, 2013). Martinez and Morgan (2018) suggest that a B2 level serves as a significant threshold. In Turkiye, lecturers must pass national tests such as YDS or YÖKDİL with a score of 85 or more out of 100 (previously 80) to teach in EMI (YÖK, 2021).

Evaluation and assessment also present issues. Lecturers admitted to being more tolerant of errors in EMI exam papers than in TMI test papers, leading to inconsistent evaluations. Systematic errors, influenced by lecturers' biases, can positively or negatively impact students' grades (Kamış & Doğan, 2017). Criteria-based evaluation is recommended to ensure impartiality in assessing written and oral expressions (Demirel, 1998). Additionally, explicit policies at the institutional or departmental level are needed to guarantee fairness and uniformity in EMI assessment (Şahan & Rose, 2022).

Preparation in Turkish for EMI courses can hinder lecture delivery due to the time and stress involved in translating course material during a condensed period. Another issue is the lack of comprehensive course preparation, leading to monotony and inertia (Liao et al., 2008). Enhancing personal growth, motivation, and self-confidence is crucial as an inert existence can severely impact performance.

Lecturers noted that teaching by merely telling is a significant issue. Lecturing dominates EMI delivery in Turkiye, resulting in less interaction and a monological perspective (Jensen & Thogersen, 2011). Telling involves information transfer without context, whereas effective teaching provides context and practical applications. It's recommended that lecturers employ methods encouraging active student participation and vary their delivery techniques (Feden, 2012).

A lack of subject-specific vocabulary and confidence among lecturers is another challenge. Self-confidence is a powerful motivator and essential for effective teaching (Mwalongo, 2014). Lecturers also struggle with nervousness, often linked to their language skills and self-confidence. Concerns about being unable to answer student questions exacerbate this issue (Agustiana, 2014). To build self-confidence and avoid mistakes, it is crucial for lecturers to thoroughly understand the course content (Agustiana, 2014).

A significant issue in EMI courses is a lack of communication skills among lecturers. Effective communication, including questioning abilities, is essential for successful teaching and aligns with social constructivist learning theory (Loy, 2006). Lecturers who engage students through questions, responses, and personal experiences foster better learning outcomes. Developing communication competency is crucial in professional development programs as it enhances effectiveness across all teaching aspects (Zlatic et al., 2014).

6 Conclusion

This study has provided a comprehensive description of the EMI course structure and process within Turkish higher education, highlighting the pedagogical needs essential for EMI lecturers' professional development. To effectively support the

EMI course process, lecturers should be supported to explore methods for creating high-quality lesson plans, using strategies that make their lectures engaging and effectively communicate ideas. The implementation of translanguaging pedagogy, which integrates both the mother tongue and English, helps construct meaning and facilitates learning, demonstrating its adaptability and effectiveness in meeting diverse linguistic needs. Lecturers must enhance their methodological competencies, adapt to linguistic challenges, and integrate cultural sensitivities into their content delivery. Examining the EMI course process within the Turkish higher education context, this research proposes developmental strategies to support lecturers in improving their instructional practices and professional capacities. This approach aims not only to enhance educational outcomes but also to create a supportive environment for educators navigating the complexities of EMI.

Furthermore, lecturers require practical knowledge of measurement and assessment types alongside a theoretical understanding of instructional methods and strategies. Bridging the gap between theory and practice is crucial, as the choice of materials directly impacts instructional quality. Professional support is necessary for both language and pedagogical issues, emphasizing the need for ongoing professional development tailored to context-specific needs. Lecturers can be supported to use a variety of materials, including movies and videos, to enhance their teaching. Additionally, alternative assessment methods such as peer review, open book exams, student portfolios, and performance assessments should be incorporated more frequently. These methods can serve as reflective techniques that help lecturers understand their teaching practices and recognize their strengths and limitations. In conclusion, EMI authorities should prioritize well-structured training activities in professional development programs to address context-specific needs. This will help lecturers enhance their instructional quality and navigate the dynamic nature of teaching through EMI more effectively.

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Designing Professional Development Activities to Meet EMI Assessment Challenges



Olivia Mair, Amanda Murphy, and Francesca Costa

Abstract Designing assessment that is effective and equitable is challenging enough when students and teachers come from the same educational system and share the same first language. It is even harder in EMI contexts. Until very recently, assessment was a marginal issue in EMI research, but the *Journal of English-Medium Instruction* shone the spotlight on assessment in a special issue in 2022, recognising that more attention on assessment practices and on increasing EMI teachers' assessment literacy is needed (Dimova & Kling. *Journal of English-Medium Instruction, 1*(2), 137–152, 2022). This chapter addresses the issue of professional development for assessment in EMI, with a focus on Italian higher education. In Italy, very little research on EMI assessment has been carried out and there is little professional development that focuses specifically on assessment. The purpose of this chapter is thus to provide insights from evidence-based training and reflect on a PD workshop for EMI assessment in the Italian context, taking into account a worldwide shift towards a formative, assessment-for-learning paradigm (Inbar-Lourie. *Journal of English-Medium Instruction, 1*(2), 204–231, 2022), increasing diversity in the classroom, and the local culture of teaching, learning and assessment. The training also addresses the interaction of language and content in EMI settings. For EMI professional development to be effective it needs to engage teachers in a cycle of reflect-review-act-review over time, addressing the interaction between language and content in EMI classrooms and assessment practices, and increasing teachers' assessment and feedback literacy.

Keywords English-medium instruction (EMI) · EMI assessment · Assessment for learning (AfL) · Faculty development · Internationalisation · Constructive alignment

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1 Introduction

Globally, higher education has faced a period of rapid change, driven by internationalisation and EMI, digitalisation, and the increasing cultural, social, educational and linguistic diversity of classrooms. As far as assessment is concerned, these changes add further challenges to an already complex panorama. If it is difficult to design effective and equitable assessment tasks when students and teachers share educational and linguistic backgrounds, designing them to take into account more culturally heterogeneous classrooms, online and hybrid learning modes, as well as EMI, is even more so.

Against this backdrop of rapid change, the last 20 years have seen a worldwide shift towards *assessment for learning* (AfL) at all levels of education and increased interest in ways in which assessment supports learning. The *assessment for learning* approach stems from the overall influence of social constructivist theory, with its attention to the co-creation of knowledge, dialogicity and collaboration (Weimer, 2002). AfL is developed on the principle that students' awareness of their own learning increases through assessment that is authentic, transparent, and involves continuous feedback alongside low-stakes, confidence-building opportunities (Sambell et al., 2013). Such developments in assessment practices and attitudes to assessment suggest a particular need for teachers to acquire assessment literacy, particularly when navigating the complexities of multilingual, culturally diverse learning environments. Assessment literacy is defined as an awareness and understanding of the connection between assessment and learning, of assessment techniques and methods, or criteria, standards and policies and feedback purposes and processes (Price et al., 2012).

How language matters should be addressed in both teaching and assessment remains an elephant-in-the-room situation for many content teachers. Some would rather not have to think too much about students' language competence (Costa & Murphy, 2010), language biases and inequalities in assessment, and the effect of language ability on interaction in the classroom and on academic success. This chapter identifies some of the challenges of EMI assessment, with particular reference to the Italian context and the main needs of teachers. It presents new data from three separate studies and provides insights from professional development workshops for learning outcomes, assessment and feedback. The final section proposes tools such as exercises on constructive alignment (Biggs, 2014; Biggs & Tang, 2022), case studies and role-play exercises for developing evidence-based PD activities for assessment in EMI and for sensitising content teachers to language.

2 Research on Assessment in EMI

Although Dearden's (2015) survey of EMI implementation around the world pointed to assessment as an area of concern, until a few years ago very little research on it had been carried out. While historically research on EMI assessment focused primarily on language testing before and after entry into EMI programmes and English language certification of teachers (Dimova & Kling, 2022), attention has now shifted to the interaction between content and language. In much of the most recent research on assessment in EMI (Gronchi, 2023; Lo, 2022; Rodríguez Melchor & Walsh, 2022; Sahan & Şahan, 2022, Thippayacharoen et al., 2023), there is a focus on whether and how content teachers assess language and how teachers' beliefs about their role as content teachers as opposed to language teachers may actually differ from their teaching and assessment practices. Thippayacharoen et al. (2023) carried out a systematic literature review to determine whether and how EMI teachers assess language in EMI classrooms. A noteworthy finding was that in formative assessment, English proficiency takes priority over content knowledge, while in summative assessment the opposite happens, and "the evaluation of content knowledge takes priority over English proficiency" (Thippayacharoen et al., 2023, p. 561).

Studies by both Rodríguez Melchor and Walsh (2022) and Gronchi (2023) address the discrepancies between stated objectives for academic courses and what actually happens in the assessment stage. Rodríguez Melchor and Walsh (2022) showed that while EMI content teachers frequently claim to assess on the basis of content knowledge, they also acknowledge that students' language use in both oral and written assessment is assessed implicitly (e.g., Karakaş, 2016). Gronchi's study explores this implicit-explicit dichotomy further with regard to the assessment of essays and the use of rubrics. Like Rodríguez Melchor and Walsh (2022), the study finds "some misalignment between what EMI teachers claim and their actual practice as it is experienced by the students" (Gronchi, 2023, p. 5). It draws attention to the way both language objectives and learning are implicit. This implicit nature has implications for fairness, a key concept in assessment, as the students are not always given a full understanding of intended language learning outcomes or of teachers' expectations as far as language is concerned, thus opening up the potential for bias. Overall, there is a risk of inequality and unfairness if assessment criteria regarding language are implicit and not supported through teaching.

Validity and fairness are important concepts in the design and delivery of assessment and Lo (2022) highlights the need to apply them in EMI contexts. Her study of a large sample of exam questions and texts drawn from school and university examinations in Hong Kong was aimed at identifying the cognitive and linguistic demands of both summative and formative EMI assessment tasks and gaining insight into assessment practices. The study demonstrated that all the assessment questions analysed contained both cognitive and linguistic demands, suggesting that language aspects are always being assessed in some form, no matter what the discipline. This again poses the question of whether students are properly prepared

to meet these demands by content teachers and whether teachers are able to properly students' mastery of content (Lo, 2022). In a study based on the Japanese context, Aizawa et al. (2023) found that students' strong English skills and academic English performance were predictors of performance in academic subjects, suggesting that for those with lower English levels, there may be some unfair obstacles to academic success.

Kao and Tsou (2017) investigated the assessment and grading practices of EMI teachers as well as the role of English in assessment in Taiwanese contexts using questionnaires and interviews. The study revealed that teachers used mainly summative assessment and acknowledged that language competence played a part in the assessment of learning, even if this was not made explicit. There was some variation among disciplines as to how and whether language was assessed. The authors offered a framework for EMI assessment, aimed at explaining the purposes of different types of assessment. In the Italian context, Mair (2021) used a questionnaire to investigate EMI teachers' experience, assessment practices and training needs. Results showed that 67% of teachers agreed that English language competence played a role in grading (Mair, 2021, p. 121). The study pointed to areas in which EMI teachers need support, in particular developing transparent communication around assessment, increasing knowledge of a range of assessment concepts and practices, and enhancing tools for supporting students' language. It is recognised that in some contexts "it is exceptionally difficult to persuade EMI teachers to pay more attention to language when teachers believe that as long as students could get the content accurate, they could still get the marks in assessments" (Lo, 2022, p. 61), highlighting the way beliefs and mindsets about roles and language learning can shape practice. Other studies have contributed to an understanding of what happens in the classroom and during examinations. Examples of how language learning and assessment are at times embedded in content learning and assessment practices have been documented by Block and Mancho-Barés (2020), while Johnson (2024) focused on lecturer discourse about assessment in EMI settings, based on a corpus of engineering lectures.

According to Hultgren et al. (2022) and Inbar-Lourie (2022), moving towards assessment for learning (AfL) may be an appropriate solution to counter some of the complexities involved in EMI and language testing, which include changing conceptions of norms and standards in language. Hultgren et al. (2022) review the literature regarding language assessment of both content teachers and students in EMI, highlighting the difficulties in devising equitable and appropriate assessment when native and non-native speaker norms and notions of autonomously defined "English language proficiency" are applied. Inbar-Lourie (2022) draws attention to the unique assessment competencies needed by content teachers when content and language are integrated and notes the absence of research on the professional development provided to EMI teachers for assessment.

All of these studies have implications for the design and implementation of assessment and grading practices in EMI programmes and point to the need for training and support for content lecturers in specific areas: raising awareness of assessment concepts and constructs and knowledge of assessment across cultures;

ensuring intended learning outcomes for students are aligned with formative classroom activities and summative assessment; supporting teachers in transparent communication about assessment and the provision of feedback and working on mindsets about language teaching and learning.

3 The Italian HE Context, EMI and Assessment

3.1 Overview of Legislation Relating to EMI and Research

The TAEC database (1999–2018, Molino et al., 2022) shows that there are 52 publications in Italy related to EMI, of which 36 are empirical. It is clear from the database that studies on EMI in Italy are growing, and have so far explored the experiences of a variety of stakeholders, including institutions, students and teachers.

An overview of the Italian context emerges from several independent surveys of Italian higher education institutions and EMI policies (including Anderson, 2019; Broggini & Costa, 2017; Campagna & Pulcini, 2014; Cicillini, 2021; Costa, 2016; Costa & Coleman, 2013; Pulcini, 2015; Pulcini & Campagna, 2015; Santulli, 2015). The surveys reveal that between 2013 and 2017 EMI courses increased from 74 to 85%, that they are widespread throughout the country, although there is a greater concentration in the North of Italy and in private universities; Engineering and Economics are the leading EMI disciplines, and courses are delivered mostly at master's level. EMI courses are offered mainly as a strategy to make Italian universities more international.

Legislation relating to the use of EMI in Italian universities became an important issue after a historic court case involving the Politecnico di Milano. This case was sparked by a vote in 2012 by the polytechnic's academic senate which decreed that all courses at master's and doctoral levels should be taught through English, starting from 2014. Part of the academic faculty successfully appealed against this decision (TAR Lombardia judgment n. 1348/2013) because such a policy would contradict certain principles and articles of the Italian Constitution (Articles 3 and 33, which regard discrimination based on language and the freedom of teaching) and a Royal Decree from the 1930s (n. 1592/1933, Art. 271) that states that Italian is the official language of Italian universities. The court case proceeded and led first to a judgement of the Constitutional Court (42/2017) and subsequently of the Council of State (617/2018), which favoured a non-exclusive use of English and some form of parallel language use. The establishment of EMI-type courses was in part supported by a previous law on universities (Law 240/2010) which calls for the activation of courses in a foreign language.

On 22/11/2021 a new directorial decree (n. 2711) was published, which affects EMI courses in so far as it also concerns the linguistic competence of teachers. This decree regards the accreditation process of courses of study which is based on a

national database called Scheda Unica Annuale-CdS (Annual Single Form). Among the various guidelines for *Corsi di studio internazionali* (International Study Programmes), there is a part on "courses delivered in a foreign language" which includes among its requisites that "lecturers have adequate language skills of at least C1 level, verified by the University" (page 10 of the decree). This decree mentions an important novelty as regards EMI courses at a national level, which is the fact that teachers' linguistic competence needs to be verified by each university. The issue of the verification of linguistic competence can be linked to the concept and the establishment of teacher-training courses.

3.2 EMI Professional Development in Italy

EMI teacher-training in Europe has been gaining importance in the past few years and this trend is evident in a number of new academic publications. For example, an entire volume edited by Sánchez-Pérez (2020) was dedicated to PD, as well as an issue of the *Alicante Journal of English Studies* edited by Morell and Volchenkova (2021). Before 2020 O'Dowd carried out a study on EMI training and came to the conclusion that "many teachers are confronting these issues without a great deal of training and preparation and are therefore forced to come to terms with the challenges as they teach through English on a daily basis" (O'Dowd, 2018, p. 554).

According to Broggini and Costa (2017), EMI teacher training in Italy is expanding significantly, with universities offering PD programs increasing from 23% in 2013 to 40% in 2017. This growth was paralleled by a surge in scholarly research examining these training initiatives, as evidenced by multiple studies (e.g., Bier & Borsetto, 2020; Borsetto & Bier, 2021; Costa & Grassi, 2022; Costa & Mair, 2022; Hartle, 2020). EMI training courses in Italy are generally based on both methodological and linguistic objectives with sometimes an overlapping of the two (Costa, 2015). In a country such as Italy, where training for HE teachers is only now starting to be considered important, EMI training could become an opportunity to foster a modernization of teaching methods.

3.3 Teaching and Learning Culture in Italy

Understanding the local teaching and learning culture is important when designing training. A one-size-fits-all approach to PD for EMI teachers is not an appropriate solution because the context may give rise to specific needs that should be taken into account (Bradford et al., 2022). Italian universities have tended to be characterized by a transmission style of teaching and learning, described as "lecture-focused" and "teacher-centred" (Coryell et al., 2022, p. 17; Fedeli & Taylor, 2016). While until now newly appointed teachers were not required to undertake any pedagogical training for higher education, some Italian universities are in the process of

implementing minimal compulsory PD for all new teaching staff. These developments in PD are recent, however, and the results have by no means filtered through to all teaching and learning. One rationale for introducing PD is the drive towards internationalization and EMI, and the resulting diversity of student cohorts. The traditional style of teaching may not sit well with students from diverse cultural and educational backgrounds who expect active, student-centred learning environments. Mair (2022) found that international students in the first year of an English-taught bachelor programme in a northern Italian university had higher expectations for active learning and carrying out group work in class than their Italian peers.

As far as assessment practices are concerned, final oral exams prevail in most subjects. There tends to be a separation of teaching from assessment, with blocks of teaching during the semester, followed by a final exam. A study of three degree programmes showed that in 73.1% of cases, an oral exam was taken by students, while in 11% of cases, students sat for a written and oral exam (Pastore & Pentassuglia, 2015). The oral exam may be the only occasion in which the teacher interacts with the student and provides feedback (Mair, 2021). This emphasis on summative assessment as an exclusive form of assessment and the absence of occasions to give formative feedback are gradually changing due to an increased interest in formative and continuous assessment. In addition to the practice of oral exams, which may be entirely unfamiliar to students from different educational backgrounds, the grading system is somewhat esoteric and the exam period and some of the rules for exam taking are unique to Italian higher education.

Two notable characteristics of Italian higher education include large class sizes—with the teacher-student ratio being significantly higher compared to other European countries—and the unique profile of academic staff, with teacher profiles often lacking international and EMI experience. Many educators have limited experience teaching or learning outside Italy, often having spent their entire professional careers within a single institution. A survey by Mair (2021) on assessment practices revealed the extent of this insularity, i.e. 41% of teachers reported having no direct experience of assessment methods beyond Italy, while an additional 22% had only indirect exposure through experiences such as being a student or visiting researcher. This, together with the traditional teaching and learning culture, suggests a low level of assessment literacy.

Assessment was a marginal aspect of teaching and learning in Italian higher education until just a few years ago (Serbati & Grion, 2019), without taking the special features of EMI contexts into account. Adopting an active learning approach to teaching and a formative assessment paradigm has now become the focus of faculty development programmes in Italian universities and related research. In EMI, which has the added challenge of linguistic diversity of all stakeholders, it is also gaining attention. This may make it easier to secure "institutional buy-in", one of the necessary steps if new AfL assessment practices and training to implement them in EMI programmes are to be adopted (Hultgren et al., 2022).

4 Challenges and Opportunities of EMI Assessment

4.1 Teachers' Perspectives

At the start of a workshop on assessment for EMI and the international classroom in a northern Italian university, EMI teachers were asked to list opportunities and challenges related to assessment, feedback and learning outcomes on separate post-it notes. 19 teachers took part in the exercise, some of whom listed more than one challenge and opportunity. In total, 28 challenges were given. Thematic analysis showed that language and communication issues were the most frequent challenge, with eight out of 28 referring to language and communication, largely relating to interaction with students, but also to teachers' perceptions of their own (in)competence. Other challenges related to students' diverse educational backgrounds, named by five participants, and getting students to interact together in teams and in classroom activities, also named by five. Both language challenges and those relating to the diverse educational and cultural backgrounds of students overlapped with concerns about fair assessment practices and the difficulties in evaluating students' knowledge of topics if their language competence is not high. For example, "creating a level playing ground" and "being clear and fair to each student independently from their level of English" encapsulate teacher concerns and uncertainties about ensuring assessment in EMI is equitable and inclusive. Three of the challenges listed were specifically addressed to the assessment and grading *system*. Mentions of interaction and teamwork suggest that even if assessment-for-learning practices may not dominate, they are being used in the classroom. There was no mention of the alignment of assessment practices with intended learning outcomes, and only one point mentioned integrating an international perspective as a challenge. The concentration of concerns about language and fairness suggests that teachers lack guidelines and sufficient support on how to address uneven language competence among students and ensure communication around assessment is transparent.

Analysing the 27 opportunities listed in the same exercise provides insight into the way EMI can become a site for innovation and "questioning" of existing practices. The dominant themes were the chance to change practices and mindsets, and the contact with different perspectives, which led to wider disciplinary knowledge and an enriching exchange of ideas. Upskilling was also perceived to be one of the opportunities for EMI assessment by some teachers, with reference to linguistic, pedagogical and intercultural competence.

4.2 Teachers' Awareness of Students' Perspectives

It is crucial to enhance EMI teachers' understanding of the distinctive characteristics of international classrooms and the diverse backgrounds of multilingual, multicultural learners. By raising awareness of these varied perspectives, educators can

prevent the development of deficit narratives about students and work to mitigate potential linguistic and epistemic inequalities (Zheng & Qiu, 2023). Perceptions of students in EMI as 'deficient' in language and study skills tend to construct students as responsible for adapting to university practices (Hayes & Lomer, 2023).

One way of raising awareness is to draw on international students' perspectives of assessment practices in Italian universities. In focus groups with international degree-seeking students about their first 6 months in an Italian university, conducted as part of a European project, students were asked to identify the challenges and opportunities they had faced in the university and the local community (https://nearproject.eu/). In keeping with the specifications of the project, students came from countries with high migratory pressure or BRICS countries. Although many of the challenges related to the informal curriculum, friendship with locals and not knowing Italian, unfamiliarity with teaching and learning practices also gave rise to feelings of disorientation, as one student explained:

> For me, it was really a shock. I don't know if it's in a master's degree because you have to do a lot of individual work, or it's just the teaching here. In my country it was more like an interactive thing with students, so we had classes where they made us participate in class, they made us talk. It was like ongoing conversation with the professor. We had, I don't know, every two weeks group projects and presentations. So you really get to know people in your class and also have a relationship with the professor. But here there's the lecture where you have slides and the teacher just gives his slides. And that's it. […] I think they just ask two or three questions in the whole two hours, and that's it. So it's like paying attention and trying to copy everything they say, and it's not like an interactive experience. […] And then it's all about the slides. You just have to learn all these slides for the exam, which is like, a really hard thing to do, of course.
>
> International student in focus groups with international students, (Mair, 2024)

Adapting to the different teaching and learning cultures constitutes a "shock" in this student's words. The student describes a transmission style of teaching with a summative assessment based on a final exam. Learning is individual, based on note-taking during lectures and studying, rather than dialogic or team-based, and there are apparently no formative assessment opportunities. The student, from a non-Anglophone country, does not mention linguistic challenges.

In another study (Costa & Mair, 2023), based on video-stimulated recall interviews with EMI teachers, a teacher who had undertaken a series of EMI PD workshops, including for assessment, learning outcomes and feedback, discussed the changes he had implemented since, observing that course facilitators "forced me to consider the point of view of someone who isn't used to the Italian way. The Italian approach is based on an Italian background". He thus recognised that teaching and assessment practices are usually premised on students having collective prior experience of them within the Italian education system.

This is not to overlook the importance of local students' perspectives in EMI. *All* students in an EMI course may find assessment tasks unfamiliar, stressful and more time-consuming in another language and require information, examples, simulation opportunities and feedback.

5 PD Tools for EMI Assessment

While it is useful for educational developers and workshop facilitators to stimulate an exchange of ideas and reflection on assessment, it is also important to propose definitions, examples, exercises and strategies that can help teachers meet the challenges. The PD workshop presented in this section aims to enhance teachers' general assessment literacy, in addition to addressing specific challenges of EMI assessment, with particular reference to the role of language. Another aim is to support teachers in developing a repertoire of functional language for assessment and feedback in order to make communication around exams and grading more transparent, and feedback more effective. The workshop covers:

- Definition of assessment practices and purposes, drawing on Kao and Tsou's (2017) framework for EMI assessment
- Discussion of assessment and grading practices outside of Italy
- International students' perceptions of assessment in Italy
- Reflection on the role of language in content assessment
- Applying the principles of constructive alignment (Biggs, 1999, 2014; Biggs & Tang, 2022)
- Case study exercises
- Role play exercise on the provision of feedback and assessment communication
- Examples of tasks and rubrics for instructor and peer feedback

The following sections focus on the application of constructive alignment and the use of case studies and role-play.

5.1 Applying Constructive Alignment in EMI Contexts

As Inbar-Lourie (2022) suggests, for any attention and changes to EMI assessment practices to be effective, they must be positioned within broader considerations of the curriculum and teaching and learning in general. One conceptual tool for addressing course design is *constructive alignment (CA)*, a kind of backwards planning in which teachers are required to begin the design of curricular content, assessment and teaching activities by first thinking about the intended learning outcomes for students at the end of the course (Biggs, 2014; Biggs & Tang, 2022). CA provides a framework for aligning teaching and assessment practices with the attainment of learning outcomes. As the name suggests, it is influenced by constructivism and is underpinned by the notion that "knowledge is constructed through the activities of the learner" (Biggs, 2014, p. 9). The interconnectedness and inseparability of intended learning outcomes, assessment and teaching activities in CA is often represented as a triangle (Fig. 1).

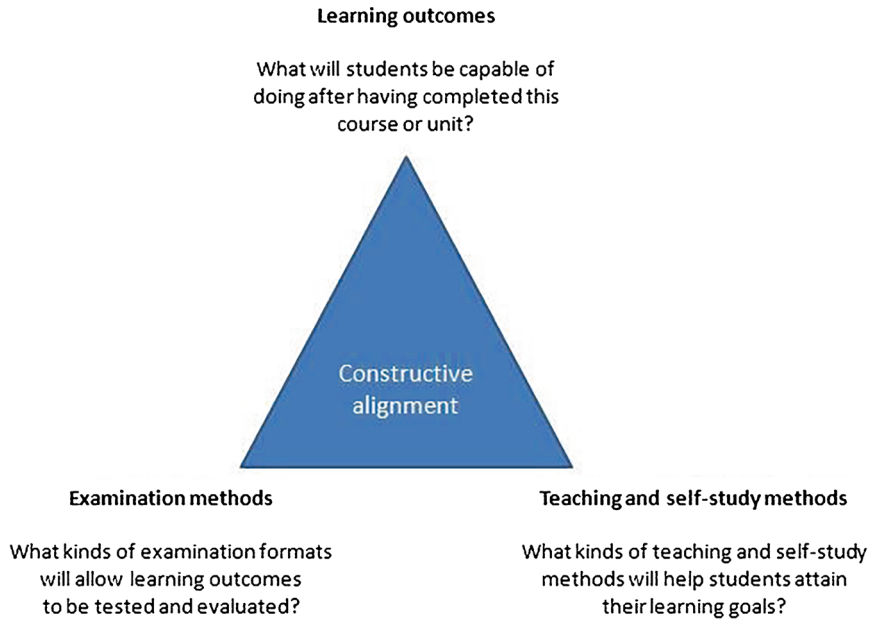


Fig. 1 Constructive alignment represented as a triangle, based on Biggs, (2014)

If applied to an EMI context, it is pertinent to adapt CA to take into account the complex relationship between language and content learning. To the intended content learning outcomes an intended learning outcome for language can be added, so that any language learning in the EMI programme is no longer just incidental, but intentional. In this way, language learning is integrated into the disciplinary learning and made an explicit focus of assessment and teaching activities. The assessment instruments adopted to evaluate whether the learning outcomes have been achieved can be both summative and formative in nature, and this follows through to EMI contexts when language is embedded in content learning. An example of how this can be achieved is addressed in the case of Professor C, presented in the next section.

Facilitators of PD can help teachers improve their assessment practices and design assessment tasks in workshop settings, or in one-on-one interventions. This involves looking at their syllabus documents, reflecting on their course's intended learning outcomes and seeking to align assessment practices and teaching activities with the intended outcomes.

5.2 *Integrating Language Learning Outcomes in the ILOs of a STEM Course: A Content Teacher's Journey Through PD*

EMI content teachers' beliefs about their roles in relation to language have been documented extensively, perhaps most notably by Airey (2012) who found EMI content teachers did not view themselves as teaching or having to teach language. More recently, Airey (2020) has offered suggestions for ways in which content teachers may be encouraged to reflect on linguistic goals for their students, mainly by drawing on the concept of disciplinary literacy.

In the case of Professor C, we witness an EMI teacher in a STEM discipline who through training and reflection eventually adds an intended learning outcome focused on disciplinary communicative competence as one of the six intended learning outcomes listed in his course. He also implements AfL practices in the classroom. The case study gives trainees who are at the start of their PD journey an example of a teacher's change in mindset and practice.

Intended Learning Outcomes in an EMI STEM Course: Case Study
Professor C has taught in a natural sciences faculty at a northern Italian university for over 10 years. He began teaching in EMI courses several years ago and since 2017 has undertaken PD for EMI and the international classroom. Training led him to reflect on the role of language in student learning and to change his mindset from avoidance of language matters to wanting to embed learning opportunities and assessment of language in an explicit way. He recognised that many science graduates would become consultants to industry and would need strong communication skills to be able to carry out their work, so his attitude was also influenced by a long-term view of curriculum in relation to the development of transferable skills and employability.

As a result, Professor C revised the intended learning outcomes in his EMI syllabus description to include an ILO that focuses on language: "Students will be able to communicate key concepts with appropriate scientific and technical language in written and oral contexts." In order to ensure that the learning outcome was achievable, the teacher embedded formative language competence-building activities during class time, such as role plays, creating opportunities for student-student interaction and feedback from the teacher. He designed assessment tasks in which students would need to demonstrate appropriate command of written and oral language.

5.3 Applying Good Practice Principles for EMI Assessment

The use of case studies is a way of focusing on critical incidents and engaging trainees in learning to apply good practice principles. A case study, as in the case of Professor B below, can be used to *bookend* a workshop, opening with an exercise in which participants read the case study and identify the assessment challenges, and closing with suggestions for strategies that can be adopted to improve the scenario.

Teaching in EMI contexts does not mean that local assessment practices must necessarily be abandoned, but that they should be used alongside other practices. This removes the pressure of single, high-stakes assessment for students, but at the same time, gives them the opportunity to try out new forms of assessment. A final oral exam as the *only* form of assessment is not the right option for EMI courses. If an oral exam is used, it will need to be supported by explicit instruction and information in written and oral form, both in class and via the learning platform. Simulation opportunities should be provided so that students can receive feedback and build their confidence. If language ability contributes to students' marks in a written or oral exam, then this needs to be stated and criteria and a breakdown of marks should be given. Any local or institutional rules relating to the exam and grading should be addressed by the teacher well in advance. EMI teachers need to be prepared to set aside extra time to answer students' questions about assessment via a forum in the learning platform, in class or during consultation hours.

Assessment: Case Study

Professor B has been teaching at an Italian university for 15 years. In 2021, he began teaching an English-taught course in a new economics bachelor's degree. His English is CEFR C1 level and he has presented papers at many international conferences. The course is similar to one he has already taught in Italian with mainly domestic students. He does not think it will be too difficult.

In preparation for the new course, Professor B translates his Italian-taught course programme but changes the course reading list to include mostly English language material. He plans the same type of assessment that he has always used: a final oral exam based on course reading and lectures. There will be four questions covering a range of course content. The final mark will be out of 30.

At the first lecture, he introduces the course and explains that assessment will consist of an oral exam. After class, a queue forms at his desk and in the weeks ahead he receives many questions via email and during office hours. Several students are anxious because they have never done an oral exam before. They ask how they should prepare and if other students will be listening when they take the exam. Some students ask if their English language level will affect the final mark.

Two students write and ask Professor B to explain the grading system: what is considered a "good" mark and how can they achieve it? One student says that she has heard that she can refuse a mark and retake the exam, and she wants to know if this is correct. Other students write about the exam calendar and ask when they should enrol for the exam.

5.4 Role Play for Assessment and Feedback in EMI and the International Classroom

In order to raise teachers' understanding of students' perspectives and to put the spotlight on the need for explicit communication practices surrounding assessment and grading, role play and simulations can be used during professional development workshops. The following scenarios are examples of a role-play activity in which participants take on the part of either a teacher or a student. In scenario one an international student is faced with culturally specific assessment practices and seeks further explanation. In scenario two the student wants a clearer explanation about a grade and the marking criteria, as well as feedback on assessment tasks. In the third scenario, a student wants to understand the marking criteria and what to expect in an oral exam. The activity is intended to raise awareness of the challenges students may face with assessment in EMI and of the importance of making all assessment tasks transparent. Each scenario is based on the facilitators' own experiences of assessment in EMI contexts as well as experiences recounted during workshops, questionnaires and research interviews (Mair, 2021, 2022). Participants are observed by facilitators and receive feedback. While the scenarios are context-specific, the activity could be adapted to other settings.

Student 1 You are an international student in Milan. You go to your teacher's office hours because you do not fully understand what to prepare for the oral exam. You are not used to an academic system that depends on an oral exam. Your writing skills in English are strong, but your oral skills are not as good. Ask what you should prepare, and how the exam is marked. You want to know if other students will be listening to your replies when you take the exam. You do not have any friends in the class who you can ask for information and you are very nervous about seeing the teacher	**Teacher 1** An international student comes to see you during office hours. She is clearly very nervous. You have noticed that she sits alone in class and is very quiet. She does not understand what to expect in an oral exam. Explain how the exam will be structured, how the students should prepare and provide an example of the types of questions. If language ability contributes to the final mark, you should explain how. You may wish to provide other suggestions that will improve the student's experience in an Italian university
Student 2 You are a domestic student whose exams have all been oral exams until this new English-taught course. In this course, you need to present a portfolio with three assignments and a bibliography. You think it will be easier than a normal oral exam, because you use online sources for your assignments, and you don't have to study the whole textbook. You prepare the portfolio and turn up for the exam. At the exam, you receive a mark of 25 out of 30. You are disappointed and ask for an explanation	**Teacher 2** Your second-year domestic students have never done coursework until now. They are not used to having written assignments. You have noticed that even though you provided clear guidelines about referencing, some students copy chunks of material from websites and present them as their own work without acknowledging the source. During the exam, provide feedback to one student on his assignment, pointing out the lack of referencing. Outline the strengths and weaknesses of the student's portfolio

Student 3	**Teacher 3**
You are an international student on exchange in Italy and you are surprised that your final mark for the course will come from an oral exam. Domestic students have told you that 30 and honours are the highest marks possible, but the marking criteria are not clear. You want to keep up your high average, so you need to find out more about the marking and the exam format. Ask about the exam system, what happens during an oral exam and what the criteria are for getting a high mark	A student in your course is more accustomed to written assignments and coursework than to oral exams. The marking system is also quite different from that used in her context, where marks are usually expressed as a percentage. Explain what constitutes 'a high mark' and how to achieve it in your course. You should also explain how to enrol in an exam and make sure the student understands that it is possible to accept or refuse a mark on the day of the exam

6 Implications and Conclusion

The EMI professional development tools and activities presented in this chapter respond to the recognised challenges of EMI assessment in the most recent research literature: the need to avoid *misalignment* of learning outcomes with assessment tasks (Gronchi, 2023), focus on making assessment tasks and grading fair and valid by communicating transparently and explicitly (Gronchi, 2023; Lo, 2022; Rodríguez Melchor & Walsh, 2022), enhance teachers' awareness of assessment and grading concepts and practices (Inbar-Lourie, 2022; Kao & Tsou, 2017; Mair, 2021), increase teachers' understanding of the integrated nature of language and content learning (Aizawa et al., 2023; Lo, 2022) and address shifts in ideas about what constitutes English language proficiency (Hultgren et al., 2022).

Like many universities worldwide, Italian universities are in transition. A drive towards internationalisation and English-taught programmes has led to an increased focus on teaching and learning and faculty development. Assessment, already a weak point in Italian higher education, requires special attention in EMI contexts. Training needs to focus on improving teachers' assessment literacy, raising awareness of the special features of the EMI classroom, providing practical tools for learning and assessment design, and encouraging reflection around assessment practice. Presenting instruments like constructive alignment as a tool for improving curriculum design and adopting a more holistic approach to designing assessment tasks, as well as establishing a community of practice through which teachers from a range of disciplines can reflect collectively and exchange ideas, provide a useful starting point for those designing training for EMI contexts. To ensure professional development is effective, teachers should take part in workshops over time, in order to engage in a review of assessment principles and practices, enact changes if necessary and observe the outcomes of the changes.

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Part II
Teacher Training in EMI: Best Practices and Challenges

Classroom Practices in EMI: Reflections from the Field



Sharon Hartle

Abstract In this chapter the local context focus is Italian higher education (HE) and the aim here, in fact, is twofold. Primarily, the background of EMI will be described, with reference to Italian universities in general, and, in particular, regarding EMI teacher training courses at Verona University. This development has been studied through the lens of participant perceptions over the course of these programmes which began in 2016 and were taught regularly until 2019, when issues such as the pandemic caused an interruption. Secondly, the learning design which resulted from the study of participant perceptions and then was applied in these courses will be presented in the hope that it may inform the work of practitioners in wider contexts.

Keywords English-medium instruction (EMI) · EMI teacher training courses · English for academic purposes · EMI learning design · EMI at Verona University

1 Introduction

In his influential book "English Next", Graddol (2006) predicted that English would become a component of basic education, no longer considered to be a separate subject, a foreign language but a basic skill for post-modern pupils (Graddol, 2006 p. 72). The implications extended also to Higher Education (HE) where universities competing in a global arena, had already become drivers of globalisation. Graddol, in fact, predicted a steady increase in English-taught courses in tertiary education. This spread can be observed internationally in the increasing number of English-taught courses and programmes at HE institutions and the approach adopted to teach them is commonly referred to as English Medium Instruction (EMI). Although

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there are various interpretations of the term worldwide, Macaro's (2018) widely cited definition of EMI as "the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language (L1) of the majority of the population is not English" (p. 37), for instance, is the one that is closest, perhaps to its application in Italian HE, the context of this chapter. This definition, however, does not focus on the English language learning aspect, as others may. Taguchi (2014) views EMI as a part of English Language Teaching: "curricula using English as a medium of instruction for basic and advanced courses to improve students' academic English" (p. 89). The British Council (Patel et al., 2023) prefer the term English Medium Education (EME), in line with the definition advanced by Dafouz and her colleagues (Dafouz & Gray, 2022; Dafouz & Smit, 2020), English Medium Education in Multilingual University Settings (EMEMUS).[1] This is a move to focus on education rather than specific "instruction" and the teacher role is seen as part of the whole ecology of learning. The version of EMI, as a result, that is implemented in one geographical area may differ considerably from that in another one. Its interpretation currently depends very much on the local context (Dearden, 2014) together with the related political, socioeconomic or cultural factors.

Graddol also predicted that, as a result of the spread of English-taught courses, specialist teachers would need to retrain to acquire additional skills and that English would be less often taught independently but rather as a vehicle for other subjects. As part of a recent project undertaken by the British Council called "The Future of English" (Patel et al., 2023), however, which re-examines and builds on Graddol's work, it was initially established by Rich (2021, cited in Patel et al., 2023, p. 52) that there is no real evidence for the adoption of EMI having led to a need for the retraining of English teachers. What has emerged is that there has been a proliferation of specialist master's or professional development (PD) programmes which focus on the skills involved in teaching EMI courses.[1] This reflects a perceived need for such training. PD is, in fact, a key area as those teachers assigned EMI courses may not be trained (Dearden, 2014) and may, therefore, find themselves to be ill-equipped (Dearden & Macaro, 2016; Lasagabaster, 2022) to carry out the task they have been charged with. This chapter begins with a section dedicated to the background of EMI, describing its advantages and disadvantages, the best practices and challenges, with an eye to the changing context of twenty-first-century HE priorities. We then focus on the specific Italian HE context and the University of Verona. We present our PD course for lecturers, which began in 2016, presenting its most recent evolution in 2019, which focuses on a learning design that mediates subject knowledge through an additional language, adopting an inclusive, transparent approach. Finally, we describe the latest part of our longitudinal study of EMI instructor perceptions of the PD programme. This was a series of interviews held at the end of 2020, where we sought to discover:

[1] In this chapter the term EMI is used by the author to apply broadly to the whole educational ecology.

1. How the lecturers' pedagogy had changed following the EMI PD course
2. Which of the strategies they had integrated into their teaching

As will become clear in Sect. 3, below, our aim was to focus, in particular, on increasing interaction and providing a more transparent, inclusive approach to EMI pedagogy in line with the recent UNESCO priorities of sustainability (United Nations, 2022), reflected in education as well as other domains. We also wanted to avoid top-down impositions for reasons also discussed in Sect. 3, and one of the most interesting emergent elements from our study was the fact that the majority of the lecturers appreciate a need for increased interaction and learner-centred classrooms.

2 Advantages and Disadvantages

In HE contexts the worldwide expansion of EMI can be considered to be unparalleled from a quantitative viewpoint (Agnew & Neghina, 2021; Lasagabaster, 2022; Macaro, 2018; Wächter & Maiworm, 2014). It is mainly conducted in settings where English is not the first language for at least some of the students or teachers (Pecorari & Malström, 2018). Mobility both of students and staff is a key institutional concern as is catering for increased international student intake. This process involves both advantages and disadvantages. EMI, a key actor in the internationalization of HE, was defined by Knight (2008, p. 21) as "the process of integrating an international, intercultural, or global dimension into the purpose, functions or delivery of post-secondary education". Achieving these aims, however, has involved various difficulties. Dearden (2014) highlights the challenge of developing an effective, systematic EMI pedagogy where support and guidelines differ considerably from context to context, and where linguistic competence may be reduced. There is also the fear that the level of education or research may be impoverished as a result of low levels of linguistic competence and an over-preoccupation with the language of instruction rather than the content of the teaching itself (Carloni, 2018; Dafouz & Camacho-Miñano, 2016). One advantage of internationalization, however, can be deduced from the fact that mobility both of learners and teaching staff, has increased in Europe and with this goes the recognition that being able to study or teach in another language is not only an advantage but a necessity. As underlined by Romani-Dias et al. (2019), becoming global citizens in today's world or obtaining international qualifications undeniably adds heightened value to student degrees, but, on the other hand, another problem is the cost in terms of the reduction of even loss of the use of local languages where the English hegemony is imposed, as will be seen below in Sect. 3, where the Italian case of the Politecnico di Milano is described (Molino & Campagna, 2014; Pulcini, 2015). Heated discussion of the danger of a predominance not only of this potential linguistic imperialism, but also of an Anglocentric didactic approach has also been widespread. This approach may not always be suitable for all contexts (Canagarajah, 1999; Philipson, 2009) nor may

'Englishisation' (Hultgren, 2014; Kirkpatrick, 2014), which mirrors, to some extent, concerns that have long been discussed in the teaching of English as a Foreign Language in general (Kirkpatrick, 2007; Philipson, 2009).

2.1 Twenty Years After the Bologna Process

Finally, it is worth considering that in the world today, 20 years after the introduction of the Bologna Process, other concerns are at the forefront rather than internationalization, which, for instance, in the UNESCO sustainable goals for 2030, outlined in 2015 (United Nations, 2022), is taken for granted. The overarching theme now is one of sustainability, equity, increased opportunities and wellbeing. In many nations the focus has shifted as countries look away from internationalization, turning inwards towards their own national problems, and this more inward-looking tendency may be reflected in education as well (de Wit, 2018). Additionally, HE must address such matters as artificial intelligence, digital and blended learning, demographic changes in the student population, immigration, financial crises, as well as ethnic and religious tensions.

The COVID-19 pandemic, together with the ensuing economic difficulties experienced by many, has also had its role to play on this global stage, leading to decreased mobility in general, and of international students in the HE context (Roshid & Ibna Seraj, 2023) in particular, although this may only be temporary (Agnew & Neghina, 2021). EMI, in this brave, new world, then, may actually have to change and be reshaped, catering not only for incoming international exchange students but also for the diverse, fluidly shifting groups which make up local populations. The lockdown may have reduced mobility temporarily, but it has also provided educators with opportunities to explore new resources if, as Reimers et al., 2020) say, they can rise to the "quintessential adaptive and transformative challenge" (p. 02) that working in new ways constitutes. This includes resources such as online streaming which, in turn, may lead to HE institutions being able to offer courses to students in a range of geographical locations. Furthermore, The *Sustainable Development Goals Report* (United Nations, 2022), which tracks global progress towards the 17 goals, defined in 2015 for 2030, has described its fourth goal as aiming to 'ensure inclusive and equitable education and promote lifelong learning opportunities for all' (p. 11). The picture in the current world of education, therefore, is by no means black and white, and the reality of multi-lingual and cultural classrooms today means that the call for ETPs will probably only increase. Additional stress on the need for equity and inclusion may also lead to a need for high-quality EMI teaching as the global spotlight focuses on the issue of transparency in education (Byram & Sheils, 2023). Making content transparent in multilingual settings could mean adopting an EMI approach, which may not be linked only to geographical locations but effectively to multilingual populations of learners (Jenkins & Mauranen, 2019). In light of these insights, we must carefully examine the role of EMI teachers and their professional development needs, ensuring robust

support for both current lecturers and future generations of learners. With this context in mind, we now turn our attention to the specific landscape of professional development in Italy, where the course central to this chapter took shape.

3 Contextual Background: EMI in Italian HE Contexts

The history of EMI in Italy is somewhat chequered, particularly since it was primarily initiated as an unpopular, top-down process, where policy determined a didactic approach, as will be discussed below. Italy was, indeed, initially at the forefront of the call for internationalization and reform embodied in the Bologna process, hosting the first conferences (MIUR, 1999), with the support of the Education Ministry. de Wit et al. (2015, p. 119) highlight the fact that Italy was actually the first state to apply the Bologna Process action lines. This initial enthusiasm, however, was followed by a subsequent slump as Italian HE institutions found themselves to be beset by challenges such as a lack of governmental funding or guidance on practical implementation. Italy fell behind Northern European countries in its English Taught Programmes (ETPs) (Wächter & Maiworm, 2014, p. 40). The OECD (2014) also published figures at that time classifying Italy as a country that offered "No, or nearly no programmes in English" (p. 346).

Since then, the Italian situation has changed, however, and the OECD (2020, p. 3) report the number of international students in Italy as having increased from 5 to 6% of global figures, on a par with the OECD average. Post-graduate degree courses in Italy are increasingly being offered either partly or completely in English, even though the numbers are still lower than those registered in northern Europe. The National Agency for the Evaluation of Universities and Research Institutes (ANVUR, 2018, p. 22) listed 504 courses taught completely or partially in English in 2018, with most of these courses being in sciences, followed by law and economics. This constituted a 60% increase in ETPs when compared with the 2016 total of 230 programmes. In the 2019–2020 academic year, the numbers published by the Italian Ministry show a further 30% increase to a final total of 886[2] ETPs, most of which, however, are post-graduate courses.

This period of stagnation may well be rooted in the fact that EMI in Italy was widely considered to be an unpopular decision, imposed from above. A highly publicized court case was brought as a reaction against the decision of the 'Politecnico di Milano' (Molino & Campagna, 2014; Pulcini, 2015) to deliver all Master's and PhD courses in English. This case prompted a discussion of the language of instruction both in the national and international press at that time (Scammell, 2014; Severgnini, 2015) and a ruling was finally provided in 2018 by the Italian Constitutional Court that courses could not only be taught in a foreign language

[2] These figures were published by the Italian Ministry online: https://www.crui.it/archivio-notizie/corsi-in-lingua-inglese-erogati-dalle-universit%C3%A0-italiane-master-universitari-di-i-e-ii-livello-,-dottorati-e-winter-summer-school-2-2.html (Last accessed 24/07/2023).

since this may "jeopardise the primacy of the Italian language, the freedom of students to learn and the freedom of professors to teach" (Salomone, 2018). The court case generated suspicion and a negative attitude towards EMI for many teaching ETPs in Italian HE. The ruling, however, can be seen as an attempt to protect the Italian language rather than a rejection of the advantages and opportunities that may go hand in hand with the choice of studying or teaching a subject in English. Perhaps the key error was the top-down imposition, since ETPs, as discussed in Sect. 2, also bring with them a range of advantages as far as internationalization is concerned. The situation is still delicate in Italy but many Italian lecturers now choose to teach all or part of their courses in English. The question of choice, indeed, is key as it is only those who recognize the benefits of ETPs, who will be motivated to make their teaching in the foreign language as effective as possible for their students. The need for specific training of lecturers involved in ETPs, as outlined in Sect. 1, is therefore, of paramount importance. If practical support and guidance are lacking, it is difficult for those directly at work, teaching EMI to know how to set about it. In the next section we look specifically at the background of EMI at Verona University, the context of our study.

4 Local Context: EMI at Verona University

The University of Verona offers ten complete post-graduate Master's programmes taught in English at the time of writing: three more than were offered previously in 2020. They are in a range of fields (economics, medicine and biotechnology, mathematics, artificial intelligence, data science, languages, kinds of literature digital culture and linguistics). These are complete courses but others, such as many of the ones offered on PhD programmes, are taught partially in English. This, obviously, does not account for the foreign language courses, which are not, in our interpretation of the term, to be considered as EMI courses. Although this may not seem to be a large figure when compared with the 19 programmes taught entirely in English at the University of Trento, which include two bachelor's degree courses as well as the postgraduate ones, or the 55 in Padua, there are also universities that teach far fewer courses in English (Universitaly, 2023).

4.1 EMI and Teaching

EMI research has recently been criticized as being mainly situated "in silo" (Han, 2023, p. 03), seemingly removed from the more general field of Second Language Acquisition. The most common form of HE content delivery is still the lecture, which is certainly true in the Italian context (Costa & Coleman, 2013). Macaro (2020) asks whether theories of second language acquisition can be transferred to content learning classes, stressing the fact that most research deals with language

learning in an "unproblematised manner" (p. 342). He later (2022) focused on the need for interaction in pedagogy, and our study reveals that lecturers appreciate the effectiveness of interaction in class. The danger of imposing often Anglocentric teaching methodologies on local contexts, however, remains high. Our aim was not to impose teaching methodologies on our lecturers but to develop a new approach which would involve elements of interaction, considering the context of the second language which needs to be mediated together with the content being studied. We intended to develop PD that would support the lecturers in their own teaching styles rather than imposing new ones.

4.2 Professional Development in Verona: A Bottom-Up Process

Rather than being a top-down imposition, our EMI teacher PD courses were originally developed in 2016, following a support request, made through macro area representatives of the lecturers themselves to the university language centre. Our aim, therefore, was to encourage this bottom-up approach and to involve various stakeholders in this process, as called for by Macaro (2015).

The process developed involved a series of steps and research went hand in hand with learning design over the years, as the course itself and lecturer needs, in particular, evolved. The first step in the process was to circulate a questionnaire among lecturers at the university to investigate their beliefs about their own linguistic competence which had been reported to be their main requirement. Post-course questionnaires were also distributed to participants and then analyzed both quantitatively and qualitatively to feed progressively into the learning design. A pilot training course was held for EMI lecturers in the 2016–2017 academic year, which aimed to introduce the pilot course and to establish the real needs of lecturers already teaching in English as well as providing support for those intending to introduce either complete or partial EMI courses both in the sciences and in the humanities. Following the success of this course, PD courses were offered annually until 2020, when they were interrupted due to the pandemic when they were no longer seen as a priority for lecturers focusing on the development of their distance teaching skills. Over the 2016–2020 period, however, the learning design was developed and shaped progressively according to the lecturers' responses to the questionnaires and in 2019 the study was developed further to include a qualitative analysis of the mentoring notes[3] and finally interviews were held in autumn 2020 with a small percentage of

[3] The 2019 PD course was structured as a 20-hour intensive blended learning course, which focused on EMI language and teaching methodology (see Appendix 1 for an overview of the modules). In addition to this, a one-to-one mentoring service was provided at three points in the course, the beginning, middle and end) for lecturers to develop their own specific goals, as well to inform their learning design.

the lecturers to discover how the PD course had changed their EMI teaching and which aspects they had been putting into practice in their own teaching

One key aspect to emerge that is worth noting here is that although initially the lecturers had been concerned about their own English language competence, this tended to shift rapidly during the courses to an interest in the methodological aspects of teaching their subjects in a foreign language, from the viewpoint of creating comprehensible teaching for their learners. This did, in fact, involve questions of interaction with learners, but the key element is that it emerged from the lecturers themselves. Over the years, the course design aims have, therefore, been adapted, and our research now focuses on discovering what strategies are considered to be useful by EMI lecturers both to develop their language and pedagogical skills and how far these strategies are being adopted in their teaching.

Costa (2015) describes PD as not being at all systematic but rather varying considerably from context to context in European HE. Frameworks for EMI teaching such as Dafouz and Smit's (2020) ROADMAPPING is popular but this is not in itself a PD framework, but rather a flexible system which informs a range of stakeholder activities, such as research and policy development as well as the more practical aspects of learning design and PD. Han (2023) advocates a task-based "closed loop" approach (developed by Adams, 1971, cited in Han, 2023, p. 04), whereby the EMI teaching approach being presented was task-based learning (TBL) (Ellis, 2003; Skehan, 1996; Willis, 1996) and the training procedure was also task-based. This is very similar to the approach to professional development that we took in line with Woodward (2003) who talks of "loop input", which she describes as being "a specific type of experiential teacher training process that involves an alignment of the process and the content of learning" (p. 301). Experiential learning is not new (Dewey, 1938; Kolb, 1984) but was perceived as innovative by our lecturers, as will be explored. In our case, the "loop" was provided by the teaching methodology itself, which mirrored the approach we were advocating. Our task-based, delivery methodology was blended with both online and onsite work, and our course participants were able, in this way to experience the learning design, which they later put into practice to greater or lesser degrees in their own EMI courses. The course design will now be discussed in more detail, illustrating the ways it has been both informed by lecturer perceptions and the need for transparency which is a goal of twenty-first-century HE teaching. To that end, we now describe the PD course in its most recent evolution at the University of Verona.

4.3 The Most Recent Evolution of the PD Course

As mentioned in Sect. 2.1 sustainability is one of the main UNESCO goals for 2030 (United Nations, 2022). Sustainability and inclusion in HE teaching means transparency for students, and perhaps, if not abandoning the top-down, lecture approach completely, at least integrating moments of interaction and formative assessment

(Black & Wiliam, 1998, 2018) such as feedback, reflection and goal setting. Such elements make the learning process transparent to learners and may increase their performance levels on summative tests. It is also useful to make the criteria required of them clearer at an institutional level. Winkelmes (2023, p. 01), referring to HE in general, describes the primary goal of transparent teaching in HE contexts as being as "…urgent as it is simple: to make learning processes explicit and equitably accessible for all students." This includes those studying in a second language (L2). EMI learners are dealing with the double task of studying content and grappling with the second language in which that content is encoded (Han, 2023). Transparent, inclusive teaching that focuses on learners as well as content, may include the use of a wealth of strategies and resources that have been developed for precisely this purpose of mediating content in an L2 in the world of EFL. Although many content lecturers do not consider it their job to teach the English language (Dearden & Macaro, 2016), the knowledge of English and the ability to use it is an elephant in the EMI classroom and the suggestion of combining content teaching with language teaching is worth taking into account (Karakaş, 2017; Lasagabaster, 2022; Macaro, 2018; Smit, 2023). Whether this is possible will be a matter to be decided in local contexts, but EFL best practices can, in any case, be adopted to inform EMI.

A detailed table has been provided in Appendix 2, which shows a breakdown of the transparent teaching framework that was integrated into our PD course (for an overview of the course structure see Appendix 1). This is based on Winkelmes' (2023) work but adapted to our context and divided into two macro areas of (a) elements to consider before starting a course and (b) elements to consider during the course itself, although there is some overlap of the two moments. The methodological aspects were balanced with a continual focus on language areas, such as cohesion in lectures, register for formal and informal contexts and collocation. This aimed to contribute to the lifelong learning of the lecturers themselves, and to build their confidence by starting from areas that were familiar to them before moving into new methodological aspects. Despite this initial focus on language skills, however, what clearly interested the course participants the most was the methodology which can be seen in Appendix 2.

The emphasis on this latest 2019 evolution of the Verona PD course, is clearly on demonstrating transparency by means of a closed-loop approach. The course elements were designed to help lecturers plan systematically for their EMI classes, develop materials and activities and put them into practice in an approach which is comprehensible and optimized for their learners. As will be seen in the next section the focus on EMI methodology, rather than on lecturer language proficiency, which has emerged over the years, is an integral part of this design for transparent EMI teaching. It was developed, specifically, as a result of concerns expressed by lecturers participating in the course over the years and as a result of the findings from the ongoing small-scale study that we conducted.

5 The Research Project

Our research project was undertaken to support the learning design of the PD courses and to ensure that these courses met the needs of the participants.

5.1 Research Structure: Questionnaires and Mentoring Sessions

The study, carried out to inform the learning design, was a longitudinal mixed-methods analysis, informed by Dörnyei's (2007, p. 62) intuition that bringing different approaches to analysis may reveal more than relying on either quantitative or qualitative approaches alone. The tools used were questionnaires, mentoring session notes and interviews. The first stage involved pre- and post-course questionnaires, distributed widely throughout the university, recruiting, therefore, a purposive sample of lecturers who were particularly interested in developing their EMI teaching skills. These questionnaires received 62 responses over the 4 years of distribution, from lecturers belonging to a range of different departments as can be seen in Fig. 1.

The majority were from Economics, Medicine and Computer Science as well as the Natural Sciences. 33%, however, were also from the Humanities teaching subjects such as Law, Linguistics, Cultural Studies, and Teaching and Pedagogy.

The findings from the questionnaires underlined a significant shift during the PD course, from an initial focus on the lecturers' own English language competence to a marked interest in teaching methodology for learners for whom English was not their first language. Key themes emerged from the mentoring sessions, conducted in 2019,[4] and were inductively coded thematically (Clarke & Braun, 2014) and analysed with the aid of Qualitative Data Analysis (QDA) software QDAMiner.[5] The findings from the mentoring sessions confirmed the initial preoccupation of the lecturers with their own linguistic competence, recurrent themes being firstly pronunciation, followed by general linguistic competence, comprehension, the use of English in informal contexts and spontaneity in the use of the language. As can be seen from Fig. 2, however, other areas, related more closely to the teaching methodology also emerged clearly, such as the adaptation of teaching methodology for EMI contexts, the time required for planning and the content of EMI lessons.

A more detailed investigation of the data collected from the mentoring sessions confirms the trend observed in the questionnaires. Lecturer objectives gradually shifted from their personal linguistic competence to focus on improving their EMI

[4] The study on the questionnaires and the mentoring sessions has been explored in greater detail in Hartle et al. (2021) and Hartle (2020), and is not the main focus of this chapter.

[5] QDA Miner software is available at https://provalisresearch.com/products/qualitative-data-analysis-software/freeware/ (Last accessed 29/07/23).

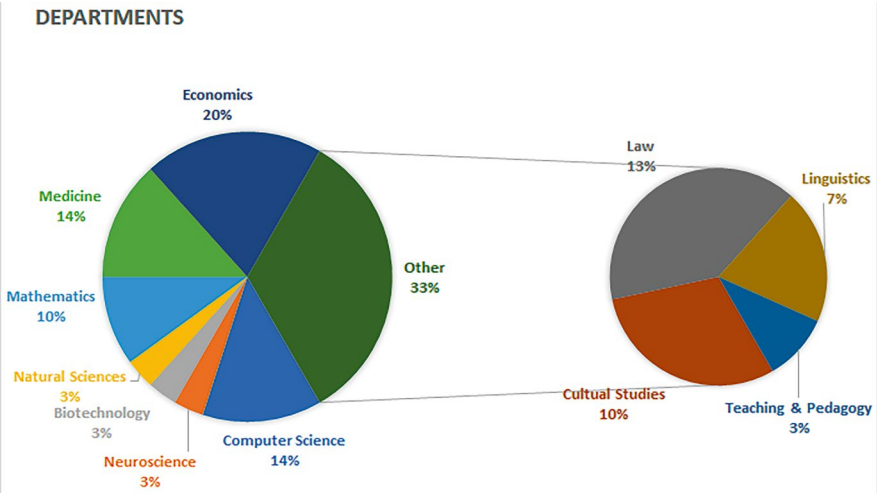


Fig. 1 Distribution of respondents to questionnaires

teaching methodology. This involved developing specific teaching strategies as well as creating and implementing materials such as PowerPoint slides, hitherto used exclusively to deliver texts as a written study aid for students, in such a way that would enable them to communicate clearly with those studying in an L2. What was noticeable was the particular emphasis on digital tools that could be used to mediate their subjects, which often involve complex issues and concepts, effectively in the L2. An interest in formative data gathering was also expressed, as lecturers explored digital tools such as quizzes that would provide them with feedback about the comprehensibility of the activities they conducted in class and would, in turn, provide feedback to the students on their levels of comprehension, as well as encouraging class participation. It was felt that, particularly in larger classes, the use of digital tools would encourage participation. One tool in particular, which was considered to be useful for this, was Mentimeter.[6] In this way, lecturers were already seeing the value in a pedagogical move from traditional lectures to a more interactive, dialogic mode, as mentioned by Macaro (2022) and Han (2023). What was of particular interest to us, however, was that this interest developed in a bottom-up way from the lecturers themselves, who had experienced the value of interacting with each other on their EMI PD course, with its closed-loop approach. The findings from these studies influenced the learning design of the PD course as seen in Sect. 4.3 above, but the main focus of the study to be considered here is the third phase of the study.

[6] Mentimeter: https://www.mentimeter.com/ (Last accessed 29/07/2023).

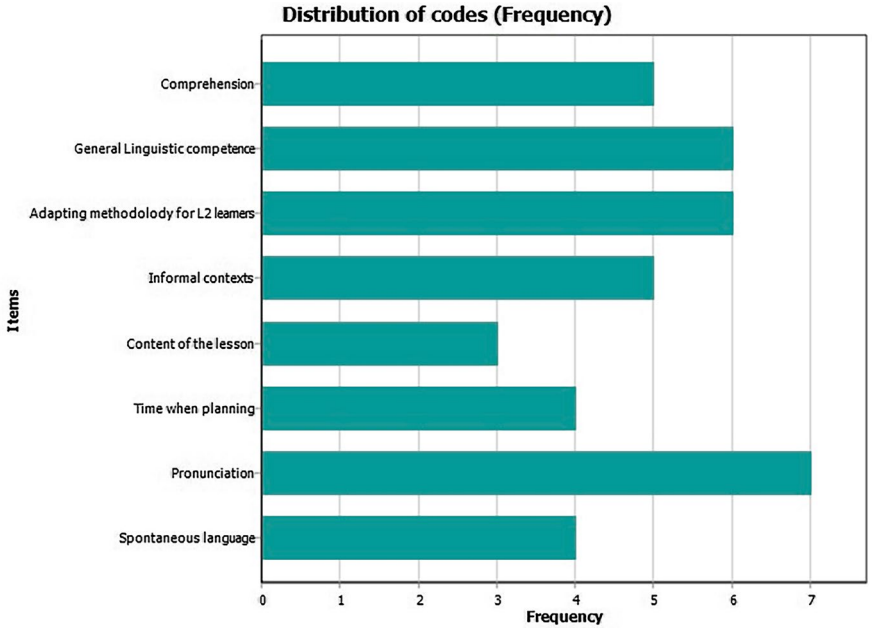


Fig. 2 Lecturer concerns in mentoring sessions, coded according to thematic frequency

5.2 Research Structure: Interviews

A series of eight interviews were conducted in autumn 2020. The aim was two-fold, both to triangulate the findings on the questionnaires and mentoring session notes and to determine how far the lecturers' EMI teaching had changed as a result of the PD course. We aimed to see specifically how the course had influenced that teaching. Unfortunately, this came at the end of the first period of lockdown following the outbreak of the COVID-19 pandemic, and the influence of the emergency was felt by all, as will be seen. This meant that some courses that had been planned did not take place, and, of course, that all teaching in our university was moved online, regardless of the expertise of the lecturers. The ensuing panic was widespread and reflects the situation worldwide, as teaching staff came to terms with mastering new skill sets. This also had the damaging effect, however, of demoting EMI from being a high-priority concern, and is reflected in the narratives provided in the interviews.

5.3 Interview Study Methodology

Semi-structured interviews were carried out by a team of four researchers,[7] who prior to the study had undergone training sessions on how to carry out interviews for qualitative research, in order to standardize the procedure (Gibbs, 2013). The interviews were structured around key questions that had emerged from the questionnaires and the mentoring session notes, which were of particular interest to the team in order to investigate the main research areas of how the lecturers' teaching had changed as a result of the course and which strategies/tools they had integrated into their teaching. A list of possible questions was determined (see Appendix 3 by the research group, which could be used to structure the interviews, which lasted a maximum of 20 min. The aim was to put the interviewees at ease and to use the initial questions to encourage the lecturers to develop their own narratives as freely as possible, not to ask each question in the list.

The interviews were conducted on Zoom,[8] and recorded after obtaining participant consent, and the transcripts were then cleaned as far as possible. Conversation analysis conventions were not used, as what was of interest was the content of the texts. The transcripts were then uploaded into NVivo software[9] and a hybrid, deductive and inductive (Fereday & Muir-Cochrane, 2006; Proudfoot, 2023), thematic analysis (Braun & Clarke, 2006, 2021; Clarke & Braun, 2014) was carried out. This analysis involved an initial reading of all the transcripts followed by the coding according to an established overall scheme, based on the interview question framework. The hybrid nature of the analysis, however, also allowed for emergent themes to be coded and added during the process. This, in turn, involved a continual revision of previous codes as new themes emerged.

One of the transcripts was double-coded in order to test for coder reliability and the two sets of values were measured by means of Krippendorff's Alpha (Krippendorff, 2011). In our context, where some divergence in interpretation can be expected, we consider alphas of >0.620 to be acceptable and the alpha obtained was 0.673. The codes, however, were then further discussed and one or two alterations were made to ensure objective assignment of references to codes.

Once the thematic framework was complete and the macro categories had been established according to the frequency of occurrence of specific themes, which were then indexed and further analysed to determine the key themes in the interviews. Multiple readings of the texts were essential at this stage, together with annotation of the process, to determine the "underlying, deeper meaning of the data" (Dörnyei,

[7] The researchers were led by Prof. Sharon Hartle and consisted of three experienced English language teaching experts from the University language centre: Mary, Elizabeth Birkett, Geltrude, Daniela Vescio and Max Marzio.

[8] Zoom is available at https://zoom.us/ (Last accessed 29/07/23).

[9] NVivo is distributed by Lumivero, available at: https://lumivero.com/products/nvivo/#:~:text=What%20is%20NVivo%3F,from%20their%20qualitative%20data%20faster. (Last accessed 31/07/2023).

2007, p. 246). The individual references were then collated into matrices using firstly NVivo and secondly Excel, with references organised according to the main thematic areas and further distilled into key concerns.

5.4 Results and Discussion

As illustrated in Fig. 3, the main emerging categories were, perhaps unsurprisingly, first, the strategies lecturers had integrated into their teaching (52%), second teaching and methodology (42%), and third the digital tools employed (38%). It is important to note that there was inevitably some conceptual overlap, with various references being coded multiple times. For instance, when lecturers discussed the digital tools they used, they would often simultaneously describe the pedagogical

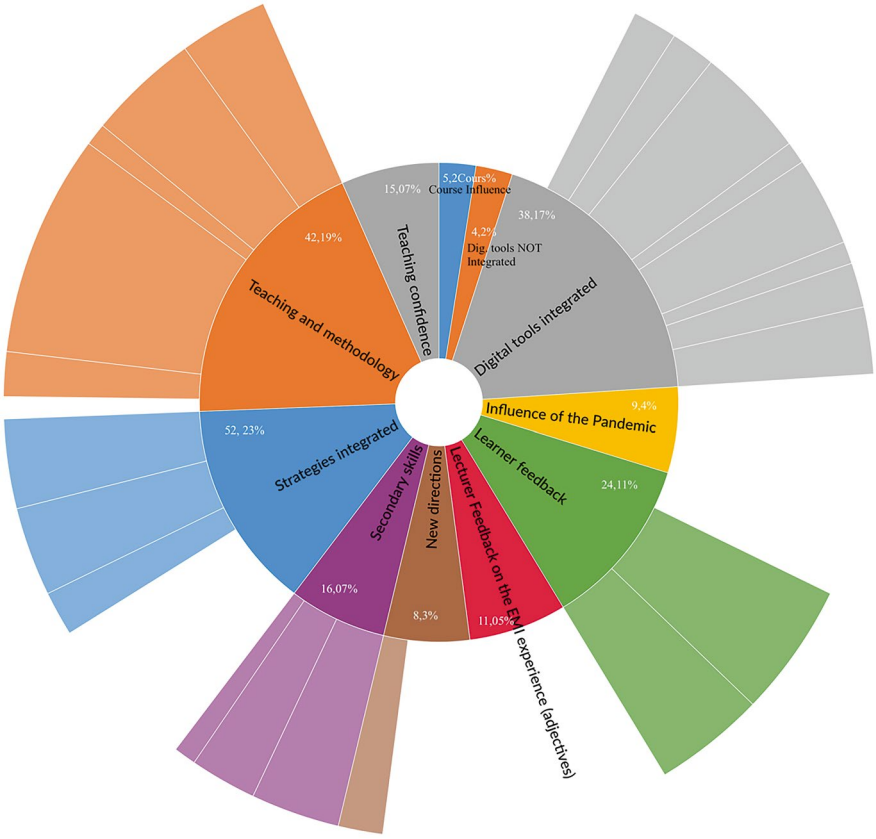


Fig. 3 Main categories emerging from the interview transcript data

aims of their activities, resulting in references that could be applicable to both teaching strategies and digital tool integration.

This is in line with the findings from the earlier analysis of the mentoring sessions. However, other issues also emerged, as can be seen, such as lecturers' teaching confidence, their learners' feedback on their own courses, secondary skills they had developed as a result of the course, the influence of the pandemic and new directions they would like future EMI PD courses to take into consideration.

Other categories that may be considered secondary are still worthy of note. The category of learner feedback accounted for 24% of the codes, which reflects an interest in a learner-centred approach together with an interest in lecturer interaction with students. Most of the comments reflected learner appreciation of the strategies the lecturers were adopting, particularly the use of segmenting video material or of providing interaction in the classroom. Another key area was 'secondary skills' (16%), which reflects many of the lecturers' desire to further their own lifelong learning, and often refers to developing their English language skills for areas such as academic writing.

Every person interviewed reported an increase to a greater or lesser extent in 'Teaching confidence' (15%) as a result of attending the PD course, which is a promising trend. When asked what new directions they would like to see in future EMI PD courses, the lecturers discussed academic writing, development of their lexical repertoires, assessment, more information about tools for teaching and how to plan and manage learning. L7[10] in particular spoke about the mentoring sessions and how useful these had been. Everyone discussed the influence of the pandemic, which was seen as a negative interruption leading to what has been described as ad hoc, temporary solution, that was unplanned and only implemented to ensure educational continuity rather than pedagogical quality (Bozkurt & Sharma, 2020; Hodges et al., 2020). The impression that emerged from the interviews was one of putting many things on hold whilst lecturers grappled with the situation and faced decisions as to whether they would stream lessons or provide video recordings, both of which modalities being offered by Verona University. Despite this, however, the pandemic actually forced them to use videos much more perhaps than they would have in the past. The work that had been done on creating interactive video recordings during the PD course stood them in good stead for this. 'Lecturer feedback on the PD course' (9%) was positive across the board, although L6 commented that courses designed to deal with specific disciplines would be useful as teaching differs considerably from one area to another, although she added, that she realised this would be difficult to organise. The code 'course influence' (5%) is perhaps misleading as almost all the participant narratives discussed changes they had made as a result of the PD course, even when this was not explicitly stated. When asked specifically how their EMI teaching had changed as a result of the PD course, the main aspects were increased confidence, greater awareness of digital tools and classroom

[10] L7 stands for Lecturer 7, as the participants have been anonymized. This system has been adopted for each participant, ordering them numerically.

strategies together with an openness towards new approaches, moving away from the more traditional top-down lecture approach. The code 'digital tools not integrated' (4%) has the least number of codes and the reasons given for not implementing the use of digital tools were related to courses being cancelled as a result of the pandemic or L5's fear that first-year students may not be ready for such an interactive approach. L2 had had an accident and had not been able to teach but would have liked to use Quizlet in her teaching and L7 and L8 both said that they wanted to use the tools more when they had the opportunity to. The lecturers primarily perceived the introduced experiential approach (Kolb, 1984) as innovative and effective. L7 discusses what he refers to as 'new methodologies', which can be interpreted as the combination of classroom management strategies, segmented content and interaction by means of a range of tools in class. He is not alone in referring to 'learning by doing' as L1 also comments on this: "I hope, If you interact during the lesson you can learn during the lesson and not just at home, studying books, I think It could improve performance." Similarly, L8 emphasizes the importance of having learners actively write code while receiving explanations.

In the next paragraph, we look in more detail at the results from the three major categories as the frequency of coding in these categories suggests concerns of primary importance for our lecturers.

5.4.1 Teaching and Methodology

We begin with the 'teaching and methodology' category, which is perhaps the most general theme. As can be seen in Fig. 4, it includes references to specific aspects of the teaching process. Key subcategories to emerge here were learner participation (16[11]), which is encouraging and is confirmed by the perceived need for interaction, discussed in Sect. 5.4.2, although it included references to lack of participation as well. Materials development and design (9) were also of interest as were exam performance (7) and student engagement (6). The latter has been allocated a separate code from learner participation as it refers to comments that are related to interest or motivation rather than actual participation in class activities. Two references were made to class size, which is of interest because they are somewhat contradictory. One lecturer used the notion of large classes (L6) as being unsuitable for interaction, and L7 commented that a tool like Mentimeter was not necessary on a course with small participant numbers.

[11] Numbers in brackets here refer to total references for each sub-category.

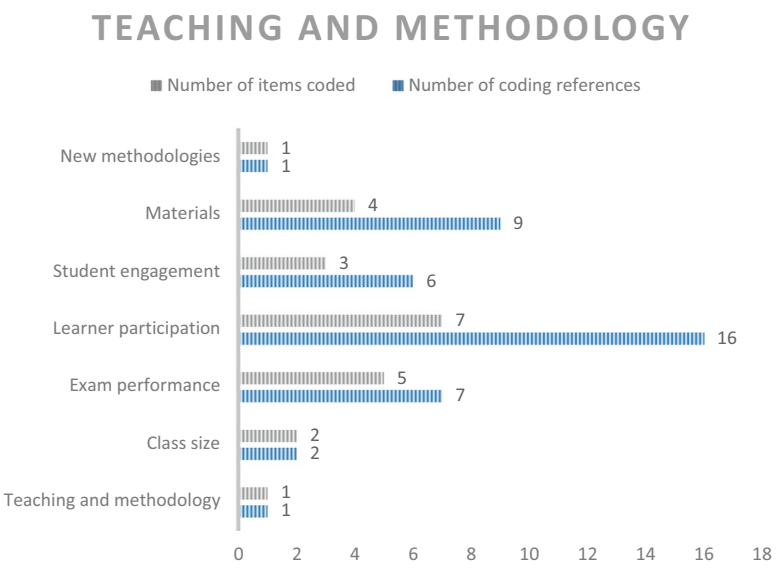


Fig. 4 Teaching and methodology: distribution across items and coding references

Learner Participation

The largest category here was learner participation, which lecturers stressed as being positive as a result of the new teaching strategies they were implementing. L1, for instance, discussed learner participation and engagement together saying when describing the strategies adopted as a result of the PD course: "I think it was useful because the students were really active during lessons and especially when using Mentimeter at the beginning of the course, because we didn't know each other. So it's kind of difficult to raise your hand and speak but I think the participation was good. Yeah." This shows an awareness that learners interacting with digital tools are more motivated to participate than speaking out in front of a large group onsite. Not everyone found it easy to motivate learners to participate actively. L6 considers participation and interaction to be difficult in large classes and L5 noted increased participation and engagement only when doing exam practice.

Materials

Discussion of materials involved in most cases the strategy of segmenting content and designing PowerPoint slides to be used interactively in class rather than simply as written texts of notions being explained. L2: "I think the students find it helpful. So I noticed that they use much more slides than before." Slides were considered essential for presenting content and as a study aid for learners. L2 focused on the importance of : "…preparing this slide in one way, with respect to another one are

putting some points, or picture or use some colour". She also said that these slides are essential in her field as no supplementary materials are available.

As will be seen in Sect. 5.4.2, segmented, interactive video recording design was also an important point which, together with the interest in developing materials that enable learners to interact, understand and participate, shows a keen interest in learner-centred teaching for the majority of the participants.

Learner-Centred Teaching, Digital Tools and Exams

The majority of the lecturers mentioned the perceived effectiveness of focusing on learners rather than course content and involving their students in a more experiential approach to HE, and this was often achieved by means of digital tools, which will be explored further in Sect. 5.4.3. L4 underlines the fact that using tools like Mentimeter, where students can see not only what they write but what their peers write as well, helps to build a group dynamic and community in class: "I think they (*the digital tools and new strategies*) are really successful and they have to, to...I would say, to build a relationship with the students. Okay. Yeah." (emphasis added) whereas, L7 underlines the fact that using all the strategies introduced on the course, leads to greater learner involvement: "I don't know if I can say innovative because all of these is properly innovative. But as far as it works as far as it helps you to get students more involved." The notion of segmentation appeared once again here as L8, who teaches computer science stressed the participation of learners who need not only theory but also to learn how to code step-by-step as he explains the concepts: "Yeah because studying on the slides is… it's fine if it's, if you're looking at theory. But as soon as you want to put something into practice you have to be able to go and implement that and do it." He, indeed, was very much in favour of student participation.

In HE contexts exams are also necessarily of interest as summative assessment is the measure of learning and leads to academic success, but there was also an interest in creating transparent procedures and providing students with clear instructions and criteria for assessment. L3, for instance, when asked if she was happy with the new strategies she was implementing replied: "Yeah, yeah, yeah, yeah, yeah, yeah. All the scores are above the mean level from the starting point. At the exams, they performed well, yeah, yeah, they performed well, especially OK, I'm not talking about the written stuff on accounting, but I asked them to deliver presentations in-class presentations. And this year it did very well. So, they use graphs much more than in the past. So probably the way I tried to, you know, the way I changed my lessons also transmitted to them as a way to perform their presentation."

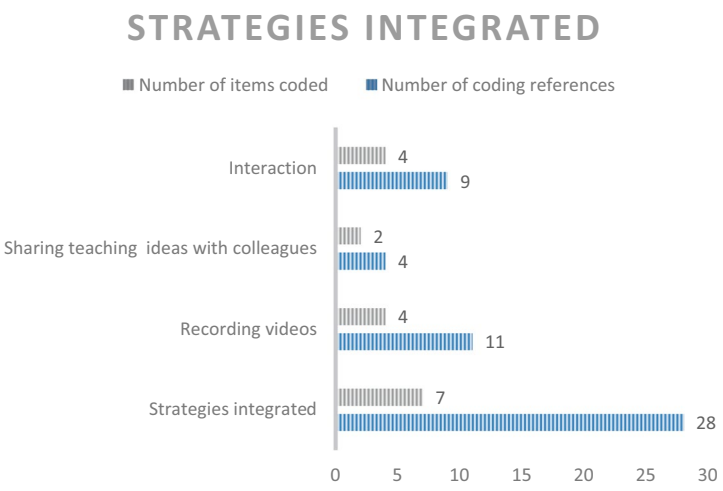


Fig. 5 Strategies integrated: distribution across items and coding references

5.4.2 The Strategies Lecturers Integrated into Their EMI Courses

Although there is some overlap between the 'strategies integrated' and the 'teaching and methodology' categories, the 'strategies integrated' category was allotted its own section because so many references were made to the specific strategies lecturers were using.

Figure 5 shows the major category of the strategies integrated by lecturers in their EMI teaching. It shows both the number of items coded, in this case, the individual interviews together with the number of coding references. This category accounted for the highest number of references of 52 total references, but only 24 of those references were related to the various sub-categories, which means that 28 codes in this category addressed other issues.

Recording Videos

Video recording, as was mentioned in Sect. 5.4 was of great interest, as a consequence of the pandemic, and forced experimentation with this delivery mode. The comments made by the lecturers, however, showed clearly that they had benefitted from the work done during the PD course on video structuring, and meditating the material for the learners. L4, for instance, explained her approach: "I'm posting both video and my notes. So I'm just writing the keywords and key sentences. So, in my...When I recorded my lessons I tried to make a slow and short video. Okay, with only the, the really important pointers."

Interaction

The need to increase interaction in EMI classrooms was called for by Macaro (2015) and discussed in Sect. 4.3. This topic is also a prominent feature in the interviews, with lecturers recognising its value and underlining the fact that their learners appreciated it as well. This emerged quite naturally from their experience on the PD course and in class applying the interactive strategies, some, however, underlining a perceived reluctance of learners to want interaction. L1, for instance, would like her lessons to be more interactive but her students "…are scared of statistics, and so at the beginning they didn't want to interact with me. If you interact during the lesson you can learn during the lesson and not just at home, studying books. So, I think, It could improve performance." A more experiential approach to HE teaching was also seen to be effectively learner-centred. L7 was enthusiastic about what he termed the 'learning by doing' approach on the PD course and he also mentioned the sharing of methodologies: "...even the chance to share your own teaching techniques and having a chance to, maybe for the first time, speak to other colleagues from different departments."

Interaction, finally, was seen to be fostered by using digital tools. L8 said: "Yeah I interacted more with them and, and yes, so it was, it was a nice way to test these, these tools."

One of the aims of the PD course, as mentioned in Sect. 3, was not to impose pedagogical norms but to develop new pedagogical practices through peer discussion. This aspect of sharing didactic approaches was appreciated by the majority of the participants.

Further Pedagogical Integrations

Transparency and inclusion may be heightened by segmenting content (Middendorf & Kalish, 1996), and this was a key component of the PD course. Together with the need to plan and structure learning in order to do this, breaking content into smaller more digestible elements was appreciated as useful by lecturers. L3 said: "OK, one thing I was not used to, to do was to explain and plan for the lesson at the beginning, during the lesson at the end. So, I'm, I do that systematically. Yeah, that's a good way."

Overall, there was an impression that these approaches and strategies were new and needed to be developed at a departmental level, not only for EMI courses. L7, for instance, discussed the new approaches that had been explored on the course and said: "Right. Yeah, that's interesting because it's really rare here, easily to be teaching. I mean, we have starting to debate about novelty methodologies, but I'd say we are at the very beginning of this… Just stopping by and talking about teaching is fundamental."

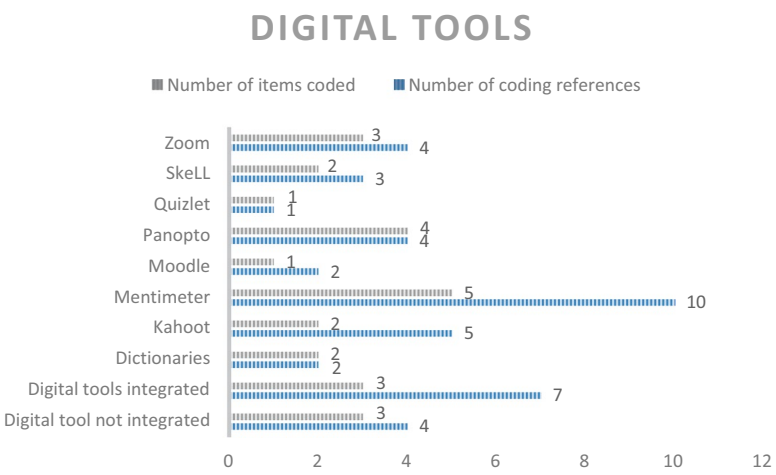


Fig. 6 Digital tools code distribution: distribution across items and coding references

5.4.3 Digital Tools

Digital tools have been allotted their own category, even though they appear in Sects. 5.4.1 and 5.4.2 and were also frequently referenced during mentoring as can be seen in Fig. 6. These PD courses were held before the pandemic, the aim being to encourage digital tool integration in large classes onsite, where learners may be loath to raise their hands before hundreds of peers, in line with research suggesting that learners may be happier interacting with a digital device (Fayez et al., 2021; Nguyen et al., 2022).

Mentimeter

Tools such as Mentimeter, which was the most popular tool, can be used both to increase learner participation and to provide information about learner levels, insights, and understanding of key concepts as well as other aspects. It has a range of functions enabling learners to answer open questions, participate in polls and ordering activities as well as creating word clouds. The fact that teaching was moved online during the pandemic had not been foreseen but the same tools could also be used at a distance, which was seen by most of the lecturers as an added advantage.

Mentimeter, in fact, is the tool that was discussed the most and proved to be effective when gathering formative information on learners as well as contributing to the group dynamics in class as discussed in Sect. 5.4.1. L1 stressed learner engagement as a result of using this tool, L3 also claimed that it boosted participation and L8 discussed various ways in which he had used it: “So, okay, I, I well, I had two hours, like so. Yeah, short time. But I had to survey the students for answers

and also use the Mentimeter functionalities for the answer of have some questions. I also like word cloud."

Kahoot

Kahoot was the next most popular tool with our lecturers. Although limited to gamified quiz and survey activities with a strong competitive element it was used by most of the lecturers for summative testing of knowledge. Gamification is considered to be a strong motivator in learning (Dahlstrøm, 2012; Wang & Tahir, 2020; Zhan et al., 2022), but L4 commented on speed as being a key factor, which meant that learners had to know the answer to be able to answer quickly. She saw this as a motivating aspect, which increased learners' studying.

Zoom

Zoom was mentioned several times in connection to the pandemic and opinions were mixed. L8 was keen to use the more active streaming option for online teaching but others (L7, L6) cited issues of connectivity as being problematic when using Zoom and preferred the more reliable option of recording videos.

SkeLL and Online Dictionaries

SkeLL was popular both for lecturers' own lifelong learning and for use in class and both L1 and L7 discussed online dictionaries as being useful.

L2 discussed Quizlet, a tool which provides a range of online quiz activities to test and practice knowledge of concepts as well as providing learners with the opportunity to create and share their own quizzes, thus increasing their agency and engagement, which has generally been seen to foster learning (Ahearn, 2001; Benson, 2022; Van Lier, 2008). L2, however, as mentioned above, had not had the chance to implement it as a result of an accident, although she would have liked to.

Digital tools, therefore, together with a series of classroom management strategies and the segmentation of content in materials may be said to be key aspects emerging from the interviews, all of which had been introduced in the PD course and were then mostly being implemented successfully in the lecturers' EMI teaching.

The general feedback on the PD course was positive so it can be concluded that this approach is a fruitful one, which is worth pursuing. As can be seen in Fig. 7,[12] which illustrates the keywords provided in answer to the feedback question asked in the interviews: "Can you describe the PD course in three adjectives?" the items

[12] This image was produced by means of https://www.wordclouds.com/ (Last accessed 19/06/2023).

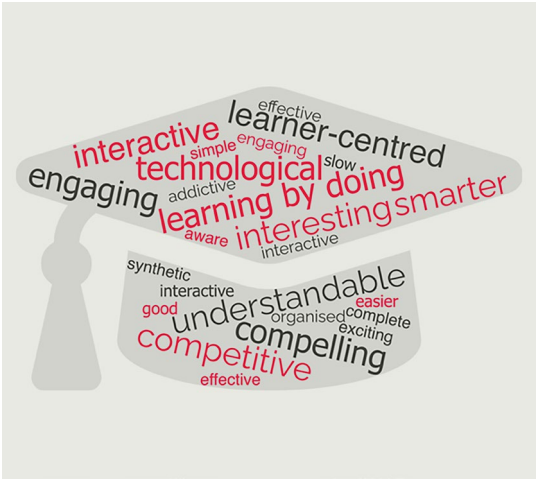


Fig. 7 General lecturer feedback on the PD course

chosen were all positive and illustrated both participant appreciation of a learner-centred, experiential approach as well as the perception of engagement emerging from the closed-loop approach to training.

6 Conclusion

In this chapter, the prospects for EMI in the near future in the Italian context have been considered. Shifting priorities from internationalization, which is currently almost taken for granted, to a more inward-looking concern with issues such as equity and inclusion in HE teaching contexts led us to develop a Design for Transparent, Inclusive EMI together with lecturers at Verona University in a bottom-up approach to pedagogy that sought to respect and integrate a range of local teaching strategies. The 2019 version of the course is presented here, mapped onto our framework for transparent EMI. The learning design of the PD course has been systematically informed by a longitudinal study of lecturer beliefs dating from 2016, but which was, unfortunately, interrupted in 2020 as a result of the pandemic. Our study, which is necessarily limited in scope to those teaching EMI in our university, revealed underlying openness to change and interaction in class after the experiential course. It would be beneficial in the future, to extend this research to other comparable contexts. Italian EMI has long been characterized by the top-down lecture approach, which is reflected in the lecturers' perceptions of experiential learning as being innovative. This approach, however, was uniformly appreciated by the course participants, who revealed their desire to interact more with learners to engage them in the subject being taught.

Our interviews, held at the end of 2020 were influenced by the pandemic and not all the lecturers had had the opportunity to implement the strategies presented in the

PD course, despite this, there was a general appreciation for a transparent approach to teaching, which aims to make content, institutional norms, exam criteria assessment comprehensible to students. Macaro (2015) called for interaction and this was something the majority of the lecturers also saw as positive, although some were driven by the fear that their students may not be "ready" for this new approach yet.

Ultimately every lecturer and every teaching context is different, shaped by the subject being taught, the personality and beliefs of the individuals involved and their past experiences. Because of this, respect for their different approaches, and sharing such approaches, is important if PD, as well as teaching, is to be inclusive.

Through the closed-loop approach to training, they experienced what it means to work in groups, to use the digital tools and classroom management strategies being introduced and even though there is still, understandably a concern for the level of their own English and their students' levels of competence, there was an appreciation of the need to use language carefully in class, with clear, simple instructions, and checking comprehension.

Appendix 1. PD Course Overview (Distributed to Participants Before the Course Begins)

English Medium Instruction (EMI): English 4 Lecturers 2019

Description and Aims The course is structured in found 3-hour face-to-face-modules supported by a further 12 hours' online work (reading, assignments and discussions).

The aim is to provide a basic skillset for those intending to teach a complete or partial university course in the English language.

Approach

The course adopts a *supportive* approach to EMI, and its principal aim is to develop lecturers' confidence in their own abilities to use English in the classroom, when teaching their own subjects. A secondary aim is to introduce and develop together an effective transparent approach to teaching in English, which will help in the delivery of lectures, the development of materials to be published online or used in class and to develop classroom management strategies. These are particularly important for the effective comprehension of content taught in a second language.

Module	Topic
Module 1: Introduction and confidence building	1. Discussion of needs analysis 2. Anxiety Management and confidence building 3. Lecture discourse (1) 4. Focus on Formulaic language: expressions required when introducing an argument. 5. Collocation and Remedial Pronunciation
Module 2: Teacher discourse	1. Lecturer discourse (2) 2. Focus on lecture introductions and developing clear lecture content 3. Intro. to Classroom management: instructions and checking comprehension
Module 3: Classroom management and learner support	1. Groupwork: giving instructions and checking comprehension (following an assignment for personal development of instructions and comprehension check questions) 2. Providing support for learners in an L2 (Informal language, office hours and effective email) 3. Effective use of PowerPoint and segmented materials development (1)
Module 4: Transfer to specific teaching contexts	1. Discussion: suitability of different materials/tasks for specific teaching contexts (following a reading assignment) 2. Focus on classroom interactions: groupwork, pairwork or open class format 3. Materials development (2) 4. Final feedback discussion

Appendix 2. Framework for Transparent Teaching in EMI Classrooms as Implemented in the Verona University 2019 PD Course

Elements of transparent teaching in HE	*Stages in EMI PD course in a closed-loop, task-based approach to training*
Element A: **Before** students undertake their studies: purpose of the work, the knowledge that will be gained by completing the coursework, skills to be practiced and acquired and relevance of such skills to their lives beyond the university.	Some of these depend on institutional policy but many measures can also be implemented by single lecturers in their own classrooms.
1. **Course Schedule and Deadlines**: Present a detailed course schedule with assignments, readings, and deadlines clearly marked. This allows students to plan their time effectively.	In our PD course these are clearly published on the Moodle e-learning site for the course as an example for lecturers to use in their own contexts. They were also related to clear deadlines published on the course calendar.
2. **Learning Outcomes Clarity**: Clearly state the learning outcomes for each module or section of the course. This helps students understand what they will achieve by the end of the course.	These are also stated at the beginning of each section of the Moodle. These sections show the various modules of the course. Outcomes include the skills and knowledge to de acquired and developed.
3. **Rubrics and Assessment Criteria**: Provide detailed rubrics and assessment criteria for assignments and exams. This informs students about how they will be evaluated and what constitutes high-quality work.	Introducing assessment criteria and frameworks such as Bloom's Taxonomy revised (Bloom et al., 1956)This is also published on the e-learning site for learners' future reference. The examples of exams with comments as to the marking is provided later in the course, so as not to discourage learners at the outset. Each module, however, includes a modified version of assessment exercises, dealing with the focus of that particular section of the course, to help learners develop an idea of what the assessment will include and how it will be carried out. This may be as an oral or a written test, for instance.
4. **Transparent Grading Policy**: Clearly communicate the grading policy, including the weightage of different assessments, to avoid surprises at the end of the course.	Examples of each section of the assessment are provided further on in the course, with the relevant grading procedure and rubrics.

5. **Regular Communication**: Maintain open communication with students through announcements, email, or discussion forums to address questions and concerns.	1. Although this was maintained throughout the course, the structure was introduced at the beginning and published on the Moodle. This PD course includes three one-to-one mentoring sessions (at the beginning to set goals, in the middle for reflection and further goal setting and at the end for evaluation of the course and the skills acquired together with further goal setting). This type of structure could be integrated by the lecturers in mainstream courses as office hour tutorials for small groups or on a one-to-one, voluntary basis. 2. Discussion forums were provided both on Moodle and by means of Padlet spaces, demonstrating multiple modes of communication such as text or audio.
Element B: During the course itself: the tasks involved during the course with multiple access to content and discussion/feedback with peers and lecturers.	This was perhaps the most challenging aspect of PD for those used to a top-down didactic approach and was introduced gradually during the course, focusing on adapting, sharing, and improving existing practices to aid study in an L2.
1. **Materials development**: Offer a variety of materials, including text, visuals, audio, and video, to cater to different learning preferences and abilities, which are segmented to aid study.	1. An initial focus was lectures and their language features (cohesion, simple, clear delivery), aiming to build confidence, followed by microteaching where lecturers could put the new skills into practice and interact with each other to comment on this work; 2. This was followed by a focus on PowerPoint slides and how to design them for segmented, interactive teaching purposes; 3. A focus on video content: including issues such as length, interaction with learners and timetable fit plus demonstration of the use of resources such as Edpuzzle for interactive adaptation of content; 4. A focus on reading/listening materials and how to break them down into manageable segments (Middendorf & Kalish, 1996) for study, interspersed with other, pace-changing activities such as discussions or reflection; 5. The use of various classroom strategies: groupwork, pairwork, analyzing when and how to implement these; 6. A focus on both analogue and digital tools and resources for polls, quizzes, feedback.

2. Classroom management: Provide clear and explicit instructions for assignments, activities, and projects. Use step-by-step guidelines to avoid confusion. Checking learner comprehension	1. At an early stage in the course, instructions, and the notion ofsimplifying language classroom language, were introduced. Clear, simple instructions to learners when setting up tasks are key and lecturers were given examples of unclear instructions, and asked to simplify them, followed by the development of instructions for their own contexts. Segmentation or demonstration is key here as well, as too many instructions may make it difficult for learners to understand what is required; 2. Checking comprehension is a with comprehension check questions (CCQs) was imported from EFL methodology, and in particular the Presentation, Practice, Production (PPP) model influential in 20th century EFL teaching (Anderson, 1982; Florkowska, 2018). Lecturers were given the opportunity to experience these and to develop their own, testing them on their peers. 3. The use of digital tools was also explored as a means to increase interaction in large classes and to gather information about learner comprehension.
3. Language Support: Provide additional language support resources, such as vocabulary lists or language workshops.	1. Lecturers explored the glossary function on the Moodle platform, which they then developed for their own contexts; 2. Digital reference resources, such as the Sketch Engine for Language Learning (SkeLL) interface, which enhance both lecturer and learner writing were explored, as were online dictionaries and their advantages and disadvantages.

4. Engagement Strategies: Encourage active learning through group discussions, collaborative projects, and hands-on activities. Clearly explain the purpose and benefits of these activities.	This is a key aspect of transparent, inclusive learning, which was developed throughout the PD course, by means of the closed-loop approach. Content was mediated by example, demonstration. Activities were segmented to encourage increased engagement and focus, as well to raise awareness of the value of such activities by means of experiential learning. The agency of the lecturers was also respected insofar as opportunities were provided regularly for them to apply the skills they were learning to their own contexts and to share their intuitions with their peers.

Sitology: platforms used

- Edpuzzle available at: https://edpuzzle.com/ (Last accessed 18/08/2023)

Moodle available at: https://moodle.org/ (Last accessed 13/09/2023)
Padlet available at: https://padlet.com/ (Last accessed 13/09/2023)
Sketch Engine for Language Learning available at: https://skell.sketchengine.eu/#home?lang=en (Last accessed 31/07/2023)

Appendix 3. Interview Questions to Prompt Lecturer Narratives

1. How has the course influenced your teaching?
2. What tools have you integrated into your lessons?
3. What strategies have you integrated into your teaching to support L2 learning?
4. How successful has this been in terms of:
   (a) Class participation
   (b) Student feedback
   (c) Information provided to you on your learners' abilities, beliefs
   (d) Improved exam performance
5. After taking the course and implementing the suggestions and guidelines provided how much has your confidence increased in EMI contexts?
6. Can you describe the pD course in three adjectives?
7. What would you like to work on in a future course?

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Educating University Teachers for New Roles: Notes About the Reconstruction of the Knowledge Base of Brazilian Academics Who Teach in EMI Settings



Telma Gimenez

Abstract The chapter discusses the need for a critical approach to educating university teachers for English as a Medium of Instruction (EMI) settings. It argues that teacher development initiatives should go beyond addressing language proficiency and pedagogical skills, and instead focus on the reconstruction of the teachers' knowledge base. Drawing on Shulman's (*Harvard Educational Review, 57*, 1–22, 1987) framework of teacher knowledge, the chapter proposes that EMI teacher education should address content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners and their characteristics, knowledge of educational contexts, and knowledge of educational ends, purposes, and values. The chapter illustrates these dimensions with excerpts from studies conducted in the Brazilian context, an emerging EMI setting. It suggests that a critical approach to EMI teacher development can help deconstruct assumptions about language, standards, and legitimacy, and promote a more holistic understanding of the social, political, and economic dimensions of EMI. The chapter contributes to the call for greater interdisciplinary insights and theorization in the field of EMI.

Keywords English as a medium of instruction (EMI) · Teacher knowledge · Teacher development · Critical approach · Brazil

1 Introduction

There is a widespread consensus that English as a medium of instruction (EMI) is now considered an important strategy to internationalize universities around the world (Bowles & Murphy, 2020; Curle et al., 2020; Gabriels & Wilkinson, 2021;

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Galloway, 2022; Karakaş, 2016; Macaro et al., 2018; Smit, 2023; Wilkinson & Gabriels, 2021). As a result of the perceived benefits of offering courses in English in contexts where English is a foreign language, many higher education institutions have encouraged or adopted EMI as an internationalization policy, leading Macaro (2015) to coin it "an unstoppable train". This train, however, has different characteristics depending on who runs it and many researchers have tried to adjust its definition to best capture its enactment in various places. Jordão et al. (2020) take issue with the metaphor and challenge it by associating such a view with coloniality. According to the authors, there is a strong belief among university professors that English represents the best track that guarantees the train travels fast and smoothly. For them, it is important to deconstruct such myths by questioning assumptions about language, standards, native speakerism and legitimacy. These concerns are echoed by Sah and Fang (2024, p. 2) for whom there is the need to "scrutinize the sociohistorical, sociopolitical, and socioeconomic dimensions of EMI", and by Curle et al. (2024) who call for greater criticality in the field.

One aspect that has been reviewed critically is what exactly EMI means (Akıncıoğlu, 2023). Its appropriation in different settings may have various interpretations. Since Dearden's (2015) initial working definition of EMI as "the use of the English language to teach academic subjects in countries or jurisdictions where the first language (L1) of the majority of the population is not English" (p. 2) several other renditions have been offered. Dafouz and Smit (2016, p. 399), for instance, prefer to adopt another perspective and propose the acronym EMEMUS—English as a medium of education in Multilingual Settings to acknowledge that universities are becoming increasingly multilingual while recognizing the role of English due to its "both as an academic language of teaching and learning as well as a means of international communication across professions and trade". Following this approach, the project The Future of English (British Council, 2023) adopted the acronym EME:

> We feel that the term instruction implies a narrow, teacher-centric focus and does not encompass the dynamic processes of teaching and learning. As suggested by Dafouz and Smit (2016), the British Council uses the alternative term education, as we see the concept as a social phenomenon, within the theoretical frameworks of sociolinguistics and ecolinguistics. We use the term English medium education (EME) as the British Council's preferred term, reflecting the need for a more holistic approach at macro (or systems), meso (or institutional) and micro (or classroom) levels.

It is noticeable that the intent is to justify the maintenance of English as the predominant language in international universities while acknowledging the need to go beyond instrumental purposes or a narrow definition of EMI. It is a reformulation that goes halfway because it does not question English hegemony. For this reason, I adopt the term EMI in this chapter because it is more widely known and, as it will become clear, I take a critical stance toward this new language practice in universities. Additionally, the focus is on teaching and not on the other roles the English language can play in academic life.

Whatever the choice of terms, one aspect remains crucial: how university lecturers[1] will respond to institutional language policies that demand greater engagement with teaching via English. That response may lean towards compliance, rejection or transformation, depending on the characteristics of the institutional policy and the kind of teacher development they are required to undergo.

Assuming that EMI is now becoming part of the strategic plans for the internationalization of universities, the aim of this chapter is to propose a critical teacher development approach that is framed within the types of teacher knowledge proposed by Shulman (1987). This proposal requires, among other policy initiatives, opportunities for lecturers to reconstruct their knowledge base and reflect on the implications of teaching in a language other than the one shared by teachers and students.

I will review some of the recent literature on teacher preparation for EMI settings and argue that it may be useful to draw on Shulman's (1987) notions of types of teacher knowledge since this innovation requires reflecting on the teacher's role and the changes that are necessary to provide content input for learning. I will argue that not only language issues and teaching need to be addressed, but also how education itself needs reframing. This approach requires critical reflection on all the dimensions suggested by Shulman since classroom practices can reinforce language ideologies and thus contribute to the hierarchization of learners/speakers and the reproduction of the status quo. I will bring excerpts of studies with postgraduate teachers and students in Brazil to illustrate the importance of considering the knowledge base of university lecturers and their teaching practices.

The chapter may contribute to the call for greater interdisciplinary insights (Curle et al., 2024) and theorization in EMI, with a focus on an area that is marginally addressed in the current EMI literature, i.e. teacher development.

2 Teacher Development in EMI Settings

Context plays a very important role in understanding teaching practices, and therefore, is an important aspect in teacher education. As Dang and Cross (2022) argue, globalization has made it more complex to conceptualize what we mean by context, since the local and the global are interconnected, affecting practices and subjectivities. By combining a Vygotskian sociocultural activity theory and globalization theory, those authors proposed a context- based framework that considers the dynamics of macro and micro relations. They illustrate their proposal with an analysis of Vietnamese EMI teachers. As they suggest (Dang & Cross, 2022, p. 18)

[1] In this chapter I will use teachers and lecturers interchangeably, although the data I rely on was collected only with university lecturers and students at postgraduate level in Brazilian universities. However, the proposal presented here may apply to school teachers and other contexts as well.

> Further, in conceptualizing the subject and environment in a dialectical relationship, it reveals how the globalized context shapes teacher practices through EMI whilst teachers appropriate EMI in response to the demands of practice and shape the way globalization is transpired and permeates in their practices both directly and indirectly.

Even though context is played out in different ways, there has been an increasing number of initiatives to educate teachers in higher education for EMI settings focusing on linguistic and/or pedagogical dimensions. In a survey of 70 European universities, carried out in 2014–2015, O'Dowd (2018) identified a wide range of approaches to training and accrediting teachers. Those opportunities favoured English language support, usually in the form of oral communication strategies (77%), supervised feedback in practical teaching sessions (54%), methodology for bilingual education (49%), and development of academic language (29%). This clearly indicates a strong emphasis on language skills, supported by the belief that proficiency in the language is enough for EMI teaching (Cañado, 2020).

However, much more is needed to be able to promote learning in another language, especially when it is not the usual medium of instruction. Macaro et al. (2020, p. 146) explain:

> Thus, the question of teacher ability to teach through the medium of English may not simply be a question of their own level of English proficiency but of their general pedagogy, their understanding of the linguistic challenges EMI students face, and the interaction skills needed to communicate and ensure content learning with students whose own level of English may be insufficient.

It is a question for institutional policymakers, who usually take for granted that nothing else is needed, apart from some incentives, or even peer pressure. In the case of Brazil, EMI is relatively recent (Baumvol & Sarmento, 2016; Gimenez & Marson, 2022; Jordão, 2016; Martinez, 2016) and a growing literature is focused on its adoption in our universities (e.g. Gimenez et al., 2021). These studies have shown that although initiatives to implement EMI are closely associated with indicators of internationalization, there is still a very limited offer, even at the postgraduate level (Gimenez et al., 2018). In general, institutional policies have been directed at providing incentives and/or short preparation courses to lecturers who are interested in teaching in English. Research about teacher development has revealed that there is no consistent approach, and the courses exhibit great diversity in length; they are mostly offered in person, with the help of foreign experts in some cases, but mostly from the Applied Linguistics area. The target audience is usually postgraduate lecturers, considering the strong introduction of EMI at this level (Gimenez et al., 2018) and the funding schemes that value this practice.

That seems to be the case, for instance, of a recent initiative in my own university, which is offering a small grant (funded by the state research agency) to lecturers willing to teach in a foreign language "in order to increase and consolidate the internationalization of the universities in the State of Paraná" (ARI Call 003/2023). Considered in isolation, this monetary reward may not be sufficient to convince the lecturers that it is worth doing it. Additionally, the call may lead to the impression that courses in a foreign language are the same as internationalization.

Although there is a paucity of research on teacher development in EMI contexts in global contexts (see, however, Deignan & Morton, 2022; Ulfah & Widiati, 2024), some researchers have started to explore issues associated with this new practice, especially in monolingual contexts. In her review of the literature, Cañado (2020, pp. 2–3) pointed out that research addressing teacher "training"[2] focused on three main fronts: top-down approaches, teachers' beliefs and professional development for EMI. In relation to the last category, she also observed an emphasis on language proficiency and formal pedagogical education. Some of the characteristics of this training included reflection, experiential learning with student-centred methodologies, micro-teaching and individual feedback.

In order to address the research gap, Cañado (2020) did a mixed methods study to find out the main training needs of teachers involved or intending to teach in EMI programs at the University of Jaén, Spain. In one of her conclusions, she argued:

> A full-fledged EMI teacher training program should include, according to our findings, linguistic aspects (especially EAP), methodological options, underlying theory, micro-teaching scenarios to learn from the best practices of others, and enhanced support in the form of feedback and counselling.

As desirable as it is to provide support to teachers, this should not be limited to the linguistic dimension, even though many students expect to learn and practice English while attending such classes, as identified in a review of Brazilian EMI initiatives (Gimenez & Marson, 2022). In that review, the few teacher preparation courses showed a great diversity in the number of hours, objectives and content and methodological approaches. Most of them seemed to concentrate on providing teachers with the tools they needed to start implementing EMI (categorized as "instrumental", i.e. aiming at giving the teachers the "tools-of-the-trade"), while a few included reflections on assumptions about language and the consequences of adopting an English-only approach in the classroom (categorized as "critical"). The need to consider critical views of English was one aspect that the authors of the study pointed out, with the indication that recent perspectives on the use of English as an academic lingua franca could help develop a more fruitful line of inquiry, with studies that investigate the lecturers' receptivity to multilingual approaches in the classroom. Such a critical approach would demand the consideration of other dimensions of teaching, often neglected or taken for granted in EMI "training" programs.

One theoretical framework that helps reframe the in-service preparation of university lecturers will be discussed next. In other words, EMI provides an opportunity for rethinking the professional status of teachers and their knowledge base.

[2] I use the word "training" in quotes because I do not endorse a view of training, but rather of education and development of teachers.

3 Teacher Knowledge

The literature on teacher education has widely drawn on Shulman's (1987) categories of teacher knowledge, described as "a codified or codifiable aggregation of knowledge, skill, understanding, and technology, of ethics and disposition, of collective responsibility—as well as a means for representing and communicating it" (p. 4).

In that seminal paper published in the Harvard Educational Review, Shulman advanced his conceptualization of teacher knowledge, in the context of calls for the professionalization of teaching in the United States, which were based on the premise of the existence of a knowledge base which would frame teacher education and inform teaching practices. Without specification of what that base entailed, Shulman presented an argument around three questions: What are the sources of knowledge base for teaching? In what terms can these sources be conceptualized? What are the implications for teaching policy and educational reform?

For him, research on teacher effectiveness, although valuable, was not enough to determine the knowledge base. Shulman's view of teaching acknowledges that teaching begins with an understanding of what it is to be learned and how it is to be taught and moves on with offering opportunities for learning and ends with "new comprehension by both the teacher and the student" (Shulman, 1987, p. 7). But, he argues, it is important to go beyond that, and he proposed categories of knowledge that underlie the understanding that may lead to comprehension by the students: Content knowledge, General pedagogical knowledge, Curriculum knowledge, Pedagogical content knowledge, Knowledge of learners and their characteristics, Knowledge of educational contexts, Knowledge of educational ends, purposes and values, and their philosophical and historical grounds.

Although many critiques of his proposition challenge the categorization by claiming it is "strictly cognitive and individual" (Dickerson et al., 2022), it is a valid starting point for the discussion of what changes are required in EMI settings. In Brazil, it has been adopted as a reference for the establishment of teacher education guidelines (Brasil, 2019).

Pedagogical content knowledge (PCK) is viewed as the type of knowledge that makes teaching distinctive, by blending content and pedagogy, thus transforming content according to the diverse interests and abilities of the learners. This seems to be the only type of knowledge privileged in EMI teacher preparation programs, i.e. tools to enable teachers to deliver the curriculum in English. In EMI settings, the content may be the subject matter, but it can also include the English language and thus, teacher education cannot ignore how this poses new challenges to lecturers used to teach their subjects and not necessarily reflect on pedagogical issues. In many EMI courses, the teachers mention how that experience made them think about their pedagogical approach even when teaching in their own language (Barçante, 2020). In fact, for this new teaching context, there may be a reconstruction of the knowledge base, affecting many of the categories devised by Shulman.

Based on the literature that proposes a more critical approach to EMI teacher development (Curle et al., 2024), I suggest an application of Shulman's categories and their expected reconstruction in higher education teaching, as show in Table 1.

An EMI teacher education initiative should acknowledge the complexity of reconstructing the knowledge base—not only of the content but also of the lecturers' own experiences, beliefs, and attitudes towards the languages they use. This is not to say that teachers who teach in EMI settings would have to have dual

Table 1 The professional knowledge base of teachers in non-EMI and critical EMI contexts

Knowledge	Non-EMI context	Critical EMI context
Content knowledge	Focus on the subject being taught. Usually acquired during the academic trajectory	Focus on the subject being taught and attention to language issues emerging from the use of English Reflection on epistemic choices
General pedagogical knowledge	Broad principles and strategies for classroom management and organization Usually developed through experience, except for degrees that include aspects of pedagogical practice	Necessary for blending content and pedagogy in their field of expertise. It may not depend solely on experience and requires intentional learning
Curriculum knowledge	It includes knowledge of learning objectives and teaching materials corresponding to the subject matter and its relationship with other educational experiences	In addition to the knowledge related to the subject matter, it involves knowing how it fits into an international dimension, i.e. it may require further research into why the over-reliance on resources in English may reproduce inequalities
Pedagogical content knowledge	Knowledge that makes the content comprehensible to the students	More complex adaptations need to be made due to the extra burden of teaching in an additional language
Knowledge of learners and their characteristics	Usually based on expectations and previous experiences with groups of students	It would demand more information about the students' linguistic backgrounds and attitudes towards English prior to planning classes
Knowledge of educational contexts	Knowledge about the local and national educational policies and their enactment in institutional settings	Knowledge about local, national and international educational policies which promote EMI and their enactment in institutional settings
Knowledge of educational ends, purposes and values, and their philosophical and historical grounds	Knowledge of the philosophical underpinnings of current teaching practices	Reflections on the reasons for teaching in English in contexts where all those involved share the same language

Source: the author, based on Shulman (1987)

qualifications (content + English), but that their knowledge base will be transformed to deal with the challenges posed by the need to develop new competences.[3]

4 The Professional Knowledge Base of Teachers in EMI Settings

In this section, I will explore in more detail the types of knowledge to be considered in EMI teacher education that go beyond the pair content/pedagogy, much highlighted in the literature. The EMI context column in Table 1 may provide the backbone of a comprehensive program that addresses all the dimensions of teacher development based on the premise that teachers need not be "trained" in certain language or pedagogical skills but rather engage in deep reflections on the nature of teaching and the role of language in this process. In fact, this may be one of the biggest contributions of the EMI "trend" in higher education, thus recognizing that the creation of conditions for learning requires more than a solid understanding of the subject matter coupled with good English proficiency. I will illustrate my suggestions with excerpts of EMI studies carried out in Brazil. It is important to note that although there may be variations in disciplinary areas these are not relevant to the discussion, i.e. irrespective of the discipline, the types of knowledge to be considered are the same.

4.1 Content Knowledge

Considering that what counts as valid knowledge depends on an epistemological stance, the knowledge that will be reconstructed involves unmasking the assumptions about the content, be it in relation to the theme of the course (e.g. Marine Biology) or the English language. In this case, several authors have called attention to the need to deconstruct commonsensical views about English and engage in deeper explorations of insights gained from research on the use of English as an academic lingua franca (e.g., Calvo et al., 2022; Jenkins, 2014, 2019a, 2019b; Kuteeva, 2020; Murata, 2019).

It is important to note that conceptualizations of language are not necessarily discussed in EMI teacher education initiatives, perhaps because it is taken for granted that teaching in English is just a matter of translating the content from L1. That seems to be the case of lecturer Paola in Marson's study, who believes that:

[3] It is beyond the scope of this chapter to address the many effects that this configuration may have on teachers' emotions, but the readers may refer to works such as those developed by Sahan and Sahan (2023), Hillman et al. (2023).

> The preparation would have to focus on language. Theoretically speaking, the teacher could be autonomous, and search for disciplinary texts in English so he or she can see the terminologies, the discussions, and update himself or herself. Other actions could be: readings, training courses, exchange of ideas with colleagues, who can help with referral to sites or which dictionaries to consult when in doubt, even though the dictionary does not provide some details; i.e. websites, readings, and training course. (Paola, in Marson, 2023, p. 165)

Contrastive studies to check whether there are changes in content delivery in EMI and L1 contexts are rare. One exception is Zuaro's (2023) investigation of five sets of matching L1 and English-medium lectures given in different disciplines at three Italian universities. Her results showed that the teachers exhibited differences in content quantity, content selection and rhetorical devices used. For instance, there was "greater information load in the EMI class, vis-à-vis more succinct, or completely omitted, explanations to the Italian class" (Zuaro, 2023, p. 272). In terms of content selection, there were more Italian references made in L1 and more international references in the EMI setting. The employment of different rhetorical devices was also noticed: more frequent use in EMI lectures is repetition, paraphrasing and language alternation. The authors conclude that the research participants gave evidence of longer lectures, slower speech rates and more repetitions in EMI. These results suggest that it is not a matter of just translating the content, i.e. just developing the language proficiency of teachers is not enough and that different types of knowledge may be at play, guided by concerns with the student's learning or with making the content comprehensible.

In one study carried out with two Brazilian universities, the participants justified using L1 in the classroom, moving away from an English-only approach, with a gradual introduction of English, "little by little, possibly also at the same time monitoring what the reactions of the students are, and adapting the integration of English and Portuguese to how the students progress during their study" (Calvo et al., 2022, p. 167).

Another aspect that deserves attention is what teachers understand by the English language. Jordão (2019) discusses different language conceptualizations and defends the adoption of a decolonial perspective that makes boundaries between named languages fluid, in alignment with the translanguaging literature. Such a move suggests that we need to recognize EMI settings as primordially English as a Lingua Franca (ELF) spaces that exhibit great variability and non-adherence to "standard" forms of the language (Gimenez, 2019). To consider ELF as the epistemic stance in content knowledge is aligned with critical approaches in EMI, a much-needed direction in the field, as argued by Curle et al. (2024).

4.2 General Pedagogical Knowledge

University lecturers in Brazil are not required to undergo pedagogical orientation and tend to build their knowledge about teaching through experience. The assumption is that if one knows the content, that will lead to successful teaching. A

professional status, however, requires a set of knowledge and competences, as advocated by Shulman. For this reason, the development of general pedagogical knowledge is an important dimension of the teaching profession. In EMI settings, there is an extra burden on the teacher concerned with students' learning: how to teach complex concepts in a foreign language. Without the knowledge of pedagogy, the repertoire will be very limited and will constrain understanding of the learners' difficulties.

Another Brazilian EMI study surfaced the concern by a research participant that English could make content learning more difficult:

> A2: (...) I was worried about the level of English. How, could we professors try to be understood by the student? Because depending on the content it is so hard in Portuguese. And then, I thought: if it is too hard in Portuguese, if they have some difficulties to understand Portuguese, how can they deal with this content in English? (Focus group, Institution A, in Gimenez et al., 2024)

The difficulty expressed by the lecturer is related to a lack of pedagogical background that could help answer the question (how to be understood by the student?) since it is not merely about translating from L1 to English.

In fact, this difficulty may be explained by the fact that university lecturers generally are not required to undergo pedagogical preparation, on the assumption that being knowledgeable about one's discipline is enough to impart this knowledge. This understanding stems from a teacher-centred, input-based education, that EMI teacher development may help dismantle.

4.3 Curriculum Knowledge

University lecturers may not dedicate enough time to think about the curriculum, especially in non-interdisciplinary arrangements. Questions around what content to include in the program are not necessarily asked, and EMI may provide opportunities to challenge the status quo and the academic inequalities when most of the resources are written in English (Shimauchi, 2018). This could counter the idea that "English is the language of science", as expressed by some Brazilian postgraduate students:

> S4: If you want to have respect, you have to publish in English, right, because it is the official language of science, right. Any other country you go to, Germany, France, you will speak English. Then...there's the issue of publishing and presenting seminars. When I was there, I had to present seminars in English, all the conferences we go to here...it's in English (focus group with students, Institution B, in Cogo et al., 2024)
>
> S: I think it's perfect for science. It is short and thick... Writing in Portuguese is much more beautiful, the Latin language is much more beautiful for you to write prose. But for short and objective sentences, English is much better. There's less room for "misunderstandings"...it's clearer. (focus group with students, Institution B, in Cogo et al., 2024)

Language ideologies play an important part in maintaining English hegemony in higher education, as illustrated by the excerpts above. Curriculum knowledge that goes beyond the local, may expand the students' and teachers' repertoires and give them a better chance to challenge their own assumptions. The belief that "good" science is written in English needs to be examined and deconstructed in a process aiming at bringing awareness about how knowledge (re) production is skewed towards English dominant epistemes (Finardi et al., 2023).

If a decolonial perspective is adopted in the internationalization of higher education, it may impact how teachers are prepared for EMI settings. Questions about what counts as valid knowledge need to be asked and EMI teacher preparation courses can be an opportunity to introduce critical reflection on knowledge production and dissemination (Sah & Fang, 2024).

4.4 Pedagogical Content Knowledge

This is perhaps the category deemed most relevant in EMI settings since it blends content and pedagogical principles to make knowledge comprehensible to learners. With the additional task of doing this in another language, teachers have to consider not only how they do it in L1 but also how it can be equally comprehensible in English. However, when asked about what kind of preparation they need, teachers tend to elect language proficiency to deal with classroom management, as one of the participants in Marson's study expressed:

> [...] offer skills or courses for teaching skills in a foreign language, not just conversation, but aimed at better management in the classroom in terms of speaking skills. (Benjamin, in Marson, 2023, p. 163).

EMI teacher preparation courses that fail to recognize the complexity of language instruction beyond mere proficiency improvement may overlook a critical pedagogical dimension. As Shulman (1987) eloquently noted, effective teaching requires "forms that are pedagogically powerful and yet, adaptive to the variations in ability and background presented to the students" (p. 15). The challenge lies in bringing awareness to the nuanced process of transforming scientific knowledge into comprehensible pedagogical content within a foreign language context.

The immediate implication is that teacher development needs to focus on how the disciplinary area is expressed in English and how that translates into how it is conveyed in L1, which may be fostered with the involvement of teachers in exploring different modes of scientific dissemination in their discipline. Again, here too EMI may help expand the teacher's knowledge.

4.5 Knowledge of Learners and Their Characteristics

This is the kind of knowledge that is very relevant in EMI settings. When teachers take for granted or fail to acknowledge the individual differences of learners or their academic background there is the risk of doing harm rather than promoting learning. A multilingual approach such as the one proposed by ELF academics is more likely to help in building disciplinary knowledge since it considers the students' previous experiences and their attitudes towards English. A teacher who believes in English-only approaches is less likely to embrace translingual practices, especially if they espouse a transmission, input-based model in their classroom practices.

Our study with Brazilian academics revealed that many are sensitive to the learners' linguistic backgrounds and their lack of English skills, and therefore, willing to use L1 in class (Calvo et al., 2022; Cogo et al., 2024; Gimenez et al., 2024). This means that knowledge of learners and their characteristics should inform EMI practices and have a direct bearing on pedagogical content knowledge:

> when you want interaction, the interaction happens in Portuguese. So if you want participation, you're just going to have it in Portuguese. This is what I understood here, yeah? Otherwise like, in the first class, the interaction in English just happened with one student, yeah? And you know they were working in groups, but then you know, just one student tried to report in English what they were talking about. But you know, the interaction didn't happen in English at all, only in Portuguese after. So that's why the teacher had to accept Portuguese, yeah? And then it's ok because you have to consider the level of the students as well yeah? We have different levels of English there so… is fine as well, in my opinion. (Focus group, Institution A, in Calvo et al., 2022, p. 159).

Therefore, one aspect that EMI may prompt is the teacher's awareness of the learners' struggle in learning disciplinary knowledge while doing it in another language.

4.6 Knowledge of Educational Contexts

This kind of knowledge is usually implicit since rarely have university lecturers a chance to reflect on their educational contexts. In the case of Brazilian universities, the EMI initiatives can be ad hoc, depending on the teachers' own desire to teach in English, but at the postgraduate level, they are mostly likely to be influenced by financial agencies that value such practices as an index of internationalization. Although there are differences among disciplinary areas (Gimenez et al., 2021) many teachers report the influence of these agencies, as one of the participants in Marson's study explained:

> Researcher: Still regarding these classes in English, do you understand them as an academic imposition?
>
> Estevão: In a way, yes, because the CAPES [graduate program funding agency] requirements make very explicit the need to use English for communication between researchers, not only does this increase the concept of the program, but other things too, but it is something that is always present. I think this comes as a kind of imposition to us. (Estevão, interview, in Marson, 2023, p. 158).

Any teacher development program aimed at improving the knowledge base of EMI teachers would have to explore how they understand why classes in English are being introduced or reinforced as part of the university's strategic planning, and their connection with initiatives elsewhere. Equally relevant is the exploration of the interconnections of policies in higher education that place universities in a competitive milieu and who benefits from such policies.

4.7 Knowledge of Educational Ends, Purposes and Values, and Their Philosophical and Historical Grounds

Closely linked to the previous kind of knowledge, this one connects to the broader context that makes EMI a demand (or desire). Teaching purposes and their underlying values need to be scrutinized vis-à-vis a practice that has the potential to produce greater insertion in the academic world or exclude those who cannot follow a class in English. Such positive and negative views were expressed by research participants in Brazil:

> P4: Because I think the main point of teaching a course in English is to give the students the opportunity to feel how it is to be outside, in a foreign country. So, it is not exactly like this because sometimes they had to speak in Portuguese and if you are in a foreign country you won't have this opportunity, but the main point is to have this internationalization feeling. Most of them don't have the opportunity of being abroad. So it's a way to understand how it is, right? I think it's valuable to go just in English and see how it goes (P4, Panel discussion, Institution A, in Calvo et al., 2022, p. 156)
>
> A3: [classes] completely in English, I'm not sure if it's so beneficial because of the level of proficiency in English that we require, I don't know if it's exactly enough for the guy to develop a discipline in English and have a 100% benefit, so it turns out that in Portuguese he or she can express himself better, you can better identify his difficulties and say "it's a knowledge difficulty, it's not a language difficulty". So, I don't know if it's 100% beneficial for us. (Interview, A3, Institution B, in Cogo et al RBLA)

As argued by Sah and Fang (2024, p. 1) "a decolonial endeavour obliges us to be mindful of how EMI programs and research may inadvertently favour economic, political, and social advantages for privileged groups and nation-states".

5 Conclusion

In this chapter I have argued that there have been some recent calls for more criticality in EMI implementation across higher education institutions, following questions about the motives behind the internationalization of universities. Not only has the concept of English been challenged by research on ELF, but also decolonial thinking has been influencing academic reflections on the consequences of this process. As a result, and considering the variations in EMI understandings and enactment in different settings, I suggested that in the Brazilian context, it may make sense to

conceptualize the teacher development required by this innovation in terms of Shulman's (1987) proposal of the knowledge base, rather than framing the process as a matter of improving the teachers' language proficiency or methodology.

For that purpose, in Sect. 3, I have briefly outlined some of the key elements to be considered along the various types of knowledge for the professional status of EMI teachers, while claiming that an ELF perspective better suits a critical view of EMI. These elements may be taken into consideration when designing the syllabus for EMI teacher development initiatives. The adoption of Shulman's categories of teacher knowledge enabled me to rethink the original proposal (which I considered "non-critical", and therefore, limited to focusing on "the tools of trade"). Drawing on the literature that endorses a critical view of EMI, I suggested some potential ways of moving toward that direction. Table 1, therefore, provides a frame of reference for course developers.

In Sect. 4, I expanded the foci mentioned in Table 1 with some excerpts of studies done in Brazil, which is an emerging ELF context for EMI. Those illustrations support the need to not only expand the teacher's knowledge base but to do so in a critical manner. Therefore, the excerpts reinforce the conclusions by Cañado (2020) and Curle et al. (2024).

Finally, it is important to note that this proposal is not intended to exclude the need to take contextual differences into account, since knowledge is situated and played out in different ways depending on the macro and micro conditions (Dang & Cross, 2022). Nor does it intend to give suggestions on how to implement teacher education courses but rather what issues can be addressed.

Nevertheless, I hope these ideas may resonate with those involved in teacher education or development initiatives aligned with institutional policies that adopt a non-subservient stance towards opportunities for academic advancement.

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EMI Professional Development at a Korean Science and Engineering University: Practices and Challenges



Eun Gyong Kim and Mik Fanguy

Abstract Korea Advanced Institute of Science and Technology (KAIST), Korea's most reputed science and engineering university where the vast majority of its faculty are non-native speakers of English, offers the majority of courses in English. In order to help new professors with lecturing responsibilities, KAIST provides an EMI professional development program (PDP). This chapter describes how the EMI PDP at the university has developed and provides insights on what should be done for its effectiveness. To do so, firstly, the purposes, stages, and contents of the EMI PDP at KAIST are analyzed. Secondly, interviews are conducted among the five EMI PDP instructors and five content professors who have participated in the program. The interviews examine the strengths and weaknesses of the program and draw suggestions for its improvement from the participants' points of view. The chapter concludes with recommendations for EMI PDPs for science and engineering professors at EMI institutions.

Keywords EMI · Professional development · Korean university · Science and engineering

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1 Introduction

English-medium instruction (EMI) is a widespread phenomenon, adopted by universities worldwide, but research into EMI-related professional development in higher education is in its infancy (Kırkgöz & Karakaş, 2022; Macaro & Tian, 2020; Yuan, 2021). Deroey (2023) surveyed 25 articles that deal with EMI professional development programs (PDP) in universities and found that there were four components in EMI PDP: language, communication, and pedagogy, and EMI awareness. EMI awareness refers to an understanding of the theoretical underpinnings of EMI and attitudes towards it and that microteaching is a widely practised activity. EMI PDPs were usually developed by English language specialists within the university, and problems that frequently appeared in programs were contextualization, participant heterogeneity, content professors' confidence, and insufficient incentives. Deroey further observes that as a one-size-fits-all program is unlikely to meet the various needs of participants, programs should consider and cater to individual needs and university needs. Furthermore, Deroey argues that a program must be implemented in a way that does not threaten participants' confidence and self-efficacy and should avoid remedial approaches (Chen & Peng, 2019). Moreover, in order for a program to be acknowledged as a success, she suggests documenting outcomes applied in actual classes. Deroey concludes that supportive activities, such as autonomous and peer learning and appropriate incentives should be provided to encourage faculty members' participation in EMI PDPs. Based on her findings, she believes that the development of an EMI PDP should follow these steps: language assessment, language training, pedagogical and communication training, evaluation of outcomes, follow-up, and certification.

Sun (2023) surveyed 38 articles on EMI PD and certification. He identifies four main components in EMI PDPs: language competence, pedagogical competence, intercultural competence and EMI awareness, slightly different from Deroey's findings, and classifies certification types into two: one that tests English proficiency and the other that focuses on pedagogical methodology. Sun found that most studies have focused on language competence and that many have proposed standards for language competence. Studies have also been conducted on pedagogical competence and intercultural competence, or the ability to communicate with students of different backgrounds and to help them with the difficulties that they experience due to their academic and cultural differences. However, there are only a few studies on EMI awareness as a component of EMI PD. Moreover, only a few certification programs for EMI PD exist, and currently, there is no consensus on the standards of EMI PD certification. Therefore, there is an increasing call for EMI PD certifications that are internationally recognized among scholars.

For the actual implementation of an EMI PDP, microteaching is a popular choice of practice. In microteaching, lecturers design mini-lectures that are video-recorded for analysis. Feedback on their use of language, posture, and pedagogical skills is provided by trainers and possibly fellow instructors and students (Chen & Peng, 2019; Costa & Mair, 2022; Fortanet-Gómez, 2020; Morell, 2018). According to

O'Dowd (2018), 54% of the surveyed European institutions with EMI PDPs offer training involving microteaching.

In their investigation of EMI PDPs at three elite science and engineering universities, Kim et al. (2021) found that the universities' EMI PDPs provided general teaching methods or technical suggestions, but were not specifically aiming at EMI. Moreover, none of the programs included the components of language assessment or the development of language competence. The study survey results show that more than 80% of the respondents had not participated in EMI PDPs, and many had negative attitudes toward EMI PD certification.

The present chapter discusses a newly launched EMI PDP at the Korea Advanced Institute of Science and Technology (KAIST), the most reputed science and engineering institution in Korea (QS, 2023). KAIST consists of five colleges, all related to science and engineering fields—College of Natural Sciences, College of Life Science and Bioengineering, College of Engineering, College of Liberal Arts and Convergence Science, and College of Business (KAIST, 2023). The student population is composed of 3665 undergraduate and 7394 graduate students. KAIST has offered the majority of its courses in English since 2007. Currently, 75% of the undergraduate courses and 63% of the graduate courses are conducted in English (Registrar's, 2022).

The majority of the KAIST students are Korean nationals who speak English as a foreign language: the number of international students makes up only 8.4% of the student population (929/11,059) (KAIST, 2023). Furthermore, the vast majority of the undergraduate students are Korean high school graduates with little exposure to EMI before entering KAIST. In the same vein, most faculty members at KAIST are Koreans who speak English as a foreign language: the ratio of international faculty members is 20.6% (137/666), and among those international faculty members, many are Koreans with foreign citizenship who speak Korean as their native language. Hence, while most professors may be highly proficient in English literacy, their levels of fluency in spoken English are varied.

Since the adoption of a far-reaching EMI policy in 2007, both students' and professors' insufficient proficiency for EMI classes has been a contentious issue. To help students improve English proficiency, the EFL (English as a Foreign Language) Program at the School of Digital Humanities and Computational Social Sciences has run an intensive English for Academic Purposes (EAP) program, a multi-level EFL program that covers all four language skills necessary for academic pursuits. Furthermore, to assist professors with their EMI classes, the EFL Program launched an EMI professional development program (PDP) in 2021.

2 Data Collection and Analysis

In order to examine the EMI PDP at the university, all of the EFL and content professors who took part in the EMI PDP were invited via email to participate in interviews through email or Zoom according to the participant's preference and schedule.

Table 1 Semi-structured interview questions

For EFL Professors/EMI Trainers
1. What motivated you to participate in the microteaching program?
2. Indicate the extent to which you agree or disagree with the following statement: I believe that the microteaching program that I offered was effective and useful.
___1 strongly disagree ___2 disagree ___3 neutral ___4 agree ___5 strongly agree
3. What do you think were the strengths of the program?
4. What was your favourite aspect of the training and why?
5. What do you think were the weaknesses of the program?
6. What was your least favourite aspect of the training and why?
7. What are the suggestions that you would like to make to improve the program?
8. Please make any additional comments if you wish.

Five of the six EFL professors who participated in the EMI PDP as trainers and five of the eleven content professors who took part in the PDP agreed to be interviewed so a total of ten participants were interviewed in total.

The interview questions were designed to inquire about the EMI PDP itself, or how the program started and works, and participants' level of satisfaction with the program and their reasons for those levels. The interviews further sought to garner suggestions for the program's improvement. Samples of the semi-structured interview questions that EFL professors, or EMI trainers, and content professors were asked are shown in Tables 1 and 2, respectively. These questions were designed to gauge participants' experiences during and perceptions of the EMI PDP. Prior to conducting the interviews, ethical approval was sought and approved by an internal review board (IRB) at the university. To protect the anonymity of the participants, all five EMI trainer interviewees and five content professor interviewees were assigned a label starting with ET (EMI Trainer) and CP, respectively, followed by a randomly selected number between 1 and 5.

Textual analysis was conducted to analyze the interview responses. Once all interviews were conducted, the interview responses from each group of participants were anonymized by assigning a number at random to each respondent and by deleting all identifying information from the data. The researchers separately analyzed and coded the responses from each group of participants using a thematic content analysis coding approach. Specifically, both researchers read the interview responses and noted frequently occurring themes in each participant group. Next, all of the coding data from all the responses from each group were compiled, analyzed as a whole, and re-grouped to find similarities and differences between them.

3 Description of the Program

A committee consisting of six EFL professors was formed in order to develop a personalized EMI PDP in which individual faculty members could sign up for one-on-one assistance from an EFL professor in improving their delivery of content lectures in English. In preparation for developing this program, each member of the

Table 2 Semi-structured interview questions

For Content Professors
1. How did you hear about the microteaching program?
2. What motivated you to participate in the program?
3. Indicate the extent to which you agree or disagree with the following statement: The program in which I participated was effective and useful.
___1 strongly disagree ___2 disagree ___3 neutral ___4 agree ___5 strongly agree
4. I would like to recommend the program to my colleagues
___1 strongly disagree ___2 disagree ___3 neutral ___4 agree ___5 strongly agree
5. What do you think were the strengths of the program?
6. What was your favourite aspect of the training and why?
7. What do you think were the weaknesses of the program?
8. What was your least favourite aspect of the training and why?
9. What are the suggestions that you would like to make to improve the program?
10. Please make any additional comments if you wish.

EMI PDP committee participated in an intensive online training program hosted by Oxford EMI (EMI, 2023). In this training program, the EFL professors learned about some of the foundational concepts and theories of EMI. After all members had completed this training, the committee held meetings to decide how the program would run, who would be eligible to attend, and how the EFL professors would be compensated for their work.

Microteaching, a teacher training technique that enables lecturers to practice and refine their teaching skills in a controlled, simulated classroom environment, was chosen because it has been proven effective in EMI PDPs. Two separate plans were proposed to the administration by the EFL professors: a full program and a "short" program. The full program provided 5–7 hours of EMI instruction to the content professors and was estimated to involve 15 hours of work for the EFL professors. The short program involved 3–5 hours of instruction for the content professors and 11 hours of work for the EFL professors. The EFL program administration elected to implement the short program, in part due to a desire to reduce the instructional burden of the program on the content professors and in part due to budgetary considerations, as the full program created more cost for the EFL program due to increased working hours of the EFL professors. A description of the short program, which became the official KAIST EMI training program, is provided in the Table 3.

As shown in the table, the proposed EMI PD program involved four stages. In the first stage, the content professor would sign up for the program and would be assigned to an EFL professor by an EFL staff member. The EFL professor would then reach out to the content professor via email with a short self-introduction and a description of the program. The email contained a link to a pre-course survey consisting of 25 items. The survey consisted of items related to the content professor's topic of instruction and research, typical course size, instructional level of students taught, approach to instructional delivery, and level of English training and proficiency. Within the email, the content professor was also asked to send a video (around 30 min long) of a lecture they had delivered to their class.

Table 3 Description of the KAIST EMI Professional Development Program

Stage	Description	Components
Stage 1—Setting the scene	This marks the beginning of the one-to-one EMI PD. The purpose of this stage is to evaluate the individual professor's context and needs in order to tailor the PD specifically for them.	• Stakeholder motivations, context, & goals assessed via survey • Introduce EMI methodology • Content professors submit a 30-minute sample video lesson for analysis
Stage 2—Specify & Study	The purpose of this stage is to suggest 2–3 key areas of improvement based on the sample lecture analysis and the professor's perceived needs ("Setting the scene" questionnaire). In this correspondence, the trainer will suggest micro-lecture videos to watch (i.e. 'modules'; see module topic suggestions further on)	• Talk time • Language awareness and pedagogy • Willingness to modify pedagogy • Modules (videos/ quizzes done on KAIST Learning Management System))
Stage 3—Review and Revise	Stage 3 integrates the professor's current situation with the theory they have been given through the modules. The trainer and the professor create a plan for specific activities to try in the classroom.	• Revisit EMI feedback based on selected modules • Make mini-game plans • Create materials
Stage 4—Reflections and continuing development	Stage 4 is done after the EMI PDP and after the professor has had time to practice the new techniques. The purpose is twofold: to gather information on the success of the course and to give potential extra modules to professors.	• Content professors submit a video (or observation) of the new style • EFL professors submit detailed analysis of this new teaching style • Feedback

In the second stage, the EFL professor would review the video and provide feedback using a feedback form that was adapted from one provided in the Oxford EMI training program. The first part of the form included an overview of the teaching observation, where the EFL professor could provide feedback on how clearly and effectively the content of the lecture was conveyed through verbal and visual explanations, the structure and organization of the lecture, the use of language, and the effectiveness of the delivery techniques used by the content professor within the lecture. The next part of the form provided a detailed commentary of the observed lecture, marked with timestamps from the video. Lastly, the feedback form included a section called "Key Areas" where the content professor would summarize all the important feedback from the prior two sections of the form into a few brief, actionable areas where improvements could be made in subsequent lectures. This form was then emailed to the content professor, who could review the feedback and the actionable suggestions made by the EFL professor. A one-on-one Zoom meeting

was then scheduled after the content professor had sufficient time to review the feedback. During this meeting, the EFL professor would answer any questions and provide further explanation and context for the written feedback. Several areas for improvement were identified, and the EFL professor would then refer the content professor to a learning management system (LMS) that was created by the committee to provide an asynchronous instructional supplement to the one-on-one live interaction on Zoom. The LMS contained a total of ten video lectures on the following topics: foundations in EMI (4 videos), vocal delivery to aid in non-native speakers' understanding (1 video), visual delivery to aid in non-native speakers' understanding (2 videos), and active learning tasks (3 videos). The EFL professor requested the content professor to watch several videos at their convenience corresponding to the areas for improvement that were identified from the written feedback form and to take corresponding comprehension quizzes provided on the LMS.

Once this phase of asynchronous study on the LMS was completed, a second one-on-one Zoom meeting between the EFL and content professors would be scheduled. In this third stage, the EFL professor and content professor would work together to create a plan for specific instructional activities to try in the classroom in order to improve the quality of instruction. During the second Zoom meeting, the EFL professor would give specific suggestions that the content professor could implement during the remaining weeks of the semester, or in a subsequent semester if too few weeks remained.

After the content professor had sufficient time to practice the new techniques suggested by the EFL professor, a final email would be sent to the content professor asking them to reflect on the effectiveness of their new instructional practices and on any areas related to EMI that they would like further instruction on. The email would also contain a link to an exit survey asking for an evaluation of the effectiveness and quality of the KAIST EMI PDP. Using the information from the email reflection and the exit survey, the EFL professors would be able to identify potential future modules of asynchronous instruction that could be added to the existing LMS. Moreover, the exit survey would provide information on areas or aspects of instruction that could be improved in the EMI PDP.

4 Motivations for Joining the EMI PDP

4.1 For One's Own Professional Development

All five content professors came to participate in the EMI PDP by responding to a campus-wide email announcement regarding the program. As for the purpose of participation, three of them had rather general purposes, such as "to improve teaching skills in English," but two of them had more specific purposes, that is, to look for solutions to the problems they were having in EMI classes:

> I had been having trouble communicating complex, difficult engineering contents effectively to my students, so I wanted to find solutions. (CP2 Aerospace Engineering)

> I joined the PD program to increase my students' class participation. I felt I needed help as my students were not too participatory in my classes. (CP3 Biological Sciences)

The EFL professors who served as EMI trainers too said that they participated in the development and offering of the EMI PDP for their own professional development. Two of the trainers viewed participation in the program as an avenue to develop professionally and increase their own learning by crossing disciplinary boundaries to work with faculty members from outside of the liberal arts and social sciences. While ET4 described participating in this program as a means of developing as a professional in the field of language learning, ET5 expressed a desire to learn more about science and engineering by working with faculty members with expertise in those areas.

4.2 For the Improvement of the Instructional Quality of EMI at the Institution

Regarding their motivations to help create and participate in the EMI PDP, four of the five EMI trainers answered that they were motivated to improve the quality of EMI at the institution. Among these four, three trainers specifically mentioned a desire to help content professors improve their instructional methods (ET1 and ET2) and pedagogical knowledge (ET3). Interestingly, only ET2 specifically cited student dissatisfaction with professors' English proficiency as a primary motivation for joining the program.

This result was somewhat unexpected since the EMI PDP was initially developed in order to assist content professors with their English proficiency, which was sometimes found by students to be lacking. However, helping content professors improve their instructional methods was also one of the main goals of the program and some instructional practices that were advocated by the trainers during the program were thought to be helpful to professors with lower English fluency (e.g., reducing lecture time and increasing collaborative learning among students).

The instructional time for the content professors in the program was relatively short (5–7 hours), so it was unlikely that great improvements in English fluency could be realized. Instead, the program sought to provide content professors with pedagogical strategies that they could use to optimize their instructional effectiveness with their present and somewhat limited English fluency. In this vein, ET1 described interactions with content professors who expressed interest in pedagogical rather than language training, and ET3 bemoaned the fact that new faculty hires receive no pedagogical support or training. ET5 revealed that they were a pedagogical researcher and had an interest in sharing this expertise with content professors majoring in science and engineering fields.

Table 4 Content Professors' Opinions on the EMI PDP (/5.0)

Question items	CP1	CP2	CP3	CP4	CP5	Total
1. The program in which I participated was effective and useful	4.0	5.0	5.0	4.0	4.0	4.4
2. I would like to recommend the program to my colleagues	4.0	5.0	5.0	4.0	4.0	4.4
3. The independent (self-directed) learning components of the program, i.e., where you studied on your own without the assistance of a language instructor, were effective and useful.	3.0	4.0	5.0	3.0	3.0	3.6
4. The independent (self-directed) learning components of the program were enjoyable.	3.0	4.0	5.0	3.0	3.0	3.6
5. The guided components learning components of the program, i.e., where you studied with a language instructor, were effective and useful.	5.0	5.0	5.0	3.0	4.0	4.4
6. The guided components learning components of the program, i.e., where you studied with a language instructor, were enjoyable.	5.0	5.0	5.0	4.0	4.0	4.6
Individual Total	4.0	4.7	5.0	3.5	3.7	4.2

5 The Degrees of Satisfaction with the Program

The content professors showed a relatively high level of satisfaction (4.2/5.0) with the program (Table 4). They found the program effective and useful overall (4.4) and appreciated the guided components of learning (4.5), but they had less favourable views of the self-directed learning components (3.6).

One participant content professor was highly appreciative of the program:

> The course that I had received help from the program [on] received a very high score of 4.95 (/5.00) on my students' course evaluations. I am grateful for helping me to offer a good class to my students. (CP2 Aerospace Engineering)

6 Strengths of the Program

6.1 Personalized Instruction and Feedback

In terms of the strengths of the EMI PDP, all five EMI trainers pointed out that, because of the one-on-one nature of the program, they were able to provide highly personalized instruction and feedback according to the content professors' needs. In fact, three out of the five trainers rated the customization of instruction and feedback as their favourite aspect of the program, while ET3 highlighted collaboratively developing a lesson plan for the content professor's class.

All five content professors agreed that individual feedback was the most favourable part of the program. One professor was particularly appreciative of the personalized feedback that he had received:

> [The strengths of the program are] customized diagnosis and improvement suggestions tailored for individual participants. The instructor not only diagnosed problems in my communication skills in English but also suggested how to improve my class management style. This information was very helpful for me to induce students' participation in my otherwise possibly boring classes (CP2 Aerospace Engineering).

6.2 Cross-Disciplinary Attribute

Another strength of the EMI PDP that was noted by two of the five EMI trainers was the opportunity the program provided for them to cross disciplinary boundaries and meet with professors outside of their own area of expertise, with ET5 highlighting this as their favourite aspect of the program:

> My favourite part of the program was probably getting to know two professors at KAIST who are in totally different departments from me. It was good to get to know them as colleagues, and I even had a chance to have lunch with one of the professors on campus. Although I'm not actively in touch with either of the [content professors] I worked with, if I saw one of them, I think we'd have a nice conversation. It's surprising to say, but there aren't many ways to connect with colleagues in outside departments, and this EMI program provided one (ET5).

Researchers in the field of higher education have long acknowledged the problem of high levels of isolation among academic departments (Gannon-Cook & Ley, 2020; Paepcke-Hjeltness, 2021), particularly between departments in the humanities & social sciences and those in STEM fields. From the answers received during the interviews, it seems that the EMI PD program may have provided the beginnings of a bridge over the gap between the humanities & social sciences and science and engineering by enabling faculty members from different areas of expertise to collaborate on improving English medium instruction at the institution.

7 Weaknesses of the Program

7.1 Content Professors' Insufficient Participation

In terms of weaknesses of the program, two themes consistently emerged in the EMI trainers' observations: lacking participation in the program by content professors due to busy schedules and perceived imbalances in power between more and less influential departments within the institution. Several of the EMI trainers mentioned that there was some difficulty in recruiting content professors to participate in the EMI PDP. Moreover, the interviewees expressed frustration that content

professors were unresponsive to their attempts to reach out in the third phase of the program (during and after the self-paced online learning on the LMS) so none of the content professors managed to complete the training. ET1 and ET3 surmised that this may have occurred due to the content professors' busy schedules. Both ET1 and ET4 described a feeling of discomfort or trepidation in attempting contact with the content professors. ET4 attributed this feeling to a perceived "slight" imbalance of power due to the nature of the small liberal arts department they worked for compared to the influential and well-funded STEM departments the content professors worked for within a science-centred university. It is also worth noting that the EMI trainers were working on non-tenure-track contracts while the content professors were hired as full-time faculty members, and this perceived difference in status may have added to the trepidation mentioned by ET4 during communications with content professors, although this was not explicitly stated by any of the interviewees.

7.2 Lack of Follow-up Activities

While the EFL professors complained about the lack of involvement on the part of content professors, the content professors pointed out the lack of follow-up from the EFL professors as a weakness of the program. That is, three of the content professors observed, "[I] did not have additional training after [the] first one-to-one feedback… [A] subsequent training/meeting would have been better," and "[the instructor] did not see how what she had taught was applied in an actual class….It would have been better if [the trainer] had come to my class and checked if things were progressing well."

8 Areas for Improvement of the Program

8.1 Administration's Active Involvement

The EMI trainers were somewhat divided on what change could be made to the program to make it more effective, with two suggesting changes to improve enrollment, two suggesting changes to reduce drop-out, and one suggesting changes to improve compensation for the EMI trainers.

To improve enrollment, two of the five EMI trainers proposed that the university administration should actively promote the EMI PDP to all faculty members. ET4 felt this could best be accomplished if the administration would set up workshops that would be led by the EMI trainers and targeted to the content professors in order to showcase the types of skills that could be learned in the EMI PDP, while ET3 went as far as to suggest that university administrators should make the PDP mandatory for all incoming faculty members. One content professor believed that

professors with poor results in students' course evaluations should be required by the university to attend the EMI PDP.

8.2 Offering of Customized Follow-up Activities

To reduce the trend of content professors dropping out of the program, two of the EMI trainers suggested that the self-paced online learning component of the program, which was hosted on the learning management system (LMS), should be removed. ET5 suggested that self-paced learning on the LMS could be replaced with an additional one-on-one meeting between the EMI trainer and content professor, although they cautioned that doing so would raise the cost of the program since the trainer would have to be compensated for this additional meeting. As mentioned previously, two of the content professors agreed that there should be follow-up activities after initial feedback from their EMI instructor.

ET1 provided perhaps a more economical solution that the self-paced learning could be replaced with lectures and workshops on various pedagogical skills and topics that could be delivered to groups of content professors. Such group sessions could provide additional support and instruction in conjunction with the existing one-on-one meetings between EMI trainers and content professors.

As most of the content professors emphasized the need for follow-up activities, EMI trainers need to consult their clients after initial training and should provide supplementary follow-up activities according to their clients' continuing needs.

8.3 Enhancement of Incentives

ET2 requested additional administrative support in the form of improved compensation for EMI trainers, considering the long hours that are required to provide the instruction and feedback necessary to help content professors improve their teaching. ET2 further requested the assistance of teaching assistants and an improved learning management system. Also, in order to encourage content professors' participation in the EMI PDP, fitting incentives should be provided for them. Working in a reputed research-focused institution like KAIST, content professors are pressured by daunting research obligations and tend to be under narrow time constraints. For them to participate in an EMI PDP, which is not related to their research responsibilities but is highly helpful for improving the quality of their EMI classes, there should be appropriate incentives, i.e., monetary compensation or acknowledgement in their performance evaluations.

8.4 Promotion of Successful Outcomes

The EFL Program and EMI trainers should develop clear, reliable criteria to measure the outcomes of the EMI PDP, and these outcomes should be shared among the participants and publicized among the university administration and the faculties. To encourage content professors' participation in the program in the future, this aspect of the program is critical.

9 Conclusions

The participant content professors' responses have shown that the EMI PDP at KAIST has run successfully even though it was recently launched. Individual feedback has been noted as the most favoured aspect of the program, while insufficiency in content professors' participation and follow-up activities has been pointed to as some of the issues to be rectified.

To maintain its quality, a program needs constant fine-tuning. Several steps have been proposed for an EMI PDP to follow: language assessment, language training, pedagogical and communication training, evaluation of outcomes, follow-up, and certification (Deroey, 2023). At KAIST, language assessment of faculty members has never been done as it is a rather sensitive issue, but it should be done in the future in order to provide more systematic, customized EMI PD services for participant professors. Also, clear and reliable evaluation of outcomes and customized follow-up, along with fitting incentives, should be provided to promote professors' participation. The aforementioned sensitivity around the evaluation of the English language competence of participants has made it difficult for the KAIST PDP to implement the latter steps proposed by Deroey (2023) for EMI training programs to follow, namely, standardization, certification, and benchmarking of EMI instructor competencies. These remain as important limitations of the program that must be addressed through future research and development, as adding these elements to the program will help to ensure its effectiveness and sustained quality. Lastly, activities to enhance professors' intercultural competence should form an essential part of the EMI PDP in order to meet international students' needs and show cultural sensitivity in EMI classes (Sun, 2023).

This chapter has discussed the practices and challenges of a newly launched EMI PDP at a Korean science and engineering school. Although relatively new, the program has demonstrated effectiveness with successful outcomes using popular teaching training techniques, such as microteaching. We believe that it is transferable to any institution considering an EMI PDP. That is, this chapter provides useful guidance for educators and administrators who are considering a similar endeavour of developing an EMI PDP at their institution.

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Collaborative Online International Faculty Development for English-medium Instruction: The Role of Reflective Learning



Olivia Mair

Abstract This chapter focuses on a collaborative online international faculty development (COIFD) programme that involves higher education institutions in six countries and is run over seven months. The programme aims to enhance the pedagogical, linguistic and cultural competencies of university teachers in EMI settings. The growing phenomenon of EMI in higher education has created an urgent need for quality professional development. A review of academic learning opportunities for EMI instructors worldwide revealed few examples of training that offers integrated pedagogic and linguistic support (Dang et al., Teaching in Higher Education 28:840–858, 2021), while research on how integrated training can be carried out online is scarce (Teräs, Professional Development in Education 42:258–275, 2016). This study focuses on the role of reflective learning in the programme. The training draws on several reflective tools, including dialogic reflection, group discussion through a forum and written assignments. The study focuses on course participants' final written assignments in order to investigate the reflective learning processes that teachers engage in. It uses qualitative content analysis to examine reflective processes, with reference to Farrell's (Promoting teacher reflection in second language education: A framework for TESOL professionals, Routledge, 2015, International Journal of Bilingual Education and Bilingualism 23:277–286, 2020) framework for holistic reflective practice in EMI and Mezirow's transformative learning theory (Fostering critical reflection in adulthood: A guide to transformative and emancipatory learning, Jossey-Bass, 1990, Transformative dimensions of adult learning, Jossey-Bass, 1991). Results reveal that participants engage in critical analysis of their teaching behaviour and beliefs and re-examine their approach to teaching practice in EMI contexts. Overall, the findings suggest that collaborative online international faculty development (COIFD), which can involve multiple institutions and disciplinary perspectives at the same time, offers an effective solution for EMI training that is potentially transformative for its participants.

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Keywords English-medium instruction (EMI) · Online faculty development · Reflective learning · Teacher professional development · Internationalisation of the curriculum

1 Introduction

Quality professional development for faculty has become increasingly urgent over the last decade as higher education has faced a period of rapid change. In addition to the well-documented challenges faced worldwide by many teachers, such as heavy teaching loads, institutional commitments and limited resources, EMI teachers face a specific set of challenges relating to teaching their subject through English, sometimes without adequate institutional support and with little time for professional development. Since 2020, the COVID-19 pandemic has accelerated the interest in digitalised solutions and in offering online learning, including online faculty development. A shift away from mobility-focused internationalisation towards internationalisation at home has also driven interest in making learning opportunities and cultural exchange accessible to both teaching staff and students through collaborative online international learning. So far, not a lot of research has emerged on collaborative online faculty development programmes in general and there is even less research on online professional learning opportunities for English-medium education (EME) contexts. To contribute to filling this gap, this chapter introduces the COIFD course for university teachers in EME contexts and addresses the role of reflective learning in the course. The chapter begins with a brief review of the literature on reflective learning, collaborative online professional learning for faculty, EMI professional development and the training that is the topic of this chapter. It then outlines the structure of the COIFD programme and its content, before presenting the results of the analysis of course participants' written assignments to investigate the role of reflective learning.

2 Literature Review

2.1 Reflective Learning

The role of reflection in learning processes has long been recognised. The concept of reflective learning has evolved over the last century. Dewey (1933, p. 16) defined reflective practice as "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it". Reflective thought, he argued, has two stages, the first being a state of doubt or uncertainty and the second, a stage of inquiry and investigation to try and resolve the uncertainty, leading to a solution (Dewey, 1933). A 'reflective turn' was identified in the 1980s

due to the number of learning theories based on reflective models that emerged at that time (Pineau, 2013; Frison et al., 2017). Schön (1983) developed the reflective model of *reflection-in-action* and *reflection-on-action*. The former is more immediate and is carried out during an action or event, in the intervals, while the latter takes place after the event is over. *Reflection-in-action* is a process that sets out from a difficult problem or challenge in the professional context, attempting firstly to understand it and secondly, to change the situation. Schön argued that "reflection-in-action in a unique case may be generalized to other cases, not by giving rise to general principles, but by contributing to the practitioner's repertoire of exemplary themes from which, in the subsequent cases of his practice, he may compose new variations" (Schön, 1983, p. 140). As far as the teaching profession is concerned, he drew attention to teachers' isolation and argued for the importance of giving teachers opportunities and instruments to test their views against those of their peers. Kolb's (1984) theory of experiential learning has at its centre a cycle of reflective practice which is similar to Schön's, but adopts different terminology, emphasising, for example, "abstract conceptualism" as the stage of learning from the experience and "active experimentation" as the stage of putting learning into practice (Kolb, 1984, p. 33). An important contribution of Kolb's theory is the emphasis on individual learning styles. Individuals, he argued, may have naturally more reflective learning styles. Boud, Keogh, and Walker (1985, p. 3) define reflection as "a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciation". They place importance on the *learning milieu* in which reflection takes place. This is defined as "the social, psychological and material environment in which the learner is situated" (Boud, 1994, p. 2).

Reflection is also central to Mezirow's (1990, 1991), transformative learning theory. Mezirow argues that critical reflection is fundamental to learning experiences and involves a reassessment of the way we pose problems and of our own disposition to thinking, feeling and acting. Critical reflection is set apart from other forms of reflection, such as reflection on content and reflection on process, because it is based on an interrogation of assumptions and challenging habitual patterns of expectation about the experience: "We may reflect on the *content* or description of a problem (or a problematic meaning scheme), the *process* or method of our problem solving, or the *premise(s)* upon which the problem is predicated" (Mezirow, 1991, p. 117). As such, critical reflection is the deepest form of reflection, and the type most likely to bring about transformative learning.

In all of these learning theories, reflection is considered an iterative process made up of various stages of re-reading and comprehension that take place over time and set out from an experience. The method or instruments of reflection, as well as the terms applied to the stages, may vary, but they all describe a process that leads to the reorientation of future actions (Frison et al., 2017). In this paper, *process* will be used to describe the reflective learning cycle and its stages, while *enactment* or *implementation* will refer to the *actions* taken and *changes* made in the latter stage(s) of the process.

2.2 Collaborative Online International Learning for Faculty Development

Collaborative online professional learning offers university teachers an accessible opportunity for professional development and an exchange of ideas with peers in other institutions. Through a globally networked learning environment (GNLE), teachers become part of a community of practice, defined by Wenger (1998) as a site of exchange and reciprocal learning, comprised of members with shared interests who develop a common body of knowledge, practice and approaches. Teräs (2016) investigated participants' experiences in a fully online collaborative professional development programme and how they perceived its impact on their professional growth. The study highlighted the interplay of reflection and the long-term implementation of change for professional growth or transformation. Two findings are particularly significant: an atmosphere that promotes and creates dialogue and the sharing of different perspectives is important for online professional development so that teachers have the opportunity to learn from each other's work; secondly, the role of the facilitator is crucial. The importance of the role of the facilitator in professional development was also emphasised by Frison et al. (2017), who examine the role of reflection in the learning process and propose strategies for promoting it. A study on teacher professional development affordances through participation in COIL projects argues that GNLEs offer an effective and affordable solution for a reciprocal exchange of ideas between faculty and students (Swartz, 2021). The study investigates the use of COIL for professional development, reporting on instructors' reflections on professional learning through participation in COIL projects.

2.3 EMI Professional Development and Reflective Learning

A recent literature review of EMI professional development options in many countries revealed very few examples of professional learning opportunities that offer "systematic and integrated linguistic and pedagogical support for EMI educators" (Dang et al., 2021, p. 7). The review showed that most learning opportunities were language-focused, with little attention to pedagogical and intercultural aspects of EMI teaching. The authors argued for a need for professional development and support that focuses on all of these aspects (Dang et al., 2021). This study confirmed the portrait of EMI professional development created by O'Dowd's (2018) survey of European universities, which showed that training focused mainly on English language support. Other studies similarly highlight the need for more comprehensive professional development for EMI teachers that offers linguistic support as well as addresses methodological considerations (Lasagabaster, 2022; Dafouz, 2018; Lauridsen, 2017).

As far as reflective learning and EMI are concerned, Farrell (2020) focuses on the role of reflective practice in professional development for EMI teachers and applies his framework of reflective practice for English language teaching (2015) to EMI settings. He notes that "although reflective practice […] is now considered a mark of professional competence in many of the professions including the field of teaching English to speakers of other languages, it has not been utilized within the EMI community" (Farrell, 2020, p. 278). While this assertion may be somewhat sweeping, it is true that there is a need, in general, for more training for EMI teachers that embeds reflective learning tools and opportunities.

2.4 *Farrell's Framework for EMI Professional Development and Reflective Learning*

Farrell's framework involves five stages: philosophy, principles, theory, practice and beyond practice. *Philosophy* focuses on the teacher's identity; *Principles* means reflecting on teacher's beliefs about EMI teaching and learning, which may draw on metaphors and metaphor analysis; *Theory* involves teachers in reflecting on both the influence of some theories on their own beliefs and practices and on how to put theories into practice. This stage, Farrell (2020, p. 280) argues, is "especially important for EMI teachers because it can lead to growing awareness of the learning needs of their students rather than their own needs to teach content, and thus they can consider different approaches to planning for EMI teaching". He suggests that reflections on theory can be carried out by means of writing, dialogue and action research (Farrell, 2020, p. 280). The fourth stage, *Practice*, involves reflecting on what goes on in the classroom and sets out from observable actions. This should ideally be carried out while using audio or video recordings of the classroom. The final stage, *Beyond Practice*, involves teachers taking a critical stance in relation to their EMI classroom practice to consider the "different agendas and interests"

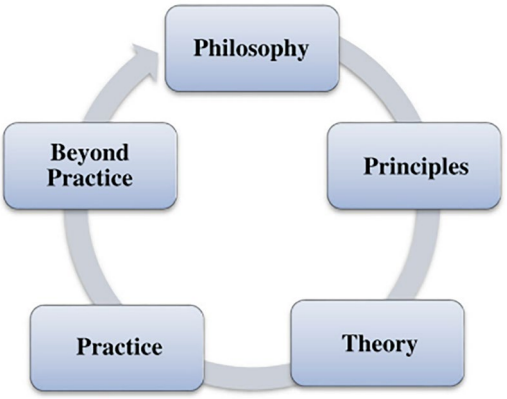


Fig. 1 Farrell's framework for reflecting on EMI practice (Farrell, 2020, p. 279)

(Farrell, 2020, p. 280) that shape it, along with its social and moral implications (Fig. 1).

Farrell emphasises that there is more than one possible starting point and that not all five stages necessarily apply to all EMI teachers, depending on their level of teaching experience, their context and their prior participation in professional development.

2.5 Previous Research on the COIFD Programme

The COIFD programme examined in this chapter has already been the focus of research (Valcke et al., 2022; Valcke & Romero Alfaro, 2016; Sanchez-Garcia & Nashaat, 2020; Orduna-Nocito & Sanchez-García, 2022; Sánchez-García, 2023). Holding particular relevance are two articles that apply a reflective learning paradigm to analyse data from the training. Sanchez-Garcia and Nashaat (2020) analysed course participants' reflections on one module in an earlier iteration of the course. They focused on the module regarding English as a Lingua Franca and analysed course participants' reflections on the discussion board with reference to the ROADMAPPING framework (Dafouz & Smit, 2016, 2020), a framework for EMI. They noted that teachers faced similar challenges with regard to the impact of ELF on their professional identity, their disciplinary teaching, and their general classroom practices and processes (Sanchez-Garcia & Nashaat, 2020). Another article focused on the impact of the training on the professional growth of three participating teachers who were interviewed after the course (Sánchez-García, 2023). The study analysed the interviews to identify instances of reflection and enactment and found that reflection was a key transformative mechanism for promoting growth (Sánchez-García, 2023).

3 The Context of the Training

3.1 Background

The professional development programme that is the subject of this chapter is an innovative online professional development course that involves EMI teachers in several European countries across Northern and Southern Europe, and for the first time in 2023, a university from Brazil. It was designed and implemented by educational developers and researchers as a flexible and sustainable solution for effective professional development for lecturers in English-medium education settings (Valcke & Romero Alfaro, 2016). The aim was to establish online communities of practice that could offer participants the chance to exchange ideas about the linguistic and pedagogical opportunities and challenges of teaching in English, as well as

practical strategies to improve the experience. Improving participants' English language skills for teaching purposes was the main aim.

Initially, the programme involved the founders' two universities and it was considered that the different contexts and perspectives would enrich discussion. In the last eight years, the project has grown. In the 2021–22 edition, 26 lecturers from 8 institutions in five different countries (Sweden, Denmark, Belgium, Italy and Spain) took part. In the 2022–23 edition, with a Brazilian university joining the programme, there were 34 participants from nine different institutions in six countries. Although lecturers who participate in the programme come from different countries and institutions with varying approaches to the implementation of EMI and with distinct teaching and learning cultures and practices, they are united by the shared experience of teaching through English. Mixing disciplines originally came about out of necessity, but turned out to be fortuitous, as Valcke and Romero Alfaro (2016, p. 4) describe: "Mixing teachers from different disciplines proved productive since teachers had to talk of their disciplines and research in layman's terms", which was similar to explaining content to students who had little prior knowledge of the topic.

3.2 Course Design and Structure

The course lasts seven months and is modular in design. It is estimated to require 80 hours of study spread over the seven months. The participants in the training are mostly not newcomers to EMI and in many cases have had years of teaching experience and carried out faculty development programmes in their own institutions. At the start, participants respond to four questions about their needs and expectations for the course. Then, after taking an English placement test based on the CEFR (Common European Framework of References) scale, each participant is matched with a colleague of roughly the same language level but from a different discipline, institution and country, to form a tandem. A facilitator, who is an educational developer and/or researcher in one of the participating institutions, is assigned to each tandem. Each participating institution has its own criteria for recruiting participants and is given two places in the training for every facilitator it contributes. Facilitators meet online regularly for planning purposes, to discuss course content and to address challenges as they arise.

According to the course page in the learning management system (LMS), the intended learning outcomes for the course are as follows: "After completing the course, participants should be able to:

- Implement a reflective approach to their teaching practice in the international classroom
- Reflect on the international classroom and on harnessing its cultural diversity, based on research in the field
- Receive and respond to feedback on own reflections from both a facilitator and your peers
- Identify methodologies for the international classroom

- Use an evidence-based approach for developing best practices in the international classroom." (course section in the host institution's LMS)

From these intended learning outcomes, it can be seen that there is a substantial emphasis on participants developing reflective skills: the first three out of a total of five learning outcomes refer to a reflective approach or reflections. Participants receive a certificate of completion once they have completed all tasks and assignments by the time the course ends.

The six modules of the course cover: presentations and constructive alignment; English as a lingua franca (ELF); Cultures of teaching and learning; Global engagement; Managing and assessing group work; and Assessment for learning. The topics suggest the kind of integrated training that Dang et al. argue is largely absent from approaches to EMI professional development worldwide (Dang et al., 2021).

Each module consists of

- Pre-task: reading articles and watching videos;
- Task: online meeting to discuss the pre-task with the tandem partner via Zoom;
- Post-task: summarising ideas about the topic in writing and commenting on 2 other contributions, as well as reflecting on personal learning.

The post-task exercise invites participants to "Think about what you have learned in this module and select one concrete element you will implement in your classroom", so the emphasis is on reflecting on learning and how to implement what has been learned in practice. Likewise, the final assignment requires participants to "*reflect* on one possible change you would want to *implement* in your teaching following on from your discussion with the student", again highlighting reflection and tying it to implementation.

3.3 Tools for Reflection

The context of the training is online and it draws on various tools to facilitate reflection, both synchronous and asynchronous. For example, there is the dialogic aspect of the tandem: once each member has read and watched the material for each module on their own, they meet to discuss and reflect on it with their partner via a personal Zoom link. They then continue to work on the topic by placing an individual written post on the discussion group they are part of, which is usually made up of 3–4 tandems. The dialogue becomes a wider discussion as each participant must read and comment on the posts of at least three others in the group, while the facilitators also join in the discussion, providing feedback and support as well as attempting to stimulate further discussion. These aspects help create a sense of community.

Writing is in its nature reflective as it is necessary to organise thought before starting to write and then editing (Farrell, 2020). This course does not involve descriptive writing, but rather critical reflection and analysis. The register of the chat is informal, while the final written assignment is more formal and invites participants to use the conventions of academic writing and draw on the critical literature addressed in the course. This process helps teachers identify aspects that are critical to their teaching practice within their own contexts.

The final assignment of the course is completed by participants following the conclusion of the modules. For this assignment, each participant needs to interview one of their own students and then reflect on the interview in a written assignment, making reference to the course reading material. Detailed instructions are provided. In the interview, they may choose to focus on one particular aspect of the programme. Rather than focusing on all six topics of the modules, it is suggested that participants should focus on one or two topics and the written assignment must include in-depth analysis and personal reflection on the topics. There is a 600-word limit. Assignments are uploaded into the platform and marked by the tandem facilitator according to a rubric with clear criteria.

4 Method

For the analysis, 11 assignments from the 2021–22 academic year were downloaded from the LMS, representing participants from a range of academic disciplines and institutions. All participants gave their informed consent to take part in the research. Sampling was homogeneous (Dornyei, 2007) because participants had all taken part in the same professional development course in the same edition and completed the same assignment. The sample was made up of assignments that were completed in the same period. Qualitative content analysis was applied to observe reflective processes and practices and instances of implementation or enactment of change. Given the relevance of Farrell's framework for reflective learning in EMI and its five stages (philosophy, principles, theory, practice and beyond practice), this was used to guide analysis. Coding adopted a deductive approach (Saldaña, 2021) based on the six topics of the course modules in addition to the question "what makes a good teacher?", which could all be chosen as topics for reflection. The second cycle of coding referred to the five stages of Farrell's framework and to Mezirow's transformative learning theory, with its emphasis on critical reflection (Mezirow, 1991, p. 225). For Mezirow "all transformative learning involves taking action to implement insights derived from critical reflection", so it was important to identify, in each assignment, the topics chosen for reflection and the types of intentional or established actions that stem from them. The two frameworks thus informed the analysis, which aimed to investigate what topics the participants reflected on, which stages of Farrell's framework could be identified in their reflection, and how their insights led to changes being implemented in their own teaching practices and identity (Table 1).

Table 1 Participants in the COIFD programme showing countries of lecturer's institution and EMI teaching subject

Lecturer	Country	Disciplinary area of EMI teaching
1	Sweden	Biomedical chemistry and biophysics
2	Italy	Psychology
3	Sweden	Pedagogy
4	Italy	Psychology
5	Sweden	Academic writing
6	Spain	Business administration
7	Italy	Visual and performing arts management
8	Sweden	Biomedicine
9	Belgium	Physical education and sports coaching
10	Italy	Medicine
11	Sweden	Physics

5 Results and Discussion

Qualitative content analysis of the final assignment showed that the topics chosen for discussion in the interview with a student and for subsequent reflection in the written assignment were diverse and difficult to compare. This was expected as instructions for the assignment gave participants the chance to choose. In addition, while the *learning milieu* established through the online international professional development programme was common to all participants in the training, each participant comes from a different teaching context, with unique pedagogical traditions and teaching and learning culture. Moreover, participants' different language levels and disciplinary cultures may have had some bearing on their choice of topics for discussion in the interview and reflection. Analysis was thus limited to identifying each participant's main areas of reflection and examining the reflective processes according to the five stages of Farrell's framework and instances of implementation. For each teacher, the main topics and instances of enactment and planned enactment are set out.

Teacher 1

Main topics of reflection

Assessment, language problems, group work and self-assessment

Enactment (both intended and underway)

Plans to introduce pilot self-assessment activity for students; intends to be more vigilant when guiding group work and assigning roles.

Teacher 2

Main topics of reflection

What makes a good teacher? Four ideas: creating relationships with students, supporting students' reflection and critical thinking, providing opportunities for students to practise theories, addressing cultural differences and making it a central dimension of students' learning experience.

Enactment (both intended and underway)

Devoting more time to exploring students' backgrounds; aligning examples, case studies, and exercises to students' "lived" experiences; the teacher intends to spend more time sharing information about her professional background.

Teacher 3

Main topics of reflection

Language of instruction. Some participants in the course were from non-Swedish-speaking backgrounds, but the instructors started talking in Swedish in clinical contexts, making them feel left out.

Good teaching means being understood by all students or students cannot achieve ILOs.

Giving feedback becomes problematic if some lecturers give it in Swedish: interaction is affected.

Enactment (both intended and underway)

Need for "more coherent teachers in the course and less focus on clinical aspects which may drive teachers to speak in Swedish".

Wants to raise the issue for discussion with the group and train Swedish teachers to address their assumptions.

Teacher 4

Main topics of reflection

Diverse teaching and learning environment and students' different academic cultures and the impact this has on student-teacher interaction and group dynamics (Anglophone students less formal).

Enactment (both intended and underway)

Creating the conditions to leverage cultural heterogeneity by making explicit the implicit rules and expectations of teachers for student behaviour. Presents a range of ideas that can tried out in future editions of the course: getting students to create a jigsaw or conceptual map of the different academic cultures within groups.

Explicitly include ICC (intercultural competence) in ILOs.

Making assessment criteria clearer and providing simulation opportunities.

Teacher 5

Main topics of reflection

Constructive alignment

Students find accents hard to follow.

Inadequacy of assessment method.

Assessment: challenges of oral exam for international students

Enactment (both intended and underway)

Talk about language proficiency explicitly. Ask the students to reflect on the expected struggles regarding language aspects or group work and share their thoughts with their group, maybe via Padlet. Explain to students the importance of being exposed to various accents.

Explaining to students how to ask for explanations.

Changing the marking scheme to rate different criteria rather than just pass/fail.

Teacher 6

Main topics of reflection

ILOs and constructive alignment and the fact that the student who is interviewed is unaware of them.

Diversity in the classroom and how it affects group work.

Lack of respect for teachers' authority.

Need for improving feedback both in quantity and quality.

Enactment (both intended and underway)

Considering giving written feedback to students in class so they read it and make the most of it.

Working on student-student interaction and student-teacher interaction by placing value on and involving the knowledge and experience of diverse learners.

Role-plays and other communicative activities can be used to enable learners to practice their skills and improve group connection.

Teacher 7

Main topics of reflection

Cultural and linguistic basis of knowledge (even though advanced in English, students needed to be able to read about course concepts in their own language); Interaction among students in and out of the classroom and linguistic choices.

Classroom diversity and the way it can lead to open-mindedness and non-binary 'us and them' thinking.

Enactment (both intended and underway)

Adopting scaffolding strategies to make students more active and conscious of their learning: provides more synonyms, periphrases and examples chosen from a variety of cultural contexts and explained broadly, and ask students themselves (the more varied their cultural background, the better) to give examples and reformulate complex concepts, reinterpreting conceptual understandings and helping each other construct meaning for themselves, which are among the most important goals for enhanced learning.

Teacher 8

Main topics of reflection

Constructive alignment. Not every course had clearly defined ILOs (disconnect of ILOs from teaching and learning activities).

Group dynamics is a problem in that one student takes on most of the work and drives the group; lack of roles and learning outcomes for group work.

Enactment (both intended and underway)

Establishing group learning outcomes and providing clearer instructions for group work; assigning roles and responsibilities within the group will counteract the need for one single person to drive the group; It is critical to make sure that both teachers and students are on the same page when it comes to the adopted methods and strategies.

Teacher 9

Main topics of reflection

What makes a good teacher, teacher competence, the concept of 'openness'.

Difficulty with different accents and pronunciation. Students in the course are learning to teach in English and so they then face the same problems.

Enactment (both intended and underway)

Diversity of students and teachers.

Acknowledges she is not more competent than the students, but resolves to encourage students to ask for repetition or clarification, to reformulate. Encourages students to do this with the children they teach, thus modelling linguistic support.

Needs to emphasize the personal and collective value of internationalisation experience and make students aware of their abilities in internationalisation; highlight that such experiences enable students to become citizens of the world.

Teacher 10

Main topics of reflection

The different academic backgrounds of the two students interviewed and their exposure to different assessment practices.

Both students' attitudes to English, which are positive. They see it as an important tool to share knowledge and build friendships with people from different backgrounds.

Lecturers' language competence is "surprisingly" effective.

Learning styles: prefer active learning rather than memorisation.

Students liked "interactive workshop, simulation scenarios and group work" seeing them as important for formative assessment and for receiving feedback on technical aspects but also development of 'soft skills'.

Enactment (both intended and underway)

Gaining of confidence after reflecting on English as a Lingua Franca and developing "a more pragmatic mindset to face English proficiency".

Successful application of constructive alignment with intended learning outcomes.

The usefulness of simulation exercises for formative assessment: setting of learning objectives that improves students' "self-confidence and leads to a change of attitude" regarding medical practice. Feedback in these activities is critical as it "is about offering the learner a self-reflection on performance to find explicit elements to build up progression and facilitate behaviour change".

Starts setting up peer learning /peer support programme in which students will help younger students.

Teacher 11

Main topics of reflection

Inclusivity in curricular and extracurricular activity (some of the latter were implicitly only for Swedish students), groupwork and linguistic exclusion, lack of interaction between international and local students.

Enactment (both intended and underway)

Get to know more international students; make courses more inclusive; create groups in class from mixed cultural backgrounds.

In their final assignments, participants in the collaborative online international faculty development programme reflected on linguistic, pedagogical, intercultural and curricular aspects of their teaching practice. The most common areas of reflection in the interviews with students were: group dynamics; interaction; the academic, linguistic and cultural diversity of students; assessment practices; and language aspects such as clarity, accents, and relationship of language to culture. Students' perspectives of constructive alignment (Biggs, 2014; Biggs & Tang, 2022) were also touched on a number of times. Areas for teachers' interventions responded to these topics, with teachers explaining changes that have already been enacted, stating their intentions for the next iteration of the same course, or hypothesising *possible* solutions. In all cases, the teachers project enactment into the future. Most teachers engaged with theories proposed during the course, which was also a requirement of the assignment. As far as the *practice* stage of Farrell's framework is concerned, none of the teachers in the study were expected to video- or audio-record their own classes, although the interview with the student is an important tool for reflecting on what goes on in the classroom. The instances of enactment nonetheless give numerous insights into shifts in classroom practice as a result of reflection, from scaffolding of language and use of simulations, to role play and provision of feedback.

In some cases, teachers' reflections extend beyond their own teaching practice to consider that of their colleagues and the impact it could have. Teacher 3, for example, reflected on colleagues' use of translanguaging between English and Swedish in clinical settings and in the provision of feedback, and found that it excluded non-Swedish-speaking students. The same teacher expressed the intention to raise the matter for discussion with Swedish colleagues in the discipline and to help them reflect on their assumptions. This consideration of linguistic and, by extension, epistemic inequalities faced by students falls within the description of the *practice* and *beyond practice* stages of Farrell's framework as the teacher takes a critical stance in relation to classroom practice. Moreover, this teacher's reflection on habitual actions and assumptions suggests that critical reflection, according to Mezirow's definition, is taking place and that the learning is thus likely to be transformative.

Likewise, teachers 9 and 10 refer to a change in mindset and personal growth, both of teachers and students. Reflection on ELF has helped teacher 10 develop "a more pragmatic mindset to face English proficiency", while the use of simulation exercises in teaching "leads to a change of attitude" and improves students' self-confidence. According to Farrell's framework, this involves the stages of *principles*, *theory* and *practice*: understanding ELF theory leads the teacher to change beliefs about EMI teaching, while applying constructive alignment (Biggs, 2014; Biggs & Tang, 2022) "facilitates understanding and doing as opposed to only studying and memorizing" in students. The teacher also endeavours to embed reflective tools for students and states that feedback on formative exercises "is about offering the learner a self-reflection on performance to find explicit elements to build up progression and facilitate behaviour change", taking the reflection *beyond practice*. Further confirmation of this comes in the teacher's account of implementing a peer learning scheme among students. Teacher 9 also endeavours to engage students in reflection, this time on the "collective value of internationalisation experience" and global citizenship, encouraging a perspective shift among students.

6 Conclusion

Analysis of assignments suggests a process by which participants identify areas needing attention and counter them by thinking about possible solutions, how they can modify practice, and in some cases, how they could extend the changes for wider impact within a programme by discussing these aspects with other colleagues. The final assignment involves two tools that Farrell (2020) proposes for reflection: *dialogic reflection* through the teacher-student interview and *critical reflection* through writing. In the assignment, teachers reflect on self; beliefs about teaching and learning; theories of teaching, learning, curriculum design and intercultural communication; classroom practice and at times, the wider disciplinary context and student cohorts. They pass through the stages of Farrell's framework for reflective practice in EMI, although not necessarily all stages and often in a different order. Participants receive written feedback on their final assignment from the facilitator of their tandem.

According to Mezirow (1991, p. 167), fostering transformative learning means promoting perspective transformation, which is the process of "becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand and feel about our world". There is evidence that what Mezirow defines as transformative learning takes place through the programme as we witness a process in which participants enhance their inclination to reflect on their identity and beliefs about teaching, reconstituting some of them, and in some cases, extending their reflection to consider how change might be extended beyond their own practice. Embedding critical reflection in a teacher programme can thus help EMI teachers develop skills for addressing linguistic, academic and cultural diversity in the classroom, and interrogating and evolving their pedagogical practice. Through dialogic reflection both within a tandem, as part of an online forum and as part of the final assignment, teachers become aware of their own roles and agency in enacting change.

Unlike Sánchez-García (2023), this study has not attempted to assess the impact of COIFD on participants, but has sought to investigate the reflective processes that participants engage in through dialogic and written reflection and the kinds of practice and mindset changes this reflection precipitates. The assignments mark the end of a six-month training period, so they provide a snapshot of a certain moment in time. Teräs (2016) argued that collaborative online faculty development can be more effective than brief in-person workshops, which appear to be the most common type of faculty development in EMI settings, in which lecturers are arguably even more time-poor than other colleagues and may have to spend extra time preparing for lectures. Unlike short bursts of training, training over time is more likely to have a far-reaching impact, even if it calls for a bigger commitment. This was also noted by Sánchez-García (2023). The international aspect of this COIFD programme also helps bring about deeper critical thinking with its multiple layers of reflection and different cultural and disciplinary perspectives. By not limiting it to one context, participants are encouraged to think beyond their own physical, social and psychological contexts.

Although analysing participants' reflective assignments at the end of one edition of an EMI teacher education programme has allowed for significant insights into how reflection can be used as a tool in online EMI training, and revealed the kinds of reflections teachers engage in, the scope of the study has been limited. Future studies of collaborative online international faculty development could try to measure the impact of participation in training by adopting a pre-course post-course research design, or by gathering data on teachers' enactment of change one year after participation in the course.

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Part III
Directions for EMI Professional Development

Future Directions for Professional Development in EMI Settings



Ali Karakaş and Yasemin Kırkgöz

Abstract This chapter synthesizes key themes and insights from international case studies on PD for EMI in higher education. It highlights the need for comprehensive, EMI-specific PD that goes beyond language training to address pedagogical skills, assessment literacy, and strategies for supporting students' disciplinary language development. The importance of context-specific approaches and institutional support is emphasized. The chapter outlines several promising directions for future research, including long-term studies on PD impact, comparative research across contexts, and investigations incorporating student perspectives. It also calls for more research on EMI teacher competencies, the integration of ESP approaches, and the use of technology in EMI PD. The chapter concludes that as EMI continues to expand globally, sustained investment in faculty PD is crucial to ensure high-quality education that meets both content and language learning goals in increasingly diverse and internationalized higher education settings.

Keywords English-medium instruction (EMI) · Professional development (PD) · Higher education · Teacher competencies

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1 Introduction

EMI has become increasingly prevalent in higher education institutions worldwide as universities seek to internationalize and attract global talent (Kırkgöz & Karakaş, 2022). However, the rapid adoption of EMI has outpaced the development of comprehensive faculty training and support systems in many contexts. This edited volume has explored diverse approaches to PD for EMI educators across different countries and regions, highlighting both common challenges and context-specific considerations.

As the preceding chapters have demonstrated, effective EMI teaching requires more than just English language proficiency (Aguilar-Pérez & Arnó-Macià, 2020). Faculty need specialized pedagogical skills to deliver complex academic content in a second language, support students' language development, adapt materials, and create inclusive multilingual/multicultural learning environments. However, many EMI teachers report feeling underprepared and lacking confidence in their ability to teach effectively in English (Dearden & Macaro, 2016; Kim & Shin, 2014). There is growing recognition that EMI teacher development must go beyond general language training to address the unique competencies required in EMI contexts (Chen & Peng, 2019; Macaro & Han, 2020). In this regard, Bradford et al. (2022) highlight the need for EMI-specific pedagogical skills development.

This final chapter will synthesize key themes and insights from the international case studies presented in this volume. It will then outline several promising directions for future research on EMI professional development. The chapter concludes with final reflections on the critical importance of systematic, context-appropriate PD in supporting the continued expansion of EMI programs worldwide.

2 Review of the Volume and Future Directions for Research

Several important themes emerged across the diverse contexts examined in this volume. One of them is about the need for comprehensive, EMI-specific professional development. In this respect, several chapters highlighted that general English language training is insufficient preparation for EMI teaching. Effective PD must address EMI-specific pedagogical skills, assessment literacy, materials development and adaptation, and strategies for supporting students' disciplinary language development (see Chapters "Understanding EMI Research and EMI Teachers' Professional Development", "Academic English Language Policies and Practices of English-medium Instruction (EMI) Universities in Turkey from Policy Actors' Eyes", "Designing Professional Development to Meet EMI Assessment Challenges", "EMI Teacher Training and Learning Design: Insights from Verona University and Beyond", and "EMI Teacher Training at a Korean Science and Engineering University: Practices and Challenges").

The importance of context-specific approaches was also evident throughout the case studies. While some common challenges were identified, the research demonstrated that EMI PD needs vary based on institutional goals, faculty backgrounds, student characteristics, and broader sociocultural factors. One-size-fits-all approaches are unlikely to be effective in meeting the diverse needs of EMI educators across different settings (see Chapters "Considering the Implementation of English as a Medium of Instruction in the Algerian Higher Education: Between Ambitions and Risks", "EMI Course Process in the Turkish Higher Education Context and Pedagogical Implications", and "Educating Teachers for New Roles: Reconstructing the Pedagogical Content Knowledge of Brazilian Academics Who Teach in EMI Settings").

Institutional support and integration emerged as a critical factor in successful EMI initiatives. Several chapters emphasized that EMI programs often lack full institutional integration and support. There is frequently a mismatch between increased responsibilities for EMI teachers and lack of recognition or career rewards, highlighting the need for better alignment between EMI initiatives and broader institutional strategies (see, Chapters "Academic English Language Policies and Practices of English-medium Instruction (EMI) Universities in Turkey from Policy Actors' Eyes", "EMI Teacher Training at a Korean Science and Engineering University: Practices and Challenges", and "Collaborative Online International Faculty Development for English Medium Instruction"). Balancing language and content instruction remains an ongoing challenge in EMI contexts. PD programs need to equip faculty to integrate language support without sacrificing disciplinary depth, addressing the dual goals of content learning and language development that are inherent in EMI (see Chapters "Designing Professional Development to Meet EMI Assessment Challenges", "EMI Teacher Training and Learning Design: Insights from Verona University and Beyond", and "Educating Teachers for New Roles: Reconstructing the Pedagogical Content Knowledge of Brazilian Academics Who Teach in EMI Settings").

As student populations become more diverse, cultural competence and inclusivity have become increasingly important aspects of EMI teaching (Fortanet-Gómez, 2020). Professional development initiatives need to focus on equipping faculty with skills to create inclusive multilingual and multicultural learning environments and leverage linguistic diversity as a resource in the classroom (see Chapters "Educating Teachers for New Roles: Reconstructing the Pedagogical Content Knowledge of Brazilian Academics Who Teach in EMI Settings" and "Collaborative Online International Faculty Development for English Medium Instruction"). Finally, several chapters highlighted the benefits of collaborative and reflective approaches to EMI professional development. Models that provide opportunities for peer learning, reflection, and ongoing mentoring have shown promise in supporting EMI teachers' growth and development over time (see Chapters "EMI Teacher Training and Learning Design: Insights from Verona University and Beyond" and "Collaborative Online International Faculty Development for English Medium Instruction").

3 Future Research Directions

Building on the insights from this volume, several promising areas for future research on EMI professional development can be identified. For instance, while many of the case studies in this volume reported on short-term PD initiatives, there is a need for more long-term research examining the sustained impact of EMI professional development on teaching practices and student outcomes. Longitudinal studies could provide valuable insights into which PD approaches lead to lasting changes in pedagogical practices and how these changes impact student learning over time.

As highlighted in several chapters, lack of institutional integration and support remains a key challenge for many EMI programs even though lecturers have already called for more institutional recognition and support for EMI programs (e.g. O'Dowd, 2018; Piquer-Píriz & Castellano-Risco, 2021). Further research is needed to identify effective models for embedding EMI within broader institutional internationalization strategies. This could include examining how different types of institutional support (e.g. workload adjustments, career incentives, ongoing mentoring) impact faculty engagement and EMI program sustainability.

While this volume provided insights from diverse settings, there is still a need for more systematic comparative research examining how EMI PD needs and effective approaches vary across different types of institutions (e.g. comprehensive vs. specialized universities), disciplines, and national/regional contexts. Such research could help identify both universal principles and context-specific considerations for EMI teacher development (e.g. Hamid et al., 2013). Most existing research on EMI PD, including many of the studies in this volume, focuses primarily on faculty perspectives and experiences. There is a need for more research incorporating student voices to understand how different PD approaches impact the student learning experience in EMI courses. This could include examining how students perceive and respond to different EMI pedagogical strategies.

While several chapters touched on pedagogical challenges faced by EMI teachers, there is still a need for more in-depth research on the specific linguistic and pedagogical difficulties encountered in different disciplines and how these can be addressed through targeted PD (e.g. Airey, 2011). This could include examining effective strategies for disciplinary vocabulary development, academic writing support, and facilitating student participation in EMI contexts. As highlighted in Chapter "EMI Teacher Training at a Korean Science and Engineering University: Practices and Challenges", online and blended PD models offer promising opportunities for international collaboration and scaling up EMI teacher training. Further research is needed to identify best practices for leveraging technology in EMI professional development, including examining the effectiveness of different online/blended formats and exploring innovative approaches like virtual reality simulations for EMI teaching practice.

Several chapters noted the lack of consensus around EMI teacher competencies and how these should be assessed. There is a need for more research on developing

and validating EMI-specific teacher competency frameworks and assessment tools (Dimova & Kling, 2022). On the subject of EMI teacher competency, Macaro et al. (2019) emphasize the importance of certifying EMI teachers in higher education by underlining the need for formal recognition of EMI teaching competencies at an institutional level (see also Macaro et al., 2020). Dafouz (2018) also focuses on the importance of considering teacher identity and ideology in EMI professional development, arguing that teaching in an L2 is a complex social practice that goes beyond mere information exchange. Bradford et al. (2022) call for more research on developing and validating EMI-specific teacher competency frameworks and assessment tools. This could, for instance, include exploring the potential of portfolio-based assessment approaches that capture the multifaceted nature of EMI teaching skills.

Moreover, as noted in Chapter "EMI Teacher Training at a Korean Science and Engineering University: Practices and Challenges", ESP teachers may have valuable expertise to contribute to EMI professional development, particularly in specialized fields. Further research could explore models for integrating ESP approaches into EMI PD programs across different disciplines and examine the impact on disciplinary language development. Thus, it might be suggested to further explore the impact of EMI on lecturers' own language development, particularly subject-specific vocabulary, as Piquer-Píriz and Castellano-Risco (2021) noted this as a potential area of interest.

Building on the attitudinal differences noted in several chapters, more research is needed to understand the factors influencing faculty attitudes towards EMI and how these attitudes impact engagement with PD initiatives. This could include examining how cultural factors, prior language learning experiences, and disciplinary backgrounds shape EMI teaching beliefs and practices. As EMI programs expand in multilingual contexts, there is growing interest in pedagogical approaches that strategically benefit from students' multilingual resources (Karakaş, 2023a; Kırkgöz et al., 2023). Further research is needed on how to prepare EMI teachers to implement translanguaging and other multilingual pedagogies effectively.

Finally, incorporating technology into EMI professional development is paramount for future research. For instance, recent research has begun to explore the potential of video technology in EMI teacher development. Llinares and Mendikoetxea (2020) demonstrated the use of a video tagging system that allows EMI teachers to identify and analyze interactional patterns in their own teaching. We believe that such technology-enhanced approaches merit further investigation as potential tools for scalable, reflective EMI professional development. Also, the recent trend related to language studies, i.e. *AI-driven translation technologies, has the potential to reduce dependency on English as the sole medium of instruction by enabling real-time translation of course materials and lectures. In this respect, some studies reported EMI students' reliance on this technology as a coping strategy for a better content comprehension (e.g.,* Ali*, 2020). These technologies could also support a shift towards more inclusive multilingual education, allowing students to engage with content in their native languages while accessing global knowledge. However, relying on AI in education raises critical ethical and practical*

*concerns, including data privacy, equity in access to technology, and the risk of over-reliance on automated systems, which may overlook nuanced cultural and disciplinary contexts (*Karakaş*, 2023b). Future research could explore how to integrate AI responsibly into EMI programs, ensuring that it complements rather than replaces human-led multilingual strategies.*

4 Final Remarks

As EMI continues to expand globally, ensuring that faculty are adequately prepared and supported for the challenges of teaching disciplinary content through English remains a critical priority. The case studies presented in this volume have demonstrated both the complexity of EMI teacher development and the potential for innovative, context-sensitive approaches to address faculty needs (Sah & Fang, 2024).

Several key takeaways emerge from this international examination of EMI professional development. First and foremost, it is obvious that EMI PD must go beyond language proficiency. While English language skills are important, effective EMI teaching requires a broader set of competencies including EMI-specific pedagogical strategies, cultural awareness, and the ability to support students' disciplinary language development. Another noteworthy takeaway is that there is no one-size-fits-all approach to EMI professional development. PD programs must be tailored to institutional goals, faculty backgrounds, student needs, and broader sociocultural factors. It might also be aptly noted that institutional integration is crucial. For EMI initiatives to be successful and sustainable, they must be fully integrated into broader institutional strategies with appropriate support structures and incentives for faculty. PD models that provide opportunities for peer learning, reflection, and ongoing mentoring appear to be particularly effective in supporting EMI teachers' development.

While this volume has provided valuable insights, there is still much to learn about effective approaches to EMI teacher development. Longitudinal studies, comparative research across contexts, and investigations incorporating student perspectives are particularly needed (Galloway et al., 2017). Llinares and Mendikoetxea (2020) incorporated student perspectives into their study of EMI teacher reflective practices, arguing that learner experiences are vital when evaluating the effectiveness of EMI pedagogical strategies. As higher education becomes increasingly globalized, the demand for EMI programs is likely to continue growing. Ensuring that these programs deliver high-quality education that meets both content and language learning goals will require sustained investment in faculty professional development. By sharing experiences and best practices across national and institutional boundaries, we can work towards developing more effective, evidence-based approaches to preparing and supporting EMI educators.

The insights presented in this volume provide a foundation for future research and practice in EMI professional development. However, it is clear that much work remains to be done. As EMI continues to evolve, so too must our approaches to

teacher preparation and support. By maintaining a commitment to context-sensitive, research-informed professional development, we can help ensure that EMI fulfils its potential to foster truly global learning experiences in higher education.

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