



T.C.

TED UNIVERSITY

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ENGLISH LANGUAGE EDUCATION

**HIGHER EDUCATION CONTENT LECTURERS' ATTITUDES
TOWARDS ENGLISH MEDIUM INSTRUCTION (EMI), THEIR
CHALLENGES AND COPING STRATEGIES IN EMI CLASSES**

ŞEYMA MERVE DEMİR

ANKARA, 2024

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CHALLENGES AND COPING STRATEGIES IN EMI CLASSES**

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ŞEYMA MERVE DEMİR

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Approval of the Graduate School

Prof. Dr. Ayça TEKİN-KORU
Dean, Graduate School

Prof. Dr. Belgin ELMAS
Program Chair

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts.

Assoc. Prof. Dr. Zeynep BİLKİ
Supervisor

Examining Committee Members

Prof. Dr. Paşa Tervik Cephe (Committee Chair)
Gazi University – English Language Education

Prof. Dr. Gölsev Pakkan
TED University – English Language Education

Assoc. Prof. Dr. Zeynep BİLKİ
TED University – English Language Education

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last name : Şeyma Merve Demir

Signature :

ABSTRACT

HIGHER EDUCATION CONTENT LECTURERS' ATTITUDES TOWARDS ENGLISH MEDIUM INSTRUCTION (EMI), THEIR CHALLENGES AND COPING STRATEGIES IN EMI CLASSES

Şeyma Merve DEMİR

Master of Arts, English Language Education

Supervisor: Assoc. Prof. Dr. Zeynep BİLKİ

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The adoption of English-medium instruction (EMI) at higher education institutions (HEIs) has become a growing phenomenon globally as a strategic response to the internationalization of HEIs, especially in non-Anglophone countries including Turkey. As the key stakeholder in EMI practices, content lecturers play a pivotal role in the effective implementation of EMI. Research on content lecturers' attitudes towards EMI has revealed inconclusive and conflicting results. Scant studies have examined challenges encountered by EMI content lecturers and their coping strategies. Considering the gap in the literature, the present study aimed to investigate content lecturers' perceptions of EMI, their challenges and coping strategies across 8 universities in Turkey, employing a mixed methods design. Quantitative data collected from an online questionnaire were analyzed using descriptive statistics and one-way ANOVA. Qualitative data gathered through semi-structured interviews were analyzed through thematic analysis. The findings revealed

the participants were mostly supportive of EMI due to its potential benefits, but they expressed some concerns. Students' low English proficiency, low level of learner engagement and assessment-related challenges were found as the major challenges. The coping strategies included simplification, L1 use, providing additional support and integration of fun elements into course plans. No significant difference between the perceptions, challenges and strategies was identified across disciplines. The findings suggest implications for content lecturers, higher education administration and EMI policy makers about prep year language education, the extent of L1 use in EMI classes, and translanguaging implementations.

Keywords: English-medium instruction, higher education content lecturers, perceptions, challenges, coping strategies

ÖZET

YÜKSEKÖĞRETİM DÜZEYİNDE BÖLÜM DERSİ VEREN HOCALARIN EĞİTİM DİLİNİN İNGİLİZCE OLMASINA YÖNELİK TUTUMLARI, EĞİTİM DİLİ İNGİLİZCE OLAN SINIFLARDA YAŞADIKLARI ZORLUKLAR VE BU ZORLUKLARLA BAŞA ÇIKMA YÖNTEMLERİ

Şeyma Merve DEMİR

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Eğitim dilinin yükseköğretim kurumlarında İngilizce olma uygulaması, bu kurumların uluslararasılaşmaya stratejik bir yanıtı olarak özellikle İngilizce'nin ana dil ya da resmi dil olmadığı Türkiye gibi ülkelerde küresel ölçekte büyüyen bir fenomen haline gelmiştir. İngilizcenin eğitim dili olarak uygulanmasında baş paydaşlardan biri olan içerik dersi veren öğretim üyeleri, İngilizcenin eğitim dili olarak etkili bir şekilde uygulanmasında hayati bir rol oynamaktadır. İçerik dersi veren öğretim üyelerinin eğitim dilinin İngilizce olmasına yönelik tutumları üzerine yapılan kapsamlı araştırmalar kesin olmayan ve çelişkili sonuçlar ortaya koymuştur. Az sayıda çalışma, içerik derslerini İngilizce dilinde veren öğretim üyelerinin karşılaştıkları zorlukları ve başa çıkma yöntemlerini incelemiştir. Literatürdeki bu boşluğu göz önünde bulundurarak, bu çalışma Türkiye'deki 8 üniversite genelinde birleştirici karma yöntemler tasarımı kullanarak içerik dersi veren öğretim üyelerinin eğitimin dilinin İngilizce olmasına yönelik tutumlarını, karşılaştıkları zorlukları ve başa çıkma stratejilerini araştırmayı amaçlamıştır. Çevrimiçi anket yoluyla toplanan

nicel veriler, tanımlayıcı istatistikler ve tek yönlü ANOVA kullanılarak analiz edilmiştir. Yarı yapılandırılmış görüşmeler aracılığıyla toplanan nitel veriler tematik analiz yoluyla incelenmiştir. Bulgular, katılımcıların çoğunun eğitim dilinin İngilizce olmasını potansiyel faydaları nedeniyle desteklediğini, ancak bazı endişeler ifade ettiklerini ortaya koymuştur. Öğrencilerin düşük İngilizce yeterliliği, düşük düzeyde öğrenci katılımı ve değerlendirme ile ilgili zorluklar, ana zorluklar olarak belirlenmiştir. Başa çıkma stratejileri arasında basitleştirme, anadil kullanımı, ek destek sağlama ve ders planlarına eğlence unsurlarının dahil edilmesi bulunmaktadır. Disiplinler arasında algılar, zorluklar ve stratejiler arasında anlamlı bir farklılık belirlenmemiştir. Bulgular, hazırlık yılı dil eğitimi eğitim dili İngilizce olan derslerde anadil kullanımının sınırları ve farklı dillerin bilinçli ve stratejik olarak kullanımı konularında içerik dersi veren öğretim üyelerine, yükseköğretim yönetimlerine ve karar alıcılara önerilerde bulunmaktadır.

Anahtar Kelimeler: eğitim dili İngilizce, öğretim üyeleri, bakış açıları, zorluklar, stratejiler

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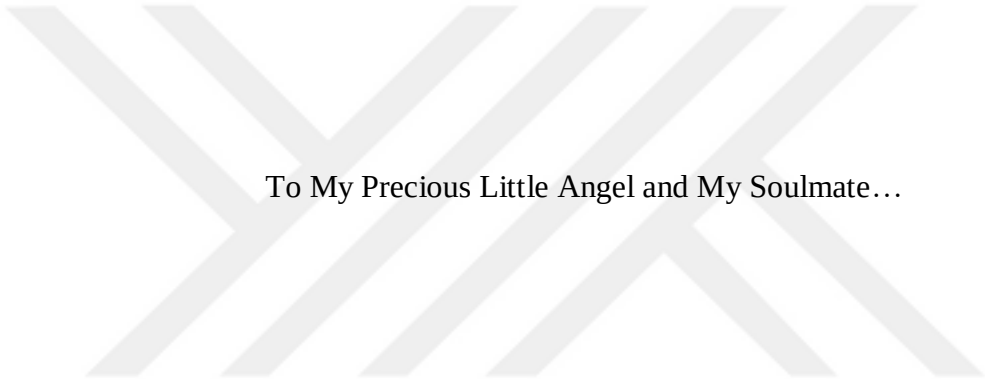
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To My Precious Little Angel and My Soulmate...

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LIST OF ABBREVIATIONS

CBL	Content-based Learning
CLIL	Content and Language integrated Learning
EFL	English as a Foreign Language
EMI	English-medium Instruction
FMI	French-medium Instruction
HE	Higher Education
HEI	Higher Education Institution
HEC	Higher Education Council
TMI	Turkish-medium Instruction

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CHAPTER 1

INTRODUCTION

This introductory chapter aims to introduce the background to the study and providing an overview of the purpose and the significance of the study as well as stating the research questions.

1.1 Background to the Study

1.1.1 EMI and EMI Studies in the World

English has been a global language and the most widely used language in higher education (HE) (Graddol, 2006). Universities around the world have recently put a supreme effort into becoming international to appeal to more and more international learners, which is called ‘internationalization’ or ‘Englishization’ (Kırkgöz, 2019). The increasing use of English at an unstoppable speed as the global language, the necessity to engage with diverse individuals at any place and time and the ‘internationalization’ of higher education (Kırkgöz, 2019) have resulted in the growth in the use of English as the medium of instruction (EMI) at university settings especially in non-English speaking countries (Galloway et al., 2020). Even though there is no universally agreed-upon definition of EMI (Banks, 2018), the term EMI could be 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” (Macaro, 2018, p. 19).

O’Dowd (2018) states that EMI is a “win-win” situation which brings great benefits to all stakeholders such as ‘the recruitment of international students and international staff, which English facilitates, leads to enhanced institutional prestige, greater success in attracting research and development funding, and enhanced employability for domestic graduates’ (Coleman, 2006, p. 5).

The adoption of EMI around the world, especially in non-Anglophone countries, has been gaining prominence at an unprecedented pace (Wächter & Maiworm, 2014). The key driving force behind this global popularity of the adoption and implementation of

EMI at higher education institutions (HEIs) has been cited as “internationalization and globalization of higher education to produce globally minded graduates that are capable of competing in the global labor market” (Alhassan, 2021, p. 1). Internationalization is regarded as “the intentional process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff and to make a meaningful contribution to society” (de Wit et al., 2015, p. 29)”. The main forces behind internationalization of the English language and HEIs are known as the Bologna Process and Erasmus. With the intention of internationalization, HEIs put tremendous efforts into “the economic growth, ranking and visibility of HEIs, staff mobility and quality assurance and academic accreditation by both national and international organizations” (Alhassan, 2021, p. 1).

As the adoption of EMI has turned into a globally growing phenomenon, EMI has been attracting considerable scholar attention around the world in recent years. Extensive research has been carried out on various aspects of EMI in different contexts including both European contexts, where the initial growth of EMI was observed, and non-English speaking settings (Galloway et al., 2020). One of the aspects of EMI that have been studies extensively is stakeholders’ (teachers, students, administrators, language policymakers, parents and so on) perceptions of EMI. On the one hand, some of these studies reveal positive attitudes towards EMI (Aguilar, 2017; Ball & Lindsay, 2013; Costa & Coleman, 2013; Dewi, 2017; Doiz et al., 2013; Galloway et al., 2017; Phuong & Nguyen, 2019). Aguilar’s (2017) study aimed to explore the opinions of university lecturers on EMI at a Spanish university. The findings of the data gathered from surveys and interviews found that the participants, who had implemented content and language integrated learning (CLIL), favored EMI due to the less demanding nature of EMI compared to CLIL. In a similar vein, Dewi’s (2017) study examined lecturers’ attitudes toward EMI at a number of state and private universities in Indonesia. The data collected through a questionnaire with 39 lecturers and interviews with 6 lecturers revealed that the participants were proponents of EMI at higher education level because of easier access to and understanding of resources written in English. In their mixed methods study, Phuong and Nguyen (2019) examined students’ perceptions of EMI at a

Vietnamese context. The data collected from 136 second years studying International Business and Information Technology showed that the students were quite supportive of EMI due to several cognitive benefits including becoming more competitive, learning to divergent thinking and more resources in the English language. On the other hand, some studies report negative opinions of stakeholders on EMI (Baltabayev, 2020; Hung & Lan, 2017; Jensen & Thøgersen, 2011; Kim et al., 2017; Simbolon et al., 2020). In their study conducted to investigate lecturers' perceptions of EMI at an Indonesian university, Simbolon et al. (2020) found that the lecturers mostly had negative opinions on EMI practices due to their lack of understanding of EMI in key areas such as assessment and course preparation.

In addition to extensive research on stakeholders' perceptions of EMI with inconclusive results, a strand of studies has focused on challenges in EMI setting (Airey & Linder, 2006; Albakri, 2017; Hu et al., 2014; Macaro et al., 2018; Zacharias, 2013) as this unstoppable growth of EMI is not without its challenges (Alhassan, 2021). These challenges are generally divided into four different categories in the relevant literature: 1) linguistic challenges, 2) pedagogical challenges, 3) assessment-related challenges and 4) administrative challenges (Alhassan, 2021; Galloway et al., 2017; Oktaviani et al., 2021). Language-related challenges faced by EMI students have received considerable critical attention globally in various contexts (Airey, 2011; Airey et al., 2017; Aizawa et al., 2020) including Turkey (Macaro & Akincioglu, 2018; Soruç & Griffiths, 2018; Yıldız et al., 2017). "The most oft-cited challenge" encountered in EMI contexts is learners' low English proficiency level (Airey & Linder, 2006; Galloway et al., 2020; Wilkinson & Yasuda, 2013), which results in poor content comprehension (Curle et al., 2020). Several studies on this focus have also found that EMI teachers also lack English language proficiency, which causes teachers to feel challenged to conduct their courses comfortably in English (Aizawa & Rose, 2019; Alhassan, 2021; Coleman, 2006; Martinez & Fernandes, 2020). Several studies conducted on challenges in EMI settings report some pedagogical challenges including being unable to notice and attend to students' learning preferences and sticking very closely to coursebooks to "minimize spontaneous interaction and improvisation" (Hu et al., 2014, p. 35), several assessment-related challenges having difficulty assessing students' exams due to language barriers

or lack of content knowledge (Kairouz, 2023) and a number of administrative challenges including having difficulty finding qualified academic staff (Galloway et al., 2017).

Despite this growing interest in EMI studies regarding stakeholders' perceptions and challenges faced in EMI settings, a very limited number of studies has been conducted on strategies utilized to handle challenges in EMI contexts globally (Alhassan, 2021; Banks, 2018; Mouhana, 2016, Oktaviani et al., 2021) including Turkey (Demir, 2022; Soruç & Griffiths, 2018; Ozer, 2020). The most oft-cited strategies in the relevant literature include simplification (Alhassan, 2021), integration of more active learning methods and interaction patterns (Banks, 2018), code-switching (Kairouz, 2023; Oktaviani et al., 2021), use of learning and metacognitive strategies (Soruç & Griffiths, 2018) and adding fun elements into curriculum (Kairouz, 2023; Ozer, 2020).

Overall, the adoption of EMI has become prevalent around the world due to internationalization of English and HEIs, which has led to an abundance of research studies on EMI in different setting from various aspects including stakeholders' perceptions of EMI, challenges faced in EMI contexts and coping strategies. However, literature is full of inconclusive and contradictory evidence regarding the attitudes of relevant bodies toward EMI, difficulties experienced in EMI settings and strategies to overcome these challenges. To this end, further research should be conducted to better contribute to the understanding of EMI.

1.1.2 EMI in Turkish Context

The internationalization of higher education and the emergence of English as the “inevitable preference in the specific and influential domain of academe” (Coleman, 2012) has also been evident in Turkey. Turkey is regarded as one of the anglophone contexts which were not previously an American or British colony due to its placement within the expanding circle in Kachru's (1992, as cited in Kırkgöz, 2014, p.446) three-circle model.

The history of EMI in Turkey dates back to years after 1923. The establishment of ‘Maarif Schools’ in 1955, today known as Anatolian High Schools, was Turkey’s strategic response to internationalization of English and HEIs around the world. The

successful English language education at Maarif Schools resulted in the emergence of Turkish universities offering education through EMI (Macaro, 2018). The first Turkish university that adopted EMI was Boğaziçi University, followed by Middle East Technical University (METU) as the first state-owned EMI university in 1956 and Bilkent University as the first private university offering EMI courses in 1983. Turkey's attempts to keep up with the internationalization continued by joining the Bologna Process in 2001 (Karakaş, 2018) and Erasmus in 2004 (Kırkgöz, 2019).

The prevalence of English as a medium of instruction (EMI) programs in Turkey has experienced a significant surge, particularly in the past two decades. According to statistics the Student Selection and Placement Centre (ÖSYM) (2023) and HEC (2024), 98 out of 208 higher education institutions (HEIs) in Turkey offer and implement either fully or partially EMI programs, which represents 47% of all universities in the country. The exponential growth of EMI, both in Turkey and worldwide, has not only influenced educational policies but has also sparked considerable interest among researchers. Different aspects of EMI in various contexts in Turkey have been investigated extensively. Understanding stakeholders' perceptions is crucial for developing effective EMI programs and establishing educational policies that align with their needs, expectations, and aspirations. Therefore, there is a growing body of research on this issue (Başibek et al., 2014; Kırkgöz, 2014; Macaro & Akıncioğlu, 2018; Ozer, 2020; Sert, 2008). While Macaro and Akıncioğlu (2018) found that the participants were in favor of EMI due to its future benefits like more career opportunities, Kılıçkaya (2006) revealed that the participants were against the use of English as the medium of instruction due to its adverse effects on content comprehension and they preferred Turkish medium instruction (TMI) to EMI, which proves that no consensus among stakeholders has been achieved on the effectiveness of EMI in Turkey either. Non-linguistic factors including self-regulation (Soruç et al., 2022), relationship between motivation and success in EMI (Kaya et al., 2022, Kır, 2024; Turhan & Kırkgöz, 2018) and gender as a variable in EMI studies (Curle et al., 2024; Macaro & Akıncioğlu, 2018) have also been studied extensively in Turkey.

Despite not being sufficient, a number of studies have been carried out in Turkey to examine challenges faced by students and/or lecturers (Demir, 2022; Soruç & Griffiths, 2018; Ozer & Bayram, 2019; Ozer, 2020b). Demir (2022) conducted a case study with 7 lecturers teaching in the psychology department at a foundation university in Turkey. The findings revealed that the lecturers suffered from a number of difficulties including the varying language levels of students in the same class, students' low proficiency level of English, choosing appropriate words while explaining course content and giving examples, addressing the needs of two groups (Turkish students and foreign students) in the same class and spending much effort to grab learners' attention to classes.

However, to date, very little attention has been paid to strategies utilized to overcome challenges in EMI contexts in Turkey (Demir, 2022; Soruç & Griffiths, 2018; Ozer, 2020b). In his phenomenological study with content lecturers at a state university in Turkey, Ozer (2020b) found that the content lecturers employed several strategies such as simpler explanations, code-switching and summarizing the key points in Turkish. In a similar study, Demir (2022) reported that the participants, who suffered from a number of challenges including different language levels of students, addressing both local and international students' needs, and low level of learner engagement, utilized several strategies like summarizing the content in Turkish, providing simpler examples and explanations, and being more energetic.

In Turkish context, there have been a strand of studies on stakeholders', especially content lecturers', perceptions of EMI, challenges encountered and coping strategies. However, none of these studies have been designed with the intention of making discipline-based differences. That is, there has been no study conducted in Turkish context comparing content lecturers' attitudes toward EMI, their challenges and coping strategies, based on academic disciplines.

Content lecturers serve as a bridge between learners' expectations and institutional objectives and the "the principal agents capable of checking whether the EMI system is working for the students"; therefore, any feedback on the areas relevant to their professional life is of vital importance for a more successful implementation of institutional EMI policies (Ozer, 2020, p. 625). That is, exploring content lecturers'

perceptions of EMI, their challenges and coping strategies through in-depth analysis may provide new and valuable insights for a more effective adoption and implementation of EMI in Turkish context.

In light of these abovementioned implications, it might be concluded that there is still a need for research in the area of English-medium instruction in terms of content lecturers' attitudes towards EMI, their challenges, and strategies by making discipline-based comparisons.

1.1.3 Purpose and Significance of the Study

Driven by the growing trend of internationalization of higher education, universities around the world are increasingly embracing EMI in their curricula and to teach various disciplines such as engineering, medicine, and architecture (Hu et al., 2014). Despite the existing benefits of EMI for higher education institutions (HEI) including attracting international students and staff, developing global skills in the home student body, and increasing employability (Fang, 2018; Kırkgöz, 2019), it is crucial to gain more insight into the reasons and motivations which drive lecturers as the key stakeholders at the micro level to leave their comfort zone and teach in another language.

It is essential to gain more insight to understand the EMI context and its stakeholders to contribute to its successful implementation. Content course lecturers are critical stakeholders at the micro level as they are expected to leave their comfort zone and teach in another language. Undoubtedly, EMI lecturing involves more than delivering content through English; it is a complex process that requires pedagogical and methodological attention (Cots, 2013; Fortanet-Gómez, 2013; Morell, 2018). To this end, to fully understand the conjoint effort lecturers and universities have to make to successfully implement EMI, it is of utmost importance to look into the main challenges practitioners- content lecturers in this study- have to face (Alhassan, 2021), and the strategies they employ to deal with these obstacles. Although a considerable body of research has been carried out to find out about learners' difficulties, as pointed out by Macaro et al. (2018), currently the bulk of EMI literature has relatively little to do with the professional preparation and development of EMI teachers in higher education

settings. Therefore, we have insufficient understanding of how EMI teachers teach, why they teach in the ways they do, what difficulties they experience in EMI classes and how they grapple with the challenges they face.

As for the relationship between disciplines and the process of teaching and learning, there has been an abundance of research on the effects of disciplinary differences on the instruction and learning process (Becher & Trowler, 2001; Lindblom-Ylännea et al., 2006; Neumann, 2001). However, little research has looked into this issue in relation to EMI. In their research focusing on the influence of general English proficiency on students' academic success in partial EMI programs, Altay et al. (2022) revealed that it affected the achievement of Social Sciences students and Mathematics, Physics, and Life Sciences at different levels. Altay et al. (2022) suggest that discipline-based issues be taken into consideration by policymakers for the successful implementation of EMI programs. In a similar vein, Kuteeva and Airey (2013) criticized 'one-size-fits-all' language policies by highlighting the importance and necessity of adjustments based on disciplines. Considering the above-mentioned studies and implications, it may be concluded that further investigation regarding discipline-based differences in EMI contexts is needed for the effective implementation of EMI and the development of educational policies that correspond to the needs and expectations of the stakeholders at HEIs (Şanlı, 2023).

The studies that have been done in Turkey are no exceptions. While there is an abundance of research that has explored the perceptions and needs of EMI students in Turkey (Atik, 2010; Karakaş, 2016; Karaman, 2018; Şanlı, 2023), there remains a current paucity of studies investigating the difficulties EMI content course lectures encounter and their coping strategies in Turkey. There has been only a limited number of studies that have examined EMI content lecturers' challenges and strategies utilized to overcome these challenges in Turkey including (Demir, 2022; Soruç & Griffiths, 2018; Ozer, 2020), and there is no study that compares challenges faced by EMI content lecturers and their strategies based on their academic disciplines. Despite the importance of its local applications, EMI is a global phenomenon that tends to change rapidly and generate heated debates. Therefore, as emphasized by Soruç & Griffiths (2018) and

Hultgren & Wilkinson (2022), there is still a need for more research on its drivers' – especially teachers'- views on EMI and the issues they face in their EMI classes to ensure improved teaching and learning outcomes.

Considering the lack of studies to explore EMI content instructors' views, obstacles and strategies in a Turkish context, this study aims to bridge the gap in the literature by exploring the difficulties EMI content lecturers at higher education level face and the strategies they adopt to be able to successfully implement EMI in a Turkish context as well as examining their perceptions of EMI. This study is also one of the first investigations in Turkish context to examine whether and how EMI content lecturers' difficulties and coping strategies differ based on their academic disciplines. Lastly, it is estimated that shifting the research trend from learners to teachers with the purpose of understanding the challenges and strategies of EMI content lecturers might contribute to the better understanding of EMI content lecturers' needs and, as a result, may lead all the main stakeholders in the process to pay more attention to the training and accreditation of teachers for English medium instruction.

1.1.4 Research Questions

Considering the gaps and limitations in the relevant literature and suggestions from the previous studies, this present study aims to address the following research questions:

1. What are the views of content lecturers teaching different disciplines at higher education level on EMI?
 - 1a. What are the underlying reasons for these content lecturers to favor EMI at university?
 - 1b. What are the underlying reasons for these content lecturers not to favor EMI at university?
 - 1c. Are there any differences among these content lecturers' perceptions, considering the disciplines they teach?
2. What challenges do content lecturers teaching different disciplines face in EMI classes?

- 2a. How do the challenges faced by EMI content lecturers differ, considering the disciplines they teach?
- 3. What strategies do content lecturers in EMI disciplines use to address these challenges?
 - 3a. How do the strategies used by EMI content lecturers to address the challenges differ, considering the disciplines they teach?



CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter aims to review the literature on English-Medium Instruction (EMI) in higher education and to provide a detailed discussion of how the stakeholders - particularly teachers- view EMI, the challenges they encounter and the methods they utilize to cope with these issues in EMI classes, which constitute the research questions of this thesis.

This chapter is subdivided into five parts. The first part attempts to clarify some key concepts and terms. The second part will provide an overview of the internationalization of English. The third and fourth parts aim at presenting a brief history of EMI in the world and in Turkey respectively. The purpose of the last part is to lay out the details of some of the previous works in the related literature concerning EMI lecturers' challenges and coping strategies.

2.2 English-Medium Instruction (EMI) as a Concept

English has quickly become the international language of choice due to the globalization of higher education (HE), with English Medium Instruction (EMI) becoming prevalent throughout non-English speaking regions (Curle et al., 2020b; Curle et al., 2024). That is, the world has witnessed an “unprecedented growth in the number of non-language subjects” being instructed in English (Galloway et al., 2020, p. 396).

English-medium instruction is often confused with content and language integrated learning (CLIL) and content-based learning (CBL). Even if these three approaches are widely and often interchangeably used in many educational settings, there are several key points that differentiate EMI from CLIL and CBL. To clarify the differences between these three approaches, it would be wiser to have a look at their definitions in the literature.

Brown and Bradford (2016) describe content and language integrated learning (CLIL) as “an approach to education that integrates language and content learning; planning for, fostering, and assessing both, though the focus may shift from one to the other” (p. 331). Similarly, Coyle et al. (2010) define CLIL as a “dual-focused form of instruction where attention is given to both the language and the content” (p. 3).

Content-based learning (CBL) is “designed to embed language instruction in the context of content that is meaningful to learners’ (Cammarata et al., 2016, p. 12). In a similar vein, CBL is defined in Brown and Bradford (2016, p. 332) as follows:

“... an approach to language teaching in which content, texts, activities, and tasks drawn from subject-matter topics are used to provide learners with authentic language input and engage learners in authentic language use.”

As for English-medium instruction (EMI), there has been no universally agreed-upon definition of EMI. Below is the compilation of some of the definitions of EMI that are commonly referred to in literature:

“... a discipline-based ‘late late’ immersion program without any bridging support” (Kang & Park, 2005, p. 158)

“... [when] English is the medium of instruction rather than studies as a foreign language” (Tarnopolsky & Goodman, 2012, p. 58)

“... the teaching and learning of content through another language (English)” (Dafouz et al., 2014, p. 224)

“English used as the language of instruction, in particular, where English is not the native language of the students” (Kim & Shin, 2014, p. 42)

“... the practice of teaching an academic subject through English which is not the first language of the majority population” (Dearden, 2014, p. 4)

While a variety of definitions of the term EMI have been suggested as seen above, this study will adopt the definition suggested by Macaro (2018) who saw it 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. 19).

In the lights of the definitions of the three terms, it would not be wrong to state that the primary difference between EMI, CLIL and CBL stem from “the relative positions of language and content in learning objectives and assessment” (Brown & Bradford, 2016, p. 328). In CBL, content serves a means of language learning, and learners are assessed on their language performance as the main aim is language learning. In EMI, the purpose is the mastery of subject content through English without any language focus as it is implied that language is learnt through subject mastery (Wannagat, 2007). Between these extremes, CLIL is an integrated approach with a dual focus on meaningful input and output in L2 and content learning (Brown & Bradford, 2016).

Another distinction has to do with the settings appropriate for the implementation of these concepts although they could be applied at any level and in any contexts in theory (Soruç & Griffiths, 2018; Cañado, 2020). While CLIL and CBL are more preferable at primary and secondary level, EMI is a more appropriate choice at tertiary level due to the fact that language learning is not of primary importance in EMI (Schmidt-Unterberger, 2018).

2.3 Internationalization of English

Due to the recent globalization of the world, there was a demand for a worldwide language that would facilitate communication between individuals from other nations (Kırkgöz, 2017), which has led to English being regarded as a lingua franca and the language of international communication in all fields of life (Phan, 2013). Higher education around the world is undoubtedly one of the areas that have been mostly affected by the global spread of English. There seems to be a swift global movement from English as a foreign language (EFL) toward English being the medium of instruction (EMI) to teach academic subjects including science, arithmetic, geography, and medicine in non-English speaking contexts (Dearden, 2015; Rose & McKinley, 2018), which has resulted in a significant rise in the number of EMI programmes around the world (Arik & Arik, 2014). The competition between state and private universities

for funding (Macaro & Akıncıoğlu, 2018), modernization of universities (Zhang, 2018) and access to the global job market (Barnawi, 2021) are among the motivations for EMI's momentum in its global expansion and the adoption of EMI at HEIs. However, the main force behind this rapid growth is internationalization of higher education (O'Dowd, 2018; Hultgren, 2014; Macaro et al., 2018). This concept is generally seen as “the intentional process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff and to make a meaningful contribution to society” (de Wit et al., 2015, p. 29).

Internationalization has become a priority for higher education institutes (HEIs) around the world. Therefore, HEIs are eager to internationalize their curricula, have a global footprint, compete with one another to attract foreign students, and strengthen their global competitiveness. To this end, HEIs, particularly in non-native English-speaking countries, make tremendous efforts by “setting up branch campuses in other countries”, through “staff and student exchanges, collaborative degree programmes and courses and initiatives to recruit international students and staff” and more importantly “by establishing – and extending – English medium instruction (EMI) courses and programmes for non-language subjects” (Galloway et al., 2017, p. 4). This is because internationalization of HEIs in non-Anglophone countries including Turkey entails the use of English as the medium of instruction and constructing knowledge through English (Phan & Barnawi, 2015).

The key drivers of internationalization of English and HE are the ratification of Bologna in Europe and Erasmus. Erasmus is the European Region Action Scheme for the Mobility of University Students, which was established in 1987 to promote student mobility and equipping students with a wider range of skills, including L2 learning (Macaro, 2018). The important point about Erasmus in relation to EMI is that the aim was originally to provide learners who spent a period of their undergraduate studies at a foreign country with an opportunity to study those subjects in the majority language of the host country (Macaro, 2018). And an “Erasmus Impact Study” mentions that enhancing their foreign language skills was the driving force behind students' decision to

study abroad (European Commission, 2014a). In the 1980s and 1990s, the most preferred countries to which university students headed for their studies were reported to be Spain, Italy, Germany, France, and the UK with the increasing number of students from 3,244 to almost 3 million (European Commission, 2014a). Macaro (2018) notes that although during those years, Erasmus students would attend lectures in the language of the host country, this practice has been gradually shifted to attending courses through the medium of English.

As the other and most probably stronger driving force behind the internationalization of HE and EMI, the Bologna Process or a.k.a. the Bologna Declaration, which has 49 members including Turkey, was initiated in 1999 with the aim of setting standards for higher education within Europe, promoting student mobility from undergraduate level to post-graduate level and drawing international students' attention to European higher education institutes more easily (Arik & Arik, 2018; Costa & Coleman, 2013; Macaro, 2018). Despite the strong criticisms of the Bologna Process failing to achieve its objectives of enhanced student mobility, equity, and mutual recognition of higher education qualifications (Alexander, 2008; Coleman, 2003, 2005, 2009; Goodman, 2010; Gnutzmann, 2011; Phillipson, 2006; Tosi 2006), its contributions to the globalization of English have been openly stated in many sources. Macaro (2018) argues that all events related to the 1999 Declaration such as forums, workshops, and conferences, which have been conducted in English, have made great contributions to English becoming the common language of education at tertiary level across Europe.

Considering the increased role of English in HEIs as a result of the Bologna Process and Erasmus, it is likely to draw the conclusion that EMI has turned into a 'galloping' phenomenon (Chapple, 2015, p. 1) and would continue as "an unstoppable train" in the future (Macaro, 2015, p. 7).

2.4 EMI and EMI studies in the World

As a result of the internationalization of higher education through the Bologna Process and Erasmus, the worldwide adoption of English as a medium of instruction (EMI) in universities has recently gained momentum especially in non-Anglophone countries in

Europe, Asia, and the Middle East (Fenton-Smith et al., 2017; Wächter & Maiworm, 2014). EMI programs have occupied a more prominent place at private higher education institutes (HEIs) compared to public ones (Costa & Coleman, 2013; Dearden, 2014; Islam, 2013; Kılıçkaya, 2006).

The reasons for this excessive growth in the use of English as the medium of instruction at tertiary level could be categorized into different groups. Internationalization with the intention of fostering student and lecturer mobility (Dearden, 2015; Galloway et al., 2017), keeping up with socio-economic and political forces of globalization (Block, 2018; O'Regan, 2021), reforms in the governance of HEIs (Hultgren & Wilkinson, 2022), obtaining access to cutting-edge information and boosting worldwide competitiveness to enhance the profile internationally (Galloway et al., 2017) as well as advances in science and communication tools (Kırkgöz, 2017) could be mentioned as the key drivers for this turn to EMI programs.

In recent years, EMI has attracted a considerable scholarly interest in a wide range of fields. There has been a sudden increase in research projects, articles and descriptive studies on different aspects of EMI implementation in various contexts and forms around the world (Maiworm & Wächter, 2002; Doiz et al., 2011; Costa & Coleman, 2013) and other studies to find out about the effects of EMI adoption on curriculum, learners and professors to “better unpack such policy and its practice in various contexts” (Huang & Fang, 2022, p. 206).

In line with this tendency, extensive research has been carried out universally to explore the attitudes of students towards EMI as one of the key stakeholders that encounter the intricacy of learning disciplinary knowledge through EMI (Moncada-Comas, 2022). However, literature has emerged that offers contradictory findings about the perceptions of learners towards EMI. In their study, Kim et al. (2017) aimed to examine the perceptions of Korean engineering students towards EMI and the use of Korean in their classes. The sample constituted five hundred twenty-four undergraduate students of three major engineering universities in Korea. The analysis of the quantitative data gathered through a questionnaire demonstrated that most of the students did not prefer EMI classes on a voluntary basis but were forced to take their departmental courses in

English due to the policy their schools adopted. In addition, most of the participants reported that their English proficiency insufficient for them to survive in an EMI content. Furthermore, they were found not to believe that EMI positively contributed to the improvement of their English language skills. Therefore, the participants mostly stated that they would choose instruction in Korean over EMI for easier and better content comprehension. On the other hand, Phuong and Nguyen (2019) conducted a mixed-methods study to investigate the perceptions of students towards the benefits and disadvantages of EMI practices in the Vietnamese context. The population consisted of 136 sophomores majoring in International Business and Information Technology at a university in Vietnam. The results of the data collected through a questionnaire and the individual interviews revealed that the majority of the students had a positive attitude towards EMI due to its benefits including cognitive advantages like making them more competitive and leading them to divergent thinking, a wider range of resources available in English in their fields, offering a brighter future with better career opportunities as well as its contributions to the improvement of their English skills, which are in line with the findings of several previous studies (Alhamami, 2015; Probyn, 2005; Tatzl, 2011; Zare-ee & Gholami, 2013). Despite these perceived benefits, most of the participants reported to have difficulty in comprehending field-specific terminology and science concepts due to their limited knowledge of lexis and low listening competence, which would cause poor content comprehension. Another challenge reported by the participants was related to reading and understanding textbooks in English. Many participants also stated that expressing themselves in exams posed one another great challenge owing to their poor command of English.

In a similar vein, Song (2019) conducted a study that aimed to examine the opinions of students on international EMI programmes in China through the theoretical lenses of language ideologies. In this ethnographic project, the data were gathered through classroom observations from 51 students from the seven EMI programmes involved in the study, and interviews from 15 students. The analysis revealed that the majority were in favor of EMI because of English being the academic lingua franca and offering a brighter future with more career prospects globally. In addition, the participants reported to consider ‘studying in China through EMI’ to be “valuable cultural capital in the

human resources market” (p. 27) due to the development of neoliberal economy that has emerged because of the globalization.

In another related study that was conducted with 77 university students in Taiwan, Huang (2020) aimed to discover students’ perceptions of EMI practices and the most preferred learning scenarios and reached intriguing findings. The results demonstrated that the students were supportive of EMI in comparison with their English proficiency, content learning and intercultural sensitivity, which is in accordance with previous findings (Fidan Uçar & Soruç, 2018; Hudson, 2009). The interesting point was that low achievers found EMI more beneficial for their English language development, content learning and intercultural sensitivity than high achievers. As for the learning scenarios to facilitate these three types of learning, the integration of native speakers of English was found to be the most useful scenario for learning the language, content and international sensitivity, followed by students’ presentations, lectures offered by non-native speakers in English and course-related videos.

Tajik et al. (2021) carried out a mixed-methods study to examine the perceptions of graduate students at 10 Kazakhstani universities towards EMI and see whether the perceptions differed based on gender, age and year of study. The data gathered from a total of 320 graduate students from 10 universities in Kazakhstan through an online questionnaire revealed that the participants were mostly proponents of EMI at higher education level because of their positive experiences such as improvements in their English skills and its contributions to further academic studies. Gender was found to be not an influential factor in the perceptions of the participants. However, as for the correlation between age and EMI, the graduates in the 18-26 age range valued EMI more for their academic and professional career compared to the other age groups. Likewise, regarding the comparison between year of study and EMI, the perceptions of Master’s students statistically differed from the ones of PhD students. PhD students were found to value EMI more and feel more confident in the English language than Master’s students, which is in consistency with the findings of Tsui and Ngo (2017) reporting that undergraduate senior students and master’s students held a more positive attitude towards EMI than juniors due to career prospects.

Similarly, Tien (2021) conducted a study to check the correlation between students' perceptions of EMI and the three factors: gender, English proficiency and listening ability in English. The analysis of the quantitative data gathered through a questionnaire from 43 university students in Taiwan found that despite being supportive of EMI because of improved English proficiency, the participants agreed on that a bilingual approach should be adopted to facilitate comprehension of disciplinary knowledge. As for the correlation between gender and EMI, gender was not statistically a significant factor in English improvement and content learning. English language proficiency did not significantly affect students' perceptions, and content learning. On the other hand, listening ability in English was found to be a significant factor in English language improvement and the comprehension of disciplinary knowledge.

Zhang and Pladevall-Ballester (2021) shifted the focus to a different aspect of studies on learners' perceptions of EMI. Considering the gap in the literature, Zhang and Pladevall-Ballester (2021) aimed to check whether there was any change on learners' opinions on EMI over time. The data were collected qualitatively and quantitatively from 170 undergraduate students taking three different EMI courses (International Trade, Film Production and Project Management). The results showed that there was a statistically significant difference between the participants' perceptions of EMI within time. Although they were initially quite supportive of EMI, their attitudes got worse at the end of the semester. The analysis revealed that this was mostly because of lectures conducted in a teacher-centered manner, limited opportunities to practice English and adverse effects on content comprehension.

The studies above are just several representatives of the vast abundance of studies on the perceptions of students towards EMI. Another theme that considerable literature has grown up around globally is the views of content lecturers on EMI adoption and implementation. This is because 'perception' is undoubtedly a notion that is liable to change within time. Wu et al. (2015) argue that teaching beliefs play a crucial role in shaping classroom behaviors that impact instructors' efforts, persistence, and resilience when confronted with challenges in their classes. Considering the critical role of lecturers in EMI context and its successful implementation, studies in the literature have

examined lecturers' attitudes towards EMI, which present different perspectives from diverse contexts and countries. However, literature has provided inconclusive and controversial evidence on the perceptions of teachers of EMI. The vast majority of earlier studies have been conducted in the Western context (Yuan & Li, 2021). In the European context, sentiments regarding EMI could be better defined as “equivocal” or “controversial” rather than being “against” the introduction and/or continuous use of EMI (Dearden, 2014, p. 2). On the one hand, the adoption of EMI at HEIs has been found to offer many benefits to all stakeholders including lecturers, students, and policymakers like equipping learners for globalization, enrolling more and more international students, attracting international academic staff and increasing universities' rankings globally (Ruiz-Garrido & Palmer-Silveira, 2008; Barnard, 2014; Kedzierski, 2016; Kırkgöz, 2019; Galloway et al., 2020).

Dafouz et al. (2014) carried out an empirical study to explore the perceptions of the lecturers towards EMI and the effects of the teaching of a Business Administration degree in English as a foreign language on Spanish students' academic performance. 106 students for the subject of Accounting, 115 for Finance and 95 for History, and 6 different Spanish-speaking teachers in the BA degree constitute the sample. The study revealed that the participants found EMI a cost-effective educational approach, and they believed EMI helped learners make progress into higher courses and improve their language and content knowledge. Similarly, in their study that compared teacher beliefs towards EMI in secondary and tertiary education, Briggs et al. (2018) explored that the instructors in both phases believed that the increased exposure brought about by EMI would contribute to learners' language learning journey and help them improve their English language skills better. Khatri's (2019) study also revealed similar results regarding the connection between language learning and the adoption of EMI. All the instructors in Khatri's (2019) study believed that EMI assisted both teachers and students in developing their proficiency with the English language. In addition, Yang et al. (2019) found that EMI helped improve both the instructors and learners' English language skills as well as cultivate the students' independent thinking and self-learning skills.

In a similar vein, Hu and Lei's (2014) case study uncovered the perceptions of faculty members and students in an EMI programme at a Chinese HEI. Upon the critical analysis of national/institutional policy statements and interviews with professors and students, EMI was reported to offer many benefits including greater employment and social mobility for graduates, enhanced English proficiency, stronger global perspective and connections, and higher rankings. In Europe, Wächter and Maiworm's (2014) survey revealed similar perceived benefits of EMI. The survey was distributed to a total of 2,637 higher education institutions in the 28 countries. Out of the 2,637 HEIs, 1,155 responded and turned out to support EMI at tertiary level due to its benefits for all the stakeholders such as enhanced global recognition, better guidance for international students, bolstered partnerships with other institutions, more and better employment opportunities and being equipped for international and intercultural working environments, which is strikingly comparable to the study findings by Galloway et al. (2017).

In their study, Morell et al. (2014) found that both lecturers and learners benefitted from EMI. Promoted global connections and increased academic and professional opportunities were reported to be among the perceived benefits of EMI. Corrales et al. (2016) also reached positive results in their case study that explored the perceptions of two professors, 27 students, and one program administrator at the department of computer science in a Colombian university. All the participants had positive attitudes towards English being the medium of instruction as they believed covering course content in English prepared the learners for their future career in the field.

Dewi (2017) also carried out a study that examined lecturers' perceptions of EMI in several public and private universities in Indonesia. The participants were 16 English lecturers and 20 other content lecturers who completed the survey, and three lecturers from each group were invited for the individual interviews. The use of EMI at HEIs was found to be supported by the participants due to easier access to and better comprehension of textbooks in the English language.

Though the adoption of EMI is welcomed by many lecturers and learners in various contexts, it is not without controversy. In his qualitative case study on the faculty

members and students' perceptions of EMI and its impacts on academic content and language acquisition conducted in Kazakhstan, Baltabayev (2020) found that the participants mostly favored EMI as they viewed English as a promoter of better career opportunities, lingua franca, the language of science, and internationalization. EMI was also reported to enhance English language competency. However, all the participants stated that EMI hinders content acquisition, which could be considered one of the major disadvantages of the adoption of EMI in non-English speaking countries. This point is also highlighted in Sela and Luke's (2020) study that reported EMI made it quite difficult for the learners to understand the content of subjects that were delivered or transferred due to the learners' low level of English proficiency.

Likewise, Oktaviani et al. (2021) did a case study to investigate the content lecturers' attitudes to EMI at a private school in Palembang. Upon the analysis of the data collected through questionnaires, classroom observations and interviews, the findings demonstrated that the subject lecturers had a strong belief toward EMI as they believed that covering course content in English, which is the lingua franca, would prepare learners for international career opportunities and help not only students but also lecturers improve their English language proficiency. Despite these perceived benefits, the learners' low level of English was reported to be the main challenge especially during times when new scientific terms were to be introduced as it hindered their content comprehension and resulted in low student engagement in class discussions. This finding is in accordance with Manalastas and Batang (2018) that found learners had lower confidence in EMI classes to express themselves compared to in multilingual classes and ones in L1 because of language barriers. In a similar vein, in Ibna Seraj and Hadina's (2021) study, students' unwillingness, anxiety, shyness, anxiety and low confidence created obstacles to the improvement of their spoken English. In addition, Oktaviani et al. (2021) identified that the teachers were also feeling quite challenged in EMI classes owing to their insufficient English language skills especially in terms of lexis and pronunciation, which caused them to waste most of their time getting prepared for their lessons. Similarly, Doiz et al. (2018) also reached that lesson preparation was quite a challenge for the lecturers since they had to spend extra hours preparing for elaboration of the materials covered in class.

In their study conducted in Denmark, Jensen and Thøgersen (2011) arrived at some striking conclusions regarding lecturers' attitudes towards EMI. One of them was that not all lecturers felt prepared and competent enough to teach through English. Those lecturers also preferred to publish in Danish to protect their native language from becoming extinct. Another striking finding was that the perceptions of the lecturers on EMI differed depending on their age groups. That is, the younger lecturers had more positive impressions of EMI compared to the older ones. The most startling perspective of the lecturers could have been that they believed students learnt best in the mother tongue. Cho (2012) reached out similar results in his study carried out to investigate the perceptions of the implementation of EMI at a science and engineering university in Korea and the effects of EMI on content teaching and learning outcomes. The faculty members stated that if they were given the choice, they would prefer to go back to teaching through L1.

Maniraho's (2013) study on motivation and attitudes toward EMI produced other intriguing results. The majority of the participants found using English to teach and learn beneficial. However, the reason why they thought so was not because EMI was helpful to teach or learn subject content. Rather than that, they believed EMI was a great means to teach or learn English, which makes the findings of this study quite interesting as, at its core, EMI is an attempt to promote content learning via the use of English.

Spurred by the internationalization of HEIs, EMI has also attracted great research interest in roles and responsibilities of EMI content lecturers. A number of studies have examined content lecturers' opinions regarding whether the transition for academic staff from delivering their academic discipline in L1 to teaching through EMI has resulted in any change in their roles and responsibilities. Previous studies on this topic of interest have revealed inconclusive evidence. While content teaching, is reported as the primary responsibility of EMI academics in some studies (Aguilar, 2017; Block & Moncada-Comas, 2019;; Huang & Fang, 2023; Pun & Thomas, 2020; Roothoof, 2019; Unterberg, 2014), some others find that EMI content lecturers have the tendency to integrate language teaching into content teaching to ensure disciplinary content acquisition (Liu & Yuan, 2023). Roothoof's (2019) study conducted with 59 EMI content lecturers from

five universities in Spain revealed that most of the participants positioned themselves as content lecturers despite their training in both content and language. Likewise, Unterberg (2014) carried out a study with business studies lecturers in an Austrian university. Regarding their roles in EMI classes, the participants considered themselves as solely content lecturers with no language teaching responsibility. Conversely, in their case study with an EMI teacher in a Macau university, Liu and Yuan (2023) found that the participant focused on both disciplinary content and language. The participants reported that the integration of both content and language teaching was pivotal to the success of EMI programs.

In a nutshell, globalization and internationalization of higher education institutions around the world has led to an explosive growth in the use of English as a medium of instruction, especially in non-English speaking countries. This recent global trend has led to a proliferation of studies that investigate various aspects of EMI in various contexts. The perceptions of stakeholders of EMI, the correlation between linguistic factors such as English proficiency and success in EMI as well as the relationship between non-linguistic factors like age, gender and motivation and success in EMI are among the research topics that have been studied extensively around the world. However, to date, there has been little agreement on how EMI is regarded by key stakeholders, especially content lecturers due to their vital role in the effective implementation of EMI. To this end, this study aims to contribute to the understanding of EMI by exploring the perceptions of lecturers conducting their subject content through EMI at higher education level.

2.5 EMI in Turkey

The number of courses and programs that are conducted using English as their medium of instruction is gaining momentum at an unprecedented rate. The initial expansion of EMI programs was mostly in Europe, where EMI programs at HEIs grew by 1,000% from 2001 to 2014 (Wächter and Maiworm, 2014). However, it has turned into a global phenomenon that is rapidly gaining popularity (Galloway et al., 2017).

Turkey is one of the few monolingual countries that have adopted English as the medium of instruction at tertiary level without a colonial past (Curle et al., 2020; Genç et al., 2023). Geographically located in a unique way with neighbors both in the West and the East, Turkey plays a vital role in the international area due to its strategic and geopolitical status (Kırkgöz, 2007; Kırkgöz, 2019). This reality makes the learning of English as the world's lingua franca quite important for Turkish people to be able to maintain international communication and stay up to date with advances in many fields around the world (Kırkgöz, 2007).

The history of the EMI programmes in Turkey dates back to the times after the establishment of the Turkish Republic in 1923. Turkey has responded to the global impacts of English on its education system by taking certain official measures such as implementing planned education policies to spread English as L2 across the country (Kırkgöz, 2017). The establishment of the Democratic Party (DP) in 1946 was an attempt by Turkey to demonstrate to the rest of the world its democratic credentials and secure its UN membership (Macaro, 2018). This political event gave the government the motivation to replace French with English as an L2. This policy led to the establishment in 1955 of five state schools called 'Maarif Schools' that changed their names to 'Anatolian High Schools' in 1975. These school offered education through EMI. Upon the success of Anatolian High Schools, several private-sector schools also adopted English as the medium of instruction and began to offer similar education to the one in Anatolian High Schools, which was the first year as the preparatory year to equip learners with the required level of English and the remaining years were in EMI. The success of public and private high schools teaching through English led to the emergence of universities offering education in English in Turkey (Macaro, 2018) with the intention of producing English-speaking national human resources (Kırkgöz, 2019). EMI higher education programs in Turkey began with the foundation of Robert College (today known as Boğaziçi University) in 1863, which is the oldest American school that was established outside the United States and is still operating (Minifie, 1998). This was followed by the establishment of Middle East Technical University (METU) in Ankara as the first state-owned English-medium university. Since the demand for university education offering English-medium instruction grew across the country, the Higher

Education Council (HEC) enacted a law in 1996 that enabled private universities providing education through English to be established (Kırkgöz, 2019). Upon this decision, Bilkent University was founded in Ankara in 1983 as the first private university with English-medium instruction. These three universities offered education through English to “enable students ... to access scientific and technological information published in English in their related disciplines” (Official Gazette, 1984, as quoted in Kırkgöz, 2005, p. 102). Karakaş (2019) considers this transition to EMI in those universities to be an effort that was put into raising qualified human resources for the country to keep up with the nation’s western-oriented policies.

As a result of this official attempt by HEC, the trend of teaching through English at universities emerged (Selvi, 2014) and, especially in the last decade, the number of universities offering EMI programs has increased exponentially (West et al., 2015; Yüksel et al., 2022). The Student Selection and Placement Centre (ÖSYM) (2023) and HEC (2024) report that 98 out of 208 higher education institutions (HEIs) in Turkey offer and implement either fully or partially EMI programs, which represents 47% of all universities in the country. In Turkey, two different approaches have been used to implement EMI programs at higher education. The first way is based on the use of English as “sole medium of instruction in full across the disciplines” (Karakaş, 2019, p. 206). METU, Boğaziçi University and Bilkent University could be considered representative examples of those universities offering programs fully in English. As the second way of administering EMI programs at tertiary level in Turkey, English is partially used as the medium of instruction in several disciplines like international relations and electrical and electronics engineering where one third of the lectures is offered in English and the rest is taught in Turkish (Başibek et al., 2014). Çukurova University and Ankara University are two examples of those partial EMI universities in Turkey. Universities in Turkey that offer EMI programs require students to undertake a one-year intensive English language education called the ‘Preparatory Year English Language Program (PYP)’ (Dearden & Akıncioğlu, 2016). PYPs aim to ensure the readiness of students in terms of English language proficiency for their majors in order for students to cope with departmental courses and to ease the transition from the PYP to studying through EMI for both lecturers and students. Students are allowed to start their

chosen field of study provided that they successfully complete the PYP and pass the proficiency exam that is called in different ways such as ‘end-of-year exam, exit level exam, or English proficiency exam’ in different HEIs.

In Turkey, the underlying motivations to prioritize and use English as the medium of instruction at HEIs could be attributed to several internal and external factors. Globalization and the internationalization of education, which encompasses a wide range of services from recruiting international students to internationalized curricula to research and partnerships with foreign universities, pushed the EMI agenda forward in Turkey (Kırkgöz, 2019). The internationalization of the HE system in Turkey followed by joining the Bologna Process in 2001 (Karakaş, 2018) and the Erasmus program in 2004 to establish a common framework of higher education qualities as well as political and economic competitiveness in an increasingly globalized world (Kırkgöz, 2019) are among the external factors. This purpose is also stated in Turkish Official Gazette (1984) as “equipping students with the power and skills to spectate broadcasts, to contribute to international meetings and discussions in the intended foreign language with the help of scientific and technological advancements” (p. 4). Furthermore, an investigation into the web pages of most of the Turkish universities makes it evident that internationalization is mentioned in their current mission statements and included in their strategic plans (Kırkgöz, 2017). As for the internal factors, EMI programs in both state and private universities have been “more favoured and popular for students and parents in comparison to universities without EMI” (Başıbek et al., 2014, p. 1819) owing to “the increased chances of finding jobs after graduation” (Oz, 2005, p. 341) or the perception of elevated social prestige (Atik, 2010). Furthermore, studying through and knowing English can help one obtain higher schooling, a more prominent career with decent rewards, and opportunities for promotion (Kırkgöz, 2005; Altay, 2020; Altay & Yüksel, 2021; Huang & Curle, 2021). EMI programs have been also regarded as a means to develop intellectual (Turhan & Kırkgöz, 2018) and linguistic (Yüksel et al., 2021) abilities.

Alongside the long history of EMI implementation in Turkish HEIs, there is an increasing number of studies which have addressed EMI discussions at Turkish

universities, especially with regard to cultural, pedagogical and socio-political issues (Karakaş, 2016). The extent of these studies has grown along with the prevalence of EMI in Turkey. Exploring the perceptions of the stakeholders at all levels of education has been one of the topics regarding EMI that have been at the center of much attention in Turkey (Başibek et al., 2014; Collins, 2010; Sert, 2008;). Among one of the early studies on EMI in Turkey is Kılıçkaya's (2006) research on Turkish instructors' perceptions of EMI. Kılıçkaya (2006) conducted a study to explore the attitudes of content instructors teaching their subjects through English at tertiary level towards EMI. 100 instructors at the universities in Ankara in Turkey constituted the sample of this study. The results of this small-scale survey study revealed that most of the participants favored the use of Turkish as the medium of instruction (TMI) over English-medium instruction despite some concerns regarding both TMI and EMI such as the lack of resources provided in Turkish, the proficiency level of learners' and student participation. One of the main reasons for this preference was the negative effects of EMI on students' content comprehension. That is, the majority of the instructors in this study believed that instruction in Turkish could promote subject learning better.

Dearden's (2015) study that was carried out with university instructors teaching their subjects through EMI in 55 countries including Turkey revealed similar results as well. The Turkish university instructors that participated in the study expressed their concerns about EMI. Despite its benefits such as more career opportunities and a wider range of resources in English, EMI was reported to hinder students' understanding of course content, which causes learners to end up with low level of knowledge of their departmental courses. The participants also reported that instruction in English leads to the low level of learner engagement in in-class tasks due to students' low level of English, and, as a result, causes instructors to spend much more time covering the target curriculum through English than planned, which supports the similar argument put forward by Arslantunali (1998), Dalkız (2002), Köksal (2002), Sert (2008) and Zok (2010).

In another study, using an online survey, Karakaş (2014) gathered the self-evaluation of 33 lecturers at three well-known, long-standing EMI universities in Turkey regarding

their English language skills and practices. The participants consisted of lecturers from the Faculty of Economics and Administrative Sciences and the Faculty of Engineering, teaching their courses in the disciplines of international relations, economics, electrical and electronics engineering, computer engineering, and mechanical engineering through English. Karakaş (2014) noted that “it can be safely put that the lecturers in this study generally assessed their English skills to be of a high level; more than 90% of them identified their overall academic English as either ‘good’ or ‘excellent’. Regarding the micro-skills (e.g. pronunciation, accent, grammar, fluency), lecturers’ ratings and markings on attitude scales indicated that they felt or experienced no problems in using these skills efficiently while teaching in English” (p. 122). Considering the participants’ responses to the scale, Karakaş (2014) concluded that Turkish lecturers in the study felt quite comfortable and competent to deliver their courses through English without any apparent language-related barriers. In a related study, Kırkgöz (2014) conducted a study on the perspectives of two comparable groups of senior engineering students at a Turkish university where the disciplinary knowledge was delivered through both Turkish (TMI) and English (EMI). The purpose of the study was to investigate the impact of the language used as the medium of instruction on their acquisition of disciplinary knowledge and their preferences for the language used as the medium of instruction. The sample consisted of 130 final-year engineering students (66 TMI and 64 EMI). Upon the analysis of the questionnaire and the focus-group interviews as well as the examination papers, the study revealed that EMI students had positive attitudes towards receiving their courses through English as they believed EMI helped them enhance their English language skills, have access to sources in English, keep up with the advancements in their fields around the world and obtain higher-paid jobs upon graduation. On the other hand, when the two groups were compared, the TMI students were found to acquire content knowledge in a more detailed manner and more easily and achieve long-lasting retention of disciplinary knowledge, which confirms previous research (Sert, 2008) suggesting that EMI is quite useful for the development of English language skills but ineffective in the acquisition of disciplinary knowledge.

Dearden et al. (2016) carried out a research project to look into the opinions of EMI teachers and students at tertiary level in Turkey. The first part of the project was

conducted with a group of 17 Preparatory Year English Language Programme (PYP) instructors and EMI content lecturers that came from different areas of Turkey including İstanbul, İzmir, Ankara, Eskişehir and Kayseri. The project aimed to explore the ways in which students' transition from PYP to EMI might be supported by both PYP and EMI instructors as well as whether and how collaborative lecture planning benefits both parties. The results revealed positive-oriented perceptions of both PYP and EMI teachers. While most of the participants believed students were by and large ready for their departmental courses in terms of academic skills, they reported that the majority of students were not at the satisfactory level to study through EMI even after completing the PYP. Both parties found collaborative planning beneficial although their level of enthusiasm differed. As for students' attitudes towards EMI, Dearden et al. (2016) used an online survey to investigate the motivation and beliefs of students preferring to study at an EMI university. The participants comprised 997 students from 18 Turkish universities (14 private and 4 state universities) that delivered courses through EMI. Most of the participants reported that learning through English posed a great challenge for them to grasp course content and first-year students felt less confident in their English language skills to be able to survive at their departments. Despite that, the participants were mostly very positive for EMI, found EMI beneficial and believed EMI instilled self-confidence.

Hasirci and Cosgun (2018) investigated Turkish English-medium university students' perceptions of the change in their language ability and the variables affecting this shift. The participants of this qualitative research were 12 students from a foundation university in Turkey. The analysis of the semi-structured interviews conducted in this study showed that the majority of the participants favored EMI and were happy to study through EMI. The participants believed that learning through EMI positively affected the development of their English language skills in general. They had high instrumental motivation for studying through and using English as they perceived English as a necessity to have a successful academic and professional career, which confirms the findings of Huang (2015) and Coleman (2006). However, speaking was reported to be the least improved skill, which validates the findings of the study done by Kim et al. (2017). The importance of being exposed to English through both receptive and

productive tasks and receiving corrective feedback was highlighted as the underlying factors that contributed to the participants' language development over time.

In their case study, Ozer and Bayram (2019) aimed to investigate the effectiveness of EMI programmes by exploring students' perceptions and experiences of EMI. The data were collected from the fourth-year undergraduate students in the spring semester as the university's first group to be graduating from EMI programmes at a state university in the Mediterranean region of Turkey. Overall, the participants had a positive attitude toward the presence of EMI at higher education level due to the benefits that EMI provides them with such as the easy access to primary sources in English, better employment opportunities and easier comprehension of subject-specific terminology, which is in line of the findings of some previous research (Bolton & Kuteeva, 2012; Macaro & Akincioglu, 2018; Lueg & Lueg, 2015; Santos et al., 2018). However, most of the students in this study reported that EMI negatively affected their academic performance as they had difficulty in knowledge acquisition and, therefore, had to spend more time needed to understand their courses, which caused a decrease in academic performance and loss of self-confidence, which supports the findings of Byun et al. (2011) but is in contradiction to Dafouz and Camacho-Minano (2016) reporting that it was not EMI but students' insufficient English language proficiency that lowered students' academic success.

Non-linguistic factors, such as self-regulation skills and sense of self-efficacy (Soruç et al., 2022), and self-theories students possess (Yüksel et al., 2021) have also received scholarly attention in EMI studies in Turkey. The connection between motivation and success in EMI has been the one that has triggered a huge amount of scientific inquiry in Turkey (Ekoç, 2020; Kaya et al., 2022). In one of the earliest studies focusing on the relationship between motivation and EMI, Kırkgöz (2005) aimed to identify the main driving forces for students' decisions to prefer education through English. The data were gathered from 203 undergraduate students from three different departments (namely Mechanical Engineering, Electric and Electronics Engineering, and Economics and Business Administration) at Çukurova University in Turkey. The findings revealed that students had a mix of both instrumental motivations such as getting a well-paid job,

becoming broadly educated and being able to attend discussions in their fields and integrative motivations including getting self-satisfaction as well as understanding the target culture.

In another study that examined influential factors determining the effectiveness of EMI implementations in the Turkish context, Turhan and Kırkgöz (2018) conducted a study with mechanical engineering students and lecturers at a state university in Turkey. The purpose of the study was to see whether the year of study was a determinant element of students' motivation. Qualitative data obtained from interviews showed that there were no notable differences among the first-, second-, third- and fourth-year students' motivation. The students in all groups were reported to "be mostly motivated by both integrative and instrumental reasons toward EMI" (p. 272). However, the motivation of the first-year students was found to be slightly higher than that of the others. Furthermore, lecturers' motivation for EMI was reported to vary based on numerous reasons such as reviewing literature in English more easily, a wider range of and better job opportunities, interacting with English-speaking people and gaining new insights.

In their study that investigated the significance of the psychological factors – sense of achievement, motivation and anxiety- for Turkish learners studying in an English-medium instruction (EMI) program and a French-medium instruction (FMI) at tertiary level, Fidan Ucar and Soruc (2018) found that students enrolled in both the EMI and FMI had a high sense of achievement about their learning capacities in a foreign language as the medium of instruction. In addition, both parties seemed to be motivated enough to take EMI / FMI courses as they believed that opting for an EMI / FMI programme would enable them to better their language skills, disciplinary knowledge and learning efficiency as well as have access to better life standards in the future. As for motivational factors, while both groups seemed to be highly motivated, the EMI students were found to be more motivated due to some possible reasons including English being a more global language compared to French and benefits that come with the English language like a wider range of career opportunities, which is in line with the findings of some previous research (Arkın, 2013; Belhiah & Elhami, 2015; Evans & Morrison, 2011; Tabaro, 2015; Turhan & Kırkgöz, 2018). In addition to that, the students enrolled

in the FMI were reported to be more anxious than the EMI learners owing to the lack of language proficiency.

One of the latest and interesting studies on this matter was conducted by Kır (2024). The study aimed to explore former EMI students' experiences of studying in an EMI program and the roles several forms of capital (financial, cultural, social, etc) play in shaping those students' experiences. The representative sample was 5 students that dropped out of an EMI university in Turkey. The participants considered their EMI experiences quite valuable and beneficial despite the challenges and undesirable outcomes. As for the second focus of the research, different forms of capital were found to have great impacts on the former EMI students' experiences. While economic capital – in other words, financial difficulty – was a concern for some participants, the discrepancy between the university's expectations from the students and the students' expectations was the primary reason for some other participants to drop out. That is, the English language proficiency that the participants achieved till higher education was not sufficient for them to survive their departmental courses, which caused a huge motivational barrier to the participants. Kır (2024) also reported that “the participants were poorly endowed with the kind of social capital they could have leveraged to navigate the EMI field more successfully” (p. 8). That is, the former EMI students referred to the lack of parental involvement in their educational life and their parents' inability to provide support in navigating through EMI as the social capital that contributed to their decision to drop out.

Gender is also examined as a variable in EMI studies in Turkey. However, to date, there have been only a handful of EMI studies that have focused on the relationship between gender and EMI in the Turkish settings. In one of the few studies on this matter, Macaro and Akıncioğlu (2018) conducted a large-scale study with 989 students from 18 universities delivering courses through EMI in Turkey to explore the differences in Turkish students' perceptions of EMI in terms of year of study, gender, and university type (private or public). The results yielded that the participants in all three years were motivated enough to opt for studying through EMI due to the potential benefits of EMI like better life chances in the future. Private university students seemed to be more

hopeful about the opportunities that EMI would provide them with upon their graduation. Overall, female students were more in favor of EMI and more certain that EMI would offer them great benefits in the future. In addition, compared to males, female participants were more positive about their progress in the departmental courses and the English language. Female students were found to have a greater level of satisfaction with EMI programmes as well. However, no significant differences in the ways female and male students dealt with EMI were found although female students reported to have more difficulty in speaking in front of others than male ones. In a related study, Curle et al. (2024) investigated the impact of gender, English language proficiency, and general motivation (instrumental and integrative) on academic achievement in English Medium Instruction in Turkey. The results of the mixed-method study conducted with 143 students majoring in Business Administration through English at a major public university in Turkey revealed no direct and statistically significant link between gender and academic success in EMI. However, instrumental and integrative motivation were found to be strong predictors of EMI achievement. Furthermore, English language proficiency was reported to account for 90% of the variance in achievement as the most predictive power of success in EMI.

All in all, Turkey is obviously one of the non-English speaking countries that have adopted and implemented EMI at schools ranging from pre-school to higher education level as its strategic response to globalization and internationalization. In line with the increased number of courses offered through EMI at schools in Turkey, extensive research has been carried out on various aspects of EMI in varying contexts including students' perceptions of EMI, effectiveness of PYPs in relation to success in EMI, relationships between EMI and English language skills and impacts of non-linguistic factors such as motivation, gender, and self-regulation on success in EMI. Even though previous studies conducted in Turkish context have provided important on Turkish content lecturers' attitudes towards EMI, this issue has been a controversial and much disputed subject. In addition, there is a notable paucity of studies investigating content lecturers' perceptions of EMI by making disciplinary-based comparisons. This study therefore aims to bridge the gap in literature by examining whether there is statistically significance between the perceptions of content lecturers based on their disciplines.

2.6 Challenges in EMI

To date, the growth of English-medium instruction (EMI) in higher education has been one of the most important trends around the world. The adoption and implementation of EMI in many non-English speaking countries is generally a top-down decision made by policy makers that assume an instructional transition from L1 to English without any difficulty and, as a result, expect to have both subject content learning and English language proficiency (Akıncioğlu, 2022). Despite being considered ‘killing two birds with one stone’ by achieving both academic content learning and language development through English, EMI has been reported to pose a string of thorny issues faced by stakeholders such as students and teachers ranging from instructors’ and learners’ inadequate language skills to poor teaching practices (Curdt-Christiansen et al., 2021).

EMI students’ and EMI lecturers’ experiences are directly connected to each other; therefore, it is valuable and significant to investigate what challenges students have in EMI classes for better understanding of EMI lecturers’ challenges and a fuller discussion of the vexed issues (Ozer, 2020). To this end, a substantial number of research studies have been conducted on the difficulties faced by learners all around the world (Alazemi, 2017; Alazemi & Alenezi, 2022; Kamaşak et al., 2020; Kırkgöz, 2014; Sert, 2008).

Extensive research on this matter has conclusively shown that language-related challenges are of most concern and are generally connected to resistance to EMI (Aizawa & Rose, 2019; Doiz et al., 2014; Galloway et al., 2017; Tange, 2012; Wächter & Maiworm, 2014). Like in many European HEIs that chose not to deliver academic courses at tertiary level through English due to linguistic issues (Wächter & Maiworm, 2014), English proficiency is found to be a key deterrent for students in Japan (Aizawa & Rose, 2019), which is in line with the findings of Kır’s (2024) study done in Turkey revealing that social capital including the expectations regarding English language proficiency was one of the primary reasons for some university students to drop out. Similarly, in their study, Galloway et al. (2020) found that a lack of adequate English proficiency might cause other problems related to communicating disciplinary knowledge, asking & answering questions in class, and needing more time to complete courses.

The other major issue EMI students suffer in various contexts around the world has been reported to be subject content learning (Chapple, 2015; Hellekjær, 2017; 2014; Ozer & Bayram, 2019; Yıldız et al., 2017). Cho (2012) investigated the impacts of EMI on content learning at a science and engineering university in Korea. The sample consisted of 41 faculty members, 439 undergraduate students and 403 graduate students. The data gathered through a questionnaire and structured interviews revealed that EMI was found to be ineffective and was regarded as a potential obstacle to content learning by the majority of the participants, which is in accordance with Başıbek et al. (2014), Kılıçkaya (2000), and Kırkgöz (2014) reporting that EMI simply makes subject content learning harder. Similarly in Turkey, Ekoç (2020) conducted a study to explore the challenges Turkish students studying through English at a technical university encountered. The data were gathered through a self-administered questionnaire from a total of 252 undergraduate and graduate students from different departments including Architecture, Mechanical Engineering, Business Administration, Chemistry and Economics. The findings revealed that most of the participants suffered from low-level of English language skills even though they had studied at the university's preparatory (prep) school for two semesters. They were dissatisfied with prep school education as they believed studying at a prep school for two semesters did not prepare them well enough to follow, understand and succeed in their departmental courses, which validates the findings of Kırkgöz's (2009) study. These findings are consistent with the findings of Altay & Yuksel (2021), British Council Report/TEPAV (2015), and Soruç & Griffiths (2018). In another study, Soruç et al. (2021) investigated the connection between English language proficiency and language-related challenges students encountered in EMI classes at a public university in Turkey. The participants were 198 EMI students majoring in International Relations and Electronic Engineering. The data set comprised of students' General English Proficiency test scores, and the questionnaire including the EMI challenges scale. The results revealed that English language proficiency was a strong predictor of language-related challenges in both subjects. That is, the higher English language proficiency, the fewer linguistic challenges when studying these subjects. However, there was a statistically significant difference between the language gain / development during the academic study in both departments and language-related

challenges. As International Relations students kept improving their language skills, they were reported to encounter fewer linguistic challenges compared to the ones studying Electronic Engineering, which affirms the suggestion put forward by Dearden and Macaro (2016) to investigate discipline-based differences in EMI settings.

In addition to extensive research on EMI students' challenges, recent years have witnessed a greater focus placed upon challenges EMI lecturers encounter in class within literature. As pointed out by Macaro (2018), examining EMI lecturers' difficulties plays a crucial role in the effectiveness of EMI programs as they are the key stakeholders in EMI that have the challenging responsibility of teaching their academic subjects through a foreign language (English in this context) to classes of students for whom English is also a language that they lack confidence in communicating through. Previous studies have revealed that EMI content lecturers suffer a number of difficulties including linguistic challenges (Jiang et al., 2019), deficiencies of communicating through English (Kuteeva, 2020), failure to provide language-related feedback to learners (Macaro et al., 2018), heavy workload (Babicheva & Lee, 2018) and restricted use of humor in English (Tsui, 2017).

The commonly reported hurdles EMI content lecturers face have been analyzed and listed under several categories in recent studies (e.g. Alhassan, 2021; Galloway et al., 2017; Oktaviani et al., 2021; Yuan, 2020). The challenges that academic staff delivering their courses encounter have been categorized in the literature as follows:

- Language-related challenges: In their study exploring the EMI phenomenon in higher education in Japan and China, Galloway et al. (2017) conducted questionnaires, interviews and focus meetings with 579 students at 12 HEIs in Japan and China, and 28 members of staff at eight universities in Japan and China. The participants reported that their level of English was insufficient to transmit their academic curriculum through English and also equip their learners with an adequate level of English language proficiency for them to grasp the academic content. Alhassan (2021) also reached the similar finding in his qualitative study investigating the challenges and training needs of EMI content lecturers delivering humanities and social sciences programs at a university in

Oman. Of particular concern of the participants was related to their insufficient English language skills to implement EMI. The content lecturers reported to feel uncomfortable and less confident in teaching their subject content through English, particularly when it was necessary to elaborate the target content and language manipulation. Content lecturers' limited language skills have been identified to negatively influence explanation, elaboration and interaction in class (Ball & Lindsay, 2013; Coleman, 2006; Drljača Margić & Vodopija-Krstanović, 2017; Mauranten et al., 2010). In addition, language insecurity causes EMI instructors to avoid asking/answering open-ended questions and using English freely, and depend on prepared utterances as well as simple, straightforward close-ended questions, which do not promote learner engagement, class discussions and interaction at all (Dafouz Milne & Sánchez García, 2013; Drljača Margić & Vodopija-Krstanović, 2017; Sánchez García, 2016). Content lecturers' inability to conduct lessons and express themselves in English appropriately also turns classes into more teacher-fronted lectures, which may result in frustration (Hahl et al., 2016) and a decrease in lecturers' self-esteem (Drljača Margić & Vodopija-Krstanović, 2018). Furthermore, feeling under pressure, code-switching, extra time required for preparation / instruction and simplification of course content are some other impacts of the lack of language proficiency on EMI instructors (Alhassan, 2021; Beckett & Li, 2012; Galloway et al., 2017; Tange & Jensen, 2012).

In a related study, Oktaviani et al. (2021) ended up with similar categories of EMI content lecturers' challenges including 'language barriers' and 'lesson preparation'. The analysis of the data gathered from 3 Mathematics and 2 Science teachers at a private school in Palembang, Indonesia revealed that despite their sufficient level of English, the participants reported their struggle with a large number of unknown terms in their field that they had to familiarize themselves with prior to instruction in class. This finding is in line with Fauziah et al. (2021), Hung and Lan (2017) and Ma'ruf and Sari (2020) exploring that conveying science- and math-related concepts in English was reported to be a

big challenge for teachers as they felt the need to expand their own vocabulary before teaching target terms in science and mathematics to their students. Another challenge spotted in Oktaviani et al. (2021) was related to lesson preparation. The participants stated that they had to spend much more time preparing for their classes by reading the coursebooks carefully, familiarizing themselves with the new target lexis, and looking up the meanings in the dictionary, which affirms the findings of Aizawa and Rose (2019) reporting that it took content teachers longer to get ready for their lessons and elaborate classroom materials in English.

On the other hand, a number of EMI content lecturers claim that they encounter these challenges not only due to their inadequate level of English proficiency but also that of their students (Borg, 2016; Kim & Shin, 2014; Rogier, 2012). This could be observed in British Council Report (2015) on higher education system in Turkey. The British Council (2015) carried out a large-scale baseline study with academic staff and students at 38 universities in 13 cities in different regions across Turkey. The purpose of the research was to identify the conditions of EMI at public and private universities as well as offer suggestions for improvement. The report indicated that teachers conducting their courses in English in Turkey had a good level of English proficiency which met European and international norms. However, Turkish learners' English knowledge was at a rudimentary level even though they had successfully completed a PYP program. Similarly, in Soruç & Griffiths' (2017) study exploring difficulties in EMI, it was evident that students suffered a lack of English proficiency, which they were all well aware of. Learners also pinpointed a number of problematic aspects of English such as difficulties with speaking and listening, lexis-related issues and cognition-related problems as a result of their language inadequacies. In another related study, Ozer and Bayram (2019) found that despite the potential benefits, the participants stated that their level of English was not at the required level to fully benefit from EMI; therefore, they had difficulty gaining disciplinary content knowledge, which led to more time needed understanding, a

decrease in their academic performance and loss of motivation. These findings lend support to Ozer's (2020) study that shed lights on the severe strain put on EMI content lecturers in Turkey and their needs for a better implementation of EMI. The data were collected from 102 lecturers from a variety of departments including Electrical and Electronic Engineering, Food Engineering, Political Science and Public Administration, Business Administration, and International Relations at a state university in Adana, Turkey. The analysis demonstrated that the main challenge facing most of the participants was students' limited language abilities. Owing to this low level of English proficiency and lack of terminology, content lecturers had to deal with learners being reluctant to engage in class discussions and find ways to simplify their course content to ease content comprehension for students. Similar results were observed in Oktaviani et al. (2021) as well. In their study, Oktaviani et al. (2021) revealed that it was a real challenge for students with a low level of English to participate in class discussions due to a lack of confidence and being afraid of making mistakes while speaking in English, which caused them to remain silent during lessons. Furthermore, owing to their anxiety, the students preferred to ask questions to or interact with their classmates instead of their teachers, which is in consistency with the findings of Manalastas and Batang (2018) revealing that EMI students had a lower level of confidence than the ones in the Multilingual Class because of language barriers.

Despite suffering from students' low level of English, many EMI content lecturers believe that it is not their responsibility to address their students' language needs despite their high level of English (Pun & Thomas, 2020), which results in poor attention to linguistic needs of learners, improper and inaccurate language learning, ineffective instruction and poor interaction between lecturers and students (Macaro, 2018). In their research in Catalonia, Block and Moncada-Comas (2019) revealed that EMI lecturers in STEM programmes did not consider themselves authoritative, qualified, and knowledgeable to handle students' language-related difficulties in learning. Such positioning as

professionals might leave students with little opportunities to produce English, which goes against the underlying reasons for EMI implementation (Airey, 2012; Farrell, 2019).

- **Pedagogical Challenges:** More is required in EMI than solely transporting and delivering content. It entails teaching subject matter using approaches and methods appropriate for learners' needs, providing students assistance in learning subject content in English, managing classes well, engaging learners in class, or addressing learners' needs, especially in classes with students from a variety of linguistic, cultural and educational backgrounds (Galloway et al., 2017), which all depends on well-trained lecturers with pedagogical knowledge and training necessary for the success of EMI programmes (Ball & Lindsay, 2013; Wilkinson, 2013). O'Dowd (2018) expresses his concerns regarding whether there is a sufficient number of teachers that are pedagogically capable of conducting their subject matter through English. And the findings of O'Dowd's (2018) study revealed that the participating EMI lecturers lacked pedagogical training and support to implement EMI in their classes, which corresponds to Banks (2018), Borg (2016), Dearden (2015), and Sert (2008). In his study with university EMI lecturers in a range of disciplines in China, Yuan (2020) found that the participants had limited pedagogical knowledge about EMI teaching as there was a "lack of systematic preparation and development for EMI teaching in their situated work contexts" (Yuan, 2020, p. 313). That is, they had a narrow perception of English as a medium for knowledge transfer; therefore, they had the tendency to prepare their lectures by translating content from Chinese into English and deliver their teaching in English monologue with no genuine interaction with their students. In addition, it was reported to be rare to witness the spontaneous use of the English language during classes for clarification or instruction. In such cases, the participating lecturers were observed to switch to L1 (Chinese) for elaboration and the clarifications of challenging concepts and theories. These findings are in accordance with Dearden and Macaro (2016) that conducted a small-scale study in Austria, Italy and Poland. The study aimed to

compare the concerns of EMI teachers in the participating countries. The results demonstrated that the participants had a glaring lack of awareness of the necessity of changing pedagogy to be able to assist both home and international students in dealing with course content delivered in English. Embarking on a quick professional development course, these participants simply tended to translate course materials and power point slides from L1 into English.

- **Cultural and Social Challenges (Westernization):** Another issue experienced by both lecturers and students is related to the impacts of English on local cultures and social equality. Mok (2007) sees EMI as a potential threat for local cultures in which EMI is implemented as Mok (2007) claims that EMI aims to “create a dependency culture and reinforcing the US-dominated hegemony” (p. 43). Likewise, Phillipson (2008), who has written prolifically on the topic of linguistic imperialism, is harshly critical of EMI since he perceives EMI as another form of linguistic imperialism. Therefore, stiff resistance of teachers and students to EMI has been observed in the literature, such as detrimental effects of EMI implementation on Turkish language, culture and identity (Boss, 1999; Sinanoğlu, 2000). Furthermore, Galloway et al. (2017) argues that in addition to supporting the stereotype that ‘native’ English is the finest form of English to learn, the spread of EMI globally is perpetuating the notion that “having a Western style education is superior and something that is necessary for a successful future” (p. 8).

As for social aspects, Brock-Utne (2012) claims that the adoption of EMI in non-Anglophone countries creates an inherent inequality in that many children are pushed to study through a language they do not use outside of school, and that they have not mastered. This inequality emerges when it comes to access to EMI institutions. Considering the fact that not every student has the opportunity to access to institutions offering EMI programs, having access to such institutions may lead to a select class in the society that utilizes the knowledge of English as “cultural [and economic] capital par excellence and one of the

most powerful forms of symbolic capital in the country” (Hu, 2009, p. 49, as cited in Karakaş, 2019).

- **Administrative Challenges:** The effectiveness of EMI programs at tertiary level is undoubtedly linked to the presence of well-chosen and well-trained academic staff that are capable of delivering courses in English and being attentive to their learners’ needs, which is one of the main responsibilities of administration as a key stakeholder at higher education institutions. Wilkinson (2013) states that ‘the scope of the English specialists’ role would seem to be inversely related to the recruitment of international content staff whose academic careers have mainly been conducted in English’ (p7). However, data from previous research note the issues of the shortage of qualified staff and the low level of English proficiency of those that are hired for EMI programs (Alhassan, 2021; Galloway et al., 2017; Karakaş, 2019; Simbolon et al., 2020). In her study conducted with EMI lecturers in HEIs in 55 countries including Turkey, Dearden (2015) reported that 83 per cent of the participating countries suffered from the shortage of qualified lecturers as many of the faculty members were recruited or forced to teach EMI courses merely due to their teaching experiences overseas or high level of competency in English. In addition, the administration in those countries had difficulty in “resourcing EMI exams, securing the appropriate number of qualified teachers and providing the learning materials and textbooks” (p. 24). It was evident that such issues placed a great burden on those lecturers, such as increased workload and the need to go through pedagogical and linguistic trainings, which caused unwillingness on the side of those faculty members to be a part of EMI programs. These findings confirm Dearden and Macaro (2016). In their comparative study in Austria, Poland and Italy, Dearden and Macaro (2016) found that the participating lecturers were recruited to teach EMI simply because they were proficient in English and had prior experiences teaching overseas, but they stated that they received no training that would equip them with professional skills necessary for EMI implementation, which could cause

emotional and professional resistance against teaching EMI (Aguilar, 2017; Airey, 2011).

By and large, despite its perceived benefits such as raising global citizens, more resources available in English in various fields, easier access to resources, and a wider range of employment opportunities, it is evident that EMI poses great challenges for all stakeholders. Previous studies that have been conducted around the world have identified a number of challenges faced by both learners and teachers including linguistic challenges, pedagogical challenges, cultural and social challenges as well as administrative challenges. However, studies that have been carried out in Turkey on this issue have mostly focused on difficulties learners experience in EMI classes. In addition, few studies that have investigated challenges content lecturers encounter at tertiary level have not explored the correlation between challenges and disciplines. Considering the gaps, limitations, and suggestions of previous studies, and the EMI implementation in Turkish context, this present study aims to not only explore the challenges faced by content lecturers delivering their courses through fully EMI at higher education level but also find out whether there is a significant difference between challenges based on disciplines.

2.7 Coping Strategies

Evidence from a variety of studies has established that the unstoppable growth of English as the medium of instruction at tertiary level around the world has brought about various challenges for all stakeholders, ranging from language-related issues to pedagogical ones. Despite the vast majority of studies that have previously focused on difficulties encountered in EMI, relatively little research has been carried out to explore the strategies that are employed to tackle the challenges facing all relevant bodies included in EMI programs. The details of the suggested ways to overcome challenges in EMI contexts that have been in previous research are presented below.

Mouhana (2016) conducted a study with nine instructors teaching in English at a university in the United Arab Emirates. The data revealed that the instructors struggled with students' low level of English proficiency, which had adverse effects on content

comprehension, the quality of instruction and learners' academic performance. To support their learners and have better outcomes, the participating instructors stated that they felt the need to modify their course content and simplify their assessment components as well as materials. They also acknowledged altering their evaluation procedures in a way that they avoided penalizing learners for their language mistakes in the exams. To exemplify, they preferred ongoing assessment and feedback types as well as multiple-choice questions rather than essays or open-ended questions that required learners to produce the target language.

Similarly, in Alhassan's (2021) study conducted with EMI content lecturers at a university in Oman, instructors' and learners' low level of English and issues related to teaching methodologies, techniques and classroom management were identified as the main challenges in this context. The participants stated that students had difficulty grasping subject content presented in English and they as lecturers lacked the skills to manipulate the language for further explanations of subject matter. To better help with student learning and improve the quality of their work, the participants tried to paraphrase the problematic parts to exemplify the challenging terms, concepts, and ideas in the discipline. Additionally, the lecturers acknowledged they simplified the course content and the language they spoke in class to deliver the subject matter to ease content comprehension.

In another study, Banks (2018) aimed to explore the attitudes and professional needs of university lecturers at a Spanish university. The data gathered through multiple sources, such as questionnaires, observations and interviews, revealed that adapting teaching methods for EMI and multilingual learners with different levels of language proficiency was a real challenge for 83 percent of the participants, which made their classes quite teacher-fronted. To avoid monologue lecturing and promote learner engagement in class discussions, the participants reported to have tried integrating more active learning methods with the help of student-centered tasks, which is supported by previous research (Chickering, & Gamson, 1987; Fry et al., 2015; Johnson et al., 2014; Macaro, 2015). In addition, the lecturers mentioned that they benefitted from the use of different types of questions to engage learners at different levels of thinking, which confirms the

suggestions put forward by Dafouz Milne & Sánchez García (2013). Coyle (2007) notes the importance of teacher-student questioning in getting learners involved in cognitive tasks and encouraging them to use the newly learned language. Utilizing a range of appropriate questions helps create an interactive learning environment that encourages learners to express themselves freely, which fosters learners' content and language comprehension (Yip, 2004).

Oktaviani et al. (2021) revealed a different set of strategies deployed by EMI content lecturers in their study done at a school in Palembang. To overcome the language-related obstacles, the participants were provided professional and pedagogical support by their institution. Namely, they received trainings and guidelines about different and appropriate ways of teaching content through EMI as well as a variety of resources. Upon these trainings, they also used prescribed textbooks, teacher guidebooks as well as other auditory and visual supplementary materials such as realia and video in English to explain new vocabulary items. In addition, they provided clear and explicit instructions, gave students extra time to complete their tasks and did code-switching from time to time. Similar results are yielded in Kariouz's (2023) study too. In Kairouz's (2023) mixed-methods study done with 59 EMI content lecturers at Kuwait University, students' low level of English proficiency, learner engagement and producing exams as well as evaluating learners' performances in accordance with their level of English were reported as the primary challenges encountered by the participating lecturers. The data revealed that the participants utilized a number of strategies to tackle those issues. Providing more definitions and oversimplification of the subject content as well as code-switching in Arabic were the commonly reported strategies among the sample of the study in order to overcome linguistic challenges in their EMI classes. In addition, to attract students' attention to classes, the participants tried to integrate fun content into their curriculum and to serve their students coffee and sweets. Moreover, they implemented the strategy of providing corrective feedback to students to foster students' language proficiency and academic performance in exams.

As for Turkey, to date, very few studies have focused on what EMI content lecturers in Turkish HEIs do to cope with the challenges they face, as well. As one of the recent

studies on this matter in Turkish content, Soruç and Griffiths (2018) aimed to explore the strategies utilized by EMI learners to deal with the challenges in EMI. The sample consisted of 39 students majoring in International Relations and Psychology at a private English-medium university in Turkey. The data gathered through video recording, an open-ended questionnaire, and stimulated-recall interviews demonstrated that EMI learners deployed a variety of cognitive strategies, including asking questions, visualizing, using prior experience, and thinking creatively and critically. To overcome difficulties learning vocabulary, the participating students reported to try various strategies such as deducing meaning from context, doing dictionary study, translating vocabulary items in English to Turkish and using visuals associated with target vocabulary. Interestingly, some students mentioned their use of metacognitive strategies to regulate their own learning process and some other strategies like sitting at the front and drag the class along to avoid demotivation and distraction during classes.

Another related study on coping strategies in EMI contexts in Turkey is conducted by Ozer (2020). Ozer (2020) conducted a phenomenological study with 102 content lecturers at a state university in Turkey to investigate EMI lecturers' perceptions and challenges encountered. Ozer (2020) reported that the participants suffered from learners' unwillingness to speak in English owing to their limited language abilities, shortage of international students, difficulty in coming up with ways to simplify course content to ease comprehension, inadequate content comprehension, and lack of terminology in English. To cope with those challenges, the participating EMI lecturers listed several strategies that they utilized in their EMI classes, including providing learners with simpler explanations, code-switching in Turkish, summarizing the target course content in Turkish, benefitting from real-life examples to clarify concepts or English terminology, and re-explaining the topic gently.

In their qualitative study exploring the translanguaging practices of EMI content lecturers at a technical university in Turkey, Genc et al. (2023) revealed that the participants used translanguaging for pedagogical and social or affective functions. The pedagogical functions of translanguaging were used for content transmission by asking/answering content-related questions, explaining challenging concepts, translating

difficult or technical vocabulary as well as for classroom mechanics to engage learners in class or attracting students' attention to course content. Furthermore, the lecturers used the social or affective function of translanguaging to support their learners by creating a cozy, supportive learning environment.

All in all, relatively few studies have explored the strategies that lecturers utilize to overcome the challenges they face while delivering their course content in English around the world. Some of the strategies that have been documented in previous research include the use of L1, simplification of course content or assessment components, paraphrasing, the use of various questions to ensure comprehension, familiarizing with terminology prior to classes and benefitting from supplementary materials that suit learners' learning preferences and address their needs. However, comparatively, very little research has been carried out on EMI content lecturers' coping strategies. Yet, none of these studies have made discipline-based comparison of these strategies. Considering the gaps in literature and previous studies in Turkish context, this study seeks to explore strategies employed by EMI content lecturers to deal with challenges while teaching through EMI and whether these strategies differ based on disciplines.

CHAPTER 3

METHODOLOGY

This chapter presents information related to the methodology adopted while conducting the current study. First, the reader is reminded of the purpose and research questions of the study. Second, information related to the setting and participants is given. Then, the data collection tools and procedures are presented. Finally, the analysis process is explained.

3.1 Research Questions & Research Design

The purpose of this study is to investigate the challenges content lecturers delivering their course content through fully English at the university level in Turkey encounter and their strategies to cope with these hurdles as well as their attitudes toward EMI by making discipline-based comparisons. The specific research questions that drive this research are as follows:

1. What are the views of content lecturers teaching different disciplines at tertiary level on EMI?
 - 1a. What are the underlying reasons for these content lecturers to favor EMI at university?
 - 1b. What are the underlying reasons for these content lecturers not to favor EMI at university?
 - 1c. Are there any differences among these content lecturers' perceptions, considering the disciplines they teach?
2. What challenges do content lecturers teaching different disciplines face in EMI classes?
 - 2a. How do the challenges faced by EMI content lecturers differ, considering the disciplines they teach?

3. What strategies do content lecturers in EMI disciplines use to address these challenges?

3a. How do the strategies used by EMI content lecturers to address the challenges differ, considering the disciplines they teach?

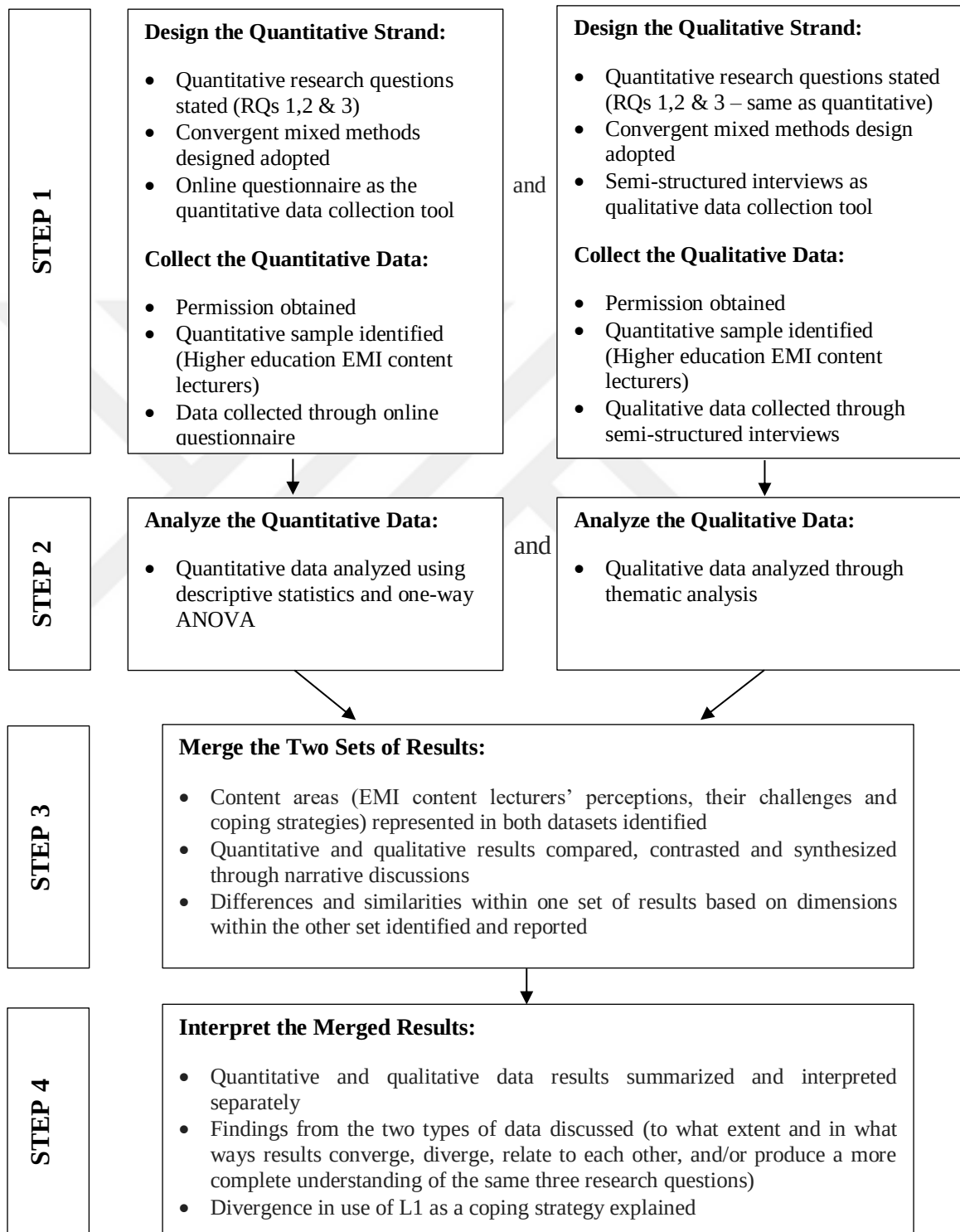
In order to address these research questions, this study was based on a convergent mixed methods design that integrated both qualitative and quantitative data with the intention to “bring together the results of both the quantitative and qualitative data analysis so they can be compared or combined” (Creswell & Plano Clark, 2018, p. 65). Creswell and Creswell (2018) also point out that the core assumption of this form of inquiry is that the combination of both qualitative and quantitative data offers additional insights beyond the information presented. Furthermore, the convergent design contributes to the validity and reliability of data (Mathison, 1998) as well as the vitality of research (Olsen, 2004, as cited in Earls, 2016). More importantly, the integration of multiple and independent data does not share the same potential for bias (Roher, 1977), neutralizes each other’s weaknesses (Creswell & Creswell, 2018) and are likely to produce a more comprehensive set of findings (Dörnyei, 2007). The convergent design was utilized because both qualitative and quantitative data were given equal priority and “the strengths of the two methods will complement each other and offset each method’s respective weaknesses” (Fraenkel et al., 2012, p. 561). That is, it is scientifically proven that while quantitative data offer a broader understanding of an issue, which “arises from examining a large number of people and assessing responses to a few variable”, qualitative data provide a more in-depth understanding, which comes from “studying a few individuals and exploring their perspectives in great depth” (Creswell & Plano Clark, 2018, p. 8). It is inevitable to receive different perspectives from both qualitative research and quantitative research due to the limitations of each type when only one is conducted. Considering this, the convergent design was applied in this study for the researcher to “obtain more complete and corroborated results” (Creswell & Plano Clark, 2018, p. 8) and to compare the analysis of qualitative (semi-structured interviews) and quantitative data (online questionnaire) to see whether the two research methods

(qualitative and quantitative) converged upon a common understanding of the questions being researched.

The steps involved in the convergent design of this study are outlined in the procedural flowchart in Figure 1. As shown in the figure, there are four crucial steps in the convergent design, which were followed by the researcher with great care in this present study. First, the researcher designed both the quantitative data instruments (the online questionnaire) and qualitative data instruments (the semi-structured interview questions) upon deciding on the research questions to be investigated both quantitatively and qualitatively. Both the questionnaire items and the semi-structured interview questions were designed in such a way that both qualitative and quantitative data would seek answers to all the research questions mentioned above in this study. Although the questionnaire items and the interview questions did not arise out of one another, it was given due consideration that the questions in both instruments would complement each other to obtain a more comprehensive set of data and findings. Still within Step 1, both quantitative and qualitative data about the topic of interest were given equal priority to address the research questions in the study and collected separately without being dependent on the findings of the other (Creswell & Plano Clark, 2018). Secondly, the two data sets were analyzed separately and independently by using descriptive statistics and one-way ANOVA on SPSS for the quantitative data and thematic analysis for the qualitative data. Obtaining the initial results of the two data sets was followed by the third step in which the researcher proceeded to merge the two sets of the qualitative and quantitative data results to be able to compare, contrast and synthesize the results. As the final step, the researcher interpreted “to what extent and in what ways the two sets of results converged or diverged from each other, related to each other, and / or combined to create a better understanding in response to the study’s overall purpose” (Creswell & Plano Clark, 2018, p. 69).

Figure 1

Flowchart of the Procedures in Implementing a Convergent Mixed Methods Design



Source: Adapted from Creswell and Plano Clark (2018, p. 70)

3.2 Setting

Higher education institutions in Turkey offer EMI programs in two different ways: either partial or full (Genc et al., 2023). In the first way, some universities in Turkey have adopted English as the medium of instruction in certain disciplines such as international relations and electrical and electronics engineering where one third of the lectures is offered in English and the rest is taught in Turkish (Başıbek et al., 2014). As for the second way, courses across all disciplines at some universities are delivered through solely English (Karakaş, 2019). In addition, as indicated in the Student Selection and Placement Centre's (ÖSYM) 2023 university selection guidebook, universities with at most two faculties such as medicine and law conducting subject content in Turkish are also listed under the second category. Considering that, only 25 universities (8 universities with solely English-medium instruction and 17 universities offering EMI in most of the faculties) out of 208 in Turkey fit the description of universities teaching in fully EMI. The definition by Macaro (2018) considering EMI “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. 19) is adopted throughout this study. In addition, the target population of this study was the Turkish university content lecturers delivering their courses in fully English-medium instruction with regard to the research questions seeking EMI content lecturers’ challenges and coping strategies in relation to their direct experiences in EMI. In accordance with the EMI definition adopted and the target sample, the data for this study was collected from content lecturers working at 8 different higher education institutions offering undergraduate and graduate programs in fully English-medium instruction in Turkey.

The 8 universities in this study consisted of both state and private universities. When deciding on the target universities, the location was not among the considerations. Therefore, all the ‘wholly EMI’ universities that are located in urban and rural areas in Turkey were included in the study.

In these participating EMI universities, students are admitted to the first year of undergraduate programs in accordance with the results of the annual examination carried

out by ÖSYM (The Student Selection and Placement Center). Upon the completion of their registration, students are required to take an exam (called as the placement exam at some of these universities and English Proficiency Exam at some others) administered by the preparatory schools at these universities so that they are placed in an appropriate level in accordance with the score they have received in the exam. The levels vary in these universities, ranging from three to five levels with different names including “Elementary, Pre-intermediate, Intermediate, Upper-intermediate” or “Program1, Program 2, Program 3, Program 4”. At some of these institutions, those who score higher than the predetermined level in the exam are considered proficient enough to start receiving their departmental courses and they directly move onto their departments. In the second group of these participating universities, students with higher scores than the predetermined level in the exam are to sit the English Proficiency Exam as the second step to determine whether they are eligible enough to start their undergraduate education. Those who score at the predetermined level or higher move onto their majors without receiving the prep year education. In addition, students who submit the score of national or international tests that are equivalent to the English Proficiency Exam are exempted from enrolling in the university preparatory program, and the minimum scores necessary for exemption are determined by the university senates. Students who fail to score enough in the English Proficiency Exam continue in the universities’ English preparatory class for one year. Students are provided an intensive English program placing emphasis on the English language skills to equip learners with the skills and language necessary to pursue their undergraduate courses without major difficulty. Students at the prep year English programs of these universities are required to prove their competency through the English Proficiency Exam given by their university or through an equivalent test approved by their university senate within two consecutive years or four semesters to be able to start their undergraduate studies.

Upon the successful completion of the prep year education, students move onto their departments and start their academic studies, which lasts four academic years on average. Overall, the undergraduate and graduate courses to be taken by the students in each semester consist of required and elective courses, laboratory, practice, project, thesis and similar studies, which may vary depending on the faculties and departments.

All these required and elective courses at these target universities are delivered in fully English.

3.3 Participants

The target population of this research study was the content lecturers teaching through fully English-medium instruction in the university context in Turkey. In this study, the word ‘lecturer’ was preferred as a neutral term to refer to anybody teaching through English at tertiary level, which was adopted from Başibek et al. (2014). Therefore, in this study, academic staff with different academic ranks at universities in Turkey, like professors, associate professors, assistant professors, and lecturers, were all referred to as ‘lecturers’ that delivered their course content through fully English.

The participants of the study for the quantitative part were selected through criterion-based purposive sampling method. The reason for this method being chosen for the questionnaire part was for the researcher to be able to identify and choose the information-rich cases by making the most use of limited resources (Patton, 2002, as cited in Palinkas et al., 2016, p. 2). That refers to identification and selection of individuals with experiences in or necessary knowledge about the topic of interest as the representatives of predetermined criteria (Creswell & Plano Clark, 2018). Within the scope of this study’s quantitative part, two criteria were taken into consideration in the selection of the participants in the quantitative part. First, the participants were required to be a content lecturer with an academic rank that conducted departmental courses in fully English at a Turkish university. Second, the participants were required to work in a higher education institution the medium of instruction in all departments was fully English. Those who could meet both criteria were identified and constituted the target population of this study.

80 content lecturers responded to the online questionnaire. While 17.5% of the participants ($n = 14$) were from the target state universities, the rest (82.5%, $n = 66$) worked at the target private universities. These participants held different academic ranks, ranging from lecturers (16.2%, $n = 13$) to professors (21.2%, $n = 17$). The academic disciplines that the participants taught are summarized as follows:

- Faculty of Arts and Sciences (including Department of Math, Department of Psychology, Department of Sociology, Department of English Language Literature, Department of Physics and Department of Molecular Biology)
- Faculty of Architecture and Design (including Department of Architecture, Department of Industrial Design, Department of Visual Communication, Department of Interior Architecture and Department of City and Regional Planning)
- Faculty of Economics and Administrative sciences (including Department of Business Administration, Department of Economics, Department of Political Sciences and International Relations and Department of Global Citizenship)
- Faculty of Education (including Department of Guidance and Psychological Counseling, Department of Mathematics Education, Department of Early Childhood Education, Department of Primary Education, Department of English Language Teaching, and Department of Mathematics and Science Education)
- Faculty of Engineering (including Department of Computer Engineering, Department of Electrical and Electronics Engineering, Department of Industrial Engineering, Department of Civil Engineering, Department of Mechanical Engineering and Department of Software Engineering)

On the other hand, the qualitative part of the study was based on convenience sampling. The reason for that was that the sample selected needed to be the representative of the population. In addition, the sample consisted of the participants who filled out the online questionnaire, were conveniently available and volunteered to be involved in the interview (Onwuegbuzie & Collins, 2007). To be able to conduct an in-depth analysis of the academic staff's experiences, challenges and coping strategies, the interview part of the present research was carried out with 13 participants who completed the questionnaire and consented to the interview part of the study voluntarily. All these participants were the academic staff working at the target private universities. These participants held different academic ranks, including lecturers (23.0%, $n = 3$), assistant professors (30.7%, $n = 4$), associate professors (23.0%, $n = 3$) and professors (23.0%, $n = 3$). The academic disciplines that the participants taught are summarized as follows:

- Faculty of Arts and Sciences (including Department of Math, Department of Psychology, Department of Sociology, Department of Physics)
- Faculty of Architecture and Design (including Department of Architecture, Department of Industrial Design, Department of Interior Architecture)
- Faculty of Economics and Administrative sciences (including Department of Political Sciences and International Relations)
- Faculty of Education (including Department of Guidance and Psychological Counseling, Department of Early Childhood Education, and Department of English Language Teaching)
- Faculty of Engineering (including Department of Electrical and Electronics Engineering and Department of Civil Engineering)

The researcher aimed to reach out the academic staff with different academic ranks and from different faculties in the target universities as the target research population as one of the main stakeholders involved in the implementation of EMI and carrying out their teaching responsibilities in English rather than their mother tongue, which is assumed to place severe burden on their shoulders. Another reason to go with the content lecturers teaching through fully English at higher education institutions in Turkey was that previous studies that had been carried out in both Turkey and around the world to explore EMI content lecturers' perceptions, difficulties and coping strategies had been conducted with only a specific group of participants teaching at a specific faculty or department. However, this study aimed to reach the academic staff in a wide range of departments at universities offering full EMI programs across Turkey to be able to investigate the general attitude towards EMI from a wider perspective and make discipline-based comparisons.

3.4 Data Collection Instruments

The data for this study were gathered from the full-time and part-time content lecturers teaching departmental courses solely in English at universities in Turkey. The data were collected from the participants that took part in the study on a voluntary basis. In an

attempt to answer the afore-mentioned research questions, the following data collection instruments were utilized in this convergent mixed methods study:

1. a 5-point Likert-scale questionnaire to all participants to obtain the quantitative data (see Appendix A for the questionnaire)
2. a semi-structured interview with the content lecturers who volunteered to be involved in it to obtain the qualitative data (see Appendix B for the semi-structured interview questions)

3.4.1 Online Questionnaire

The quantitative data in this convergent mixed-methods study were gathered through an online questionnaire (Appendix A). One of the big advantages of utilizing survey research is that “it has the potential to provide us with a lot of information obtained from quite a large sample of individuals” (Fraenkel et al., 2012, p. 13). In addition to being cost-efficient and time saving (Lefever et al., 2007), online questionnaires help researchers access the samples who may be difficult to reach in person and allows participants to take sufficient time to provide thorough answers to the questions (Fraenkel et al., 2012). Furthermore, as noted by Marshall (2005), well-planned questionnaires can “provide anonymity” (p. 132), which is more likely to provide the researcher with more frank responses and helps to reduce bias. Online questionnaires also prevent data loss and facilitates data transmission into a database for analysis (Carbonaro & Bainbridge, 2000; Ilieva et al., 2002). To be able to reach high quality usable data from a large group of samples considering the research questions, the researcher therefore conducted a questionnaire that was prepared using the online platform named Google Forms and shared with the target population online.

The type of information that could be gathered through questionnaires is threefold. As the first thing, information on attributes including age, gender and academic position could be collected. Also, behavioral questions like when or how often an action takes place could be another focus of a questionnaire. Questions about perceptions, attitudes or opinions could be also directed to explore the general point of view of the target

population (Aldridge & Levine, 2001). To this end, the researcher utilized a questionnaire which was made of both Likert-scale statements and open-ended questions that were designed to support the numerical data to investigate the demographic information about the sample, their perceptions on EMI, their challenges in their EMI classes and the strategies.

The questionnaire that has been designed to find answers to all three RQs (Appendix A) consists of four parts. The first part is designed to gather some demographic information about the participants including gender, academic position, grade levels and time spent as EMI lecturers, which may help the researcher evaluate the findings more accurately. The second part of the questionnaire was adopted from Kahvecioğlu's (2019) study upon her approval as the statements in her questionnaire were in accordance with the scope of this study's research questions, and her questionnaire was tested for validity and reliability with a group of content lecturers, who is the target population of this present study. The statements in the relevant parts of the questionnaire in Kahvecioğlu's (2019) study were directed towards Turkish learners and the Turkish language and worded in this way. However, since the target universities in this present study are home to both domestic and international students, such statements were reworded in a way that they got appropriate for the context of the current study and proofread by several experts in the field. In addition, several statements that did not serve the purpose of the present study's research questions were excluded. This adopted second part comprises two subcategories with a total of 30 5-point Likert-scale statements and three open-ended questions. The first subcategory directs 16 Likert-scale statements and one open-ended question to the participants to examine their general attitude toward the use of English as medium of instruction at tertiary level. The second subcategory consists of 14 Likert-scale statements and two open-ended questions to explore the effects of EMI on instruction process.

The third part of the questionnaire was adapted from Kairouz's (2023) study, which explored the challenges and strategies of EMI instructors at a university in Kuwait, due to its proven reliability and the similarities between Kairouz's (2023) study and this

current one. However, there was no information available on Kairouz online; therefore, the researcher did not manage to access him to receive his approval in a written way to benefit from his questionnaire after necessary adaptations. The third part includes a total of 24 5-point Likert-scale statements and one open-ended question to find out the difficulties that the participants experience in their EMI classes.

The last part of the questionnaire, which was adapted from Kairouz's (2023) study too, is made up of 11 5-point Likert-scale statements and 1 open-ended question that aim to explore the strategies that the participants adapt to be able to handle the challenges in their EMI classes. The statements in the third and fourth parts were adapted according to the context in which the current study would be conducted and were proofread by the experts in the field.

3.4.1.1 Pilot study

In addition to the aforementioned changes made on the statements, the whole adapted questionnaire was piloted with 18 content lecturers who worked at different universities offering EMI programs and did not take part in the actual study. The reason is that one of the drawbacks of questionnaires is being unable to make sure of questions being clear and not confusing. Marshall (2005) highlights that the piloting stage allows the researcher to test the validity and reliability of the questionnaire, to remove any flaws such as confusing wording or instruction as well as defects in the layout and to check the representativeness of the questionnaire. Keeping this rationale in mind, the researcher conducted a pilot run of the questionnaire with 18 EMI content lecturers.

Cronbach's coefficient was utilized in this study to calculate the internal consistency coefficients of the items in the questionnaire. As the parts of the questionnaire were adapted from two different sources, the reliability score for both each part and the whole questionnaire was calculated. For the overall reliability, the Cronbach's alpha value was .916, which is considered a strong value by Taber (2017). For the statements about EMI content lecturers' general attitudes towards EMI, the Cronbach's alpha coefficient was .621, which is deemed acceptable (Griethuijsen et al., 2014). As for the items related to

the impacts of the implementation of EMI on instruction process, the value of Cronbach's alpha scored .825, which highly proves the reliability of this part (Taber, 2017). When it comes to the questionnaire items in the third part that have been adopted to explore EMI content lecturers' challenges and the statements about EMI content lecturers' strategies in the last part, the Cronbach's alpha coefficients were .949 and .817 respectively, which indicates a very good level of reliability (Taber, 2017).

Having completed the pilot stage, the researcher made the following changes on the questionnaire by taking the feedback obtained from the pilot study into consideration:

- The time allocated for the completion of the questionnaire was extended from 10 minutes to 15 minutes.
- Question 3 asking about the academic disciplines of the participants was originally designed with options to be ticked, which caused the researcher to end up having a long list. Upon the feedback, Question 3 was changed into an open-ended question that required a short answer.
- The first draft of the questionnaire used in the pilot study included an item saying, "In general, I find it appropriate that numerical and verbal courses are conducted in English". As the feedback from the pilot study revealed that this item was redundant because of the previous two items saying "Numerical courses in universities should be conducted in English." and "Verbal courses in universities should be conducted in English", that item was omitted.
- The wording of item #14 in the draft used in the pilot study was changed from "English should be taught more effectively instead of teaching in English" into "English should be taught as a distinct subject more effectively instead of using it as a means of instruction to teach departmental courses".
- Item #25 in the draft in the pilot study saying "Instruction in English affects the production of Turkish words in the disciplines that students study negatively" was found to be irrelevant to the aim of the study. Therefore, this item was omitted.
- The wording of item #26 in the draft used in the pilot study was changed from "Instruction in English is an effective way to teach a foreign language." into

“Instruction in English is an effective way to improve learners’ English language skills”.

- The wording of item #36 in the draft used in the pilot study was changed from “Learning the terms both in English and Turkish brings an extra burden to students” into “Having students learn the Turkish equivalents of English terms related to their major brings an extra burden to students”.
- The last two words in item #39 saying “Students can only learn the concepts in lessons in Turkish.” was changed into “in their mother tongue”, considering the existence of international students in EMI classes in Turkish universities.
- Item #43 in the piloted draft saying “Transporting content knowledge through English” was omitted as item #49 saying “Transmitting content knowledge and skills in English meant almost the same thing.

3.4.2 Semi-structured Interview

For the qualitative part of this convergent design, semi-structured interviews as one of the most commonly used qualitative data gathering tools (Marshall & Rossman, 2014) were conducted with the academic staff who filled out the questionnaire and volunteered to take part in this process (Appendix B for the interview questions). The purpose of the interview was to gather information about the difficulties the content lecturers experienced in their EMI classes and strategies they tried to cope with them more closely, which is highly likely to lead to an in-depth analysis of the EMI content lecturers' experiences. Therefore, the interview questions were designed in such a way that they would seek answers to all three research questions in addition to the quantitative data concurrently but independently.

There are two different interview formats that could serve to enhance the qualitative data: structured and semi-structured. However, interviews in applied linguistics have been mostly conducted in a semi-structured way (Dörnyei, 2007). This study is no exception. One of the underlying reasons why semi-structured interviews were preferred for this study was that semi-structured interviews allow for room for the researcher to

adjust by adding or omitting any parts of the pre-prepared questions due to its flexible nature (Alamri, 2007). In addition, as the questionnaire in the quantitative part of this study mostly consisted of 5-point Likert-scale items, open-ended questions that require a response of some length were likely to be used with greater confidence, which can yield more important or revealing responses (Alamri, 2019; Fraenkel et al., 2012). Furthermore, having interviews would allow the researcher to go into more details about particular survey questions if need be, to pursue “particular questions of special interest or value in depth” and to clarify unclear or confusing items (Fraenkel et al., 2012, p. 13), which gives the interviewee the chance to elaborate their answers and, “in turn, serves to enrich the qualitative data” (Alamri, 2019, p. 66).

Since the interview process was ideally planned to be gone through with the help of the academic staff teaching at different departments, different faculties, and different grade levels to be able to compare their perceptions, challenges and coping strategies as stated in the research questions above, the interview questions stated in Appendix B were reworded, or new questions about the challenges or coping strategies were added by the researcher during the interviews, depending on the participants' experiences. The interviews were audio-recorded in the face-to-face meetings and voice-recorded during the Zoom meetings and transcribed.

To ensure validity, prior to the actual study, the interview questions with piloted with several EMI content lecturers with a doctoral degree in English language teaching that did not get involved in the present study. Having received feedback from the lecturers in the pilot study, necessary changes were made to the wording of the interview questions to ensure clarity. Upon the revision process, the final version of the interview questions was proofread by a foreign colleague of the researcher.

3.5 Data Collection Procedures

The data were gathered from content lecturers in various disciplines delivering their course content in fully English-medium instruction at 8 universities in Turkey. The rationale behind the inclusion of those 8 universities is that they fit both the description

of universities offering fully EMI programs by the Student Selection and Placement Center (2023) and Macaro's (2018) definition of EMI adopted in this study.

As the first step, the researcher obtained the approval of TED University Human Research Ethics Committee (Appendix C) to be able to launch the research study. Upon the approval, the researcher first visited the website of each and every department at the target universities and created a list of EMI content lecturers' e-mail addresses provided on the relevant websites. Although it is within the law for academic staff to share their contact information on their institution's website, there were some content lecturers whose e-mail addresses were not disclosed on the official websites, which means they had to be excluded from the study. An invitation e-mail was sent to the target sample at the 8 universities. The invitation e-mail consisted of the description of the study, the approval of TED University Human Research Ethics Committee and the link to the questionnaire at the top of which the informed consent form appeared. As a result, these invitation e-mails were sent to a total of 1.422 content lecturers working at the target 8 universities across Turkey. The quantitative data collection process took place from February to the end of March, which allowed the participants a sufficient amount of time to fill out the survey at their convenience.

While the participants consented to the terms at the beginning of the questionnaire, one of the questions was asking whether they also would like to volunteer to take part in the interview process. While the quantitative data collection was still in progress, the list of the participants who voluntarily agreed to be involved in the interview part was compiled. This was followed by the next step which was for the researcher contact these participants via e-mail to decide on the time and venue if the interview was to be held face-to-face considering both sides' working schedules. The participants were asked to inform the researcher about whether they would prefer to have the interview face-to-face or online (via Zoom). Considering the participants' preferences and both sides' availability, the interview schedule was created and shared with the participating content lecturers. Upon receiving the participants' consent, the semi-structured interviews were conducted individually with each volunteer participant. The interviews lasting

approximately 30 minutes were audio- or video-recorded, depending on the way the interviews were held.

3.6 Data Analysis

In this mixed-methods study that adopted the triangulation design, both quantitative and qualitative data were collected in an integrative manner to obtain a more comprehensive set of findings (Dörnyei, 2007). Quantitative data gathered through the Likert-scale items on the questionnaire were analyzed through descriptive statistics and one-way ANOVA to explore the attitudes, difficulties and coping strategies of the participating EMI content lecturers as well as make discipline-based comparisons. Qualitative data obtained from the open-ended questions on the questionnaire and the semi-structured interviews were analyzed through thematic analysis (Braun & Clarke, 2006). The findings coming from the qualitative analysis of the interviews were compared with the results of the quantitative data obtained from the online questionnaire with an aim to triangulate the two data sources as well as offer more holistic data towards the research questions investigated, as the findings from both the quantitative and qualitative data independently address all research questions of this convergent mixed-methods study. The purpose of the comparison of the qualitative findings with the quantitative findings was to verify the results of the quantitative phase and enrich the interpretation of the data to be able to answer the RQs under investigation.

3.6.1 Quantitative Data Analysis

Once the quantitative data collection process was over, the responses to the questionnaire were transferred to and converted into quantitative data on IBM SPSS Statistics Version 20. Descriptive statistics and one-way analysis of variance (ANOVA) were run on SPSS to investigate the perceptions of the participants towards EMI and the differences between the participant groups. Descriptive statistics including mean scores, frequencies and standard deviations enabled the researcher to present the findings related to the data set derived from the quantitative data in a meaningful and understandable way and simplify the interpretation of the data set. The mean scores allowed the researcher to pinpoint and present the most and the least common perceptions of the

participants toward EMI, the most and least common challenges faced by the participants and the most and least preferred coping strategies employed by the participating EMI content lecturers. In addition, a one-way ANOVA test was run to see whether the participants' opinions on EMI, challenges and coping strategies statistically differed based on academic disciplines.

To analyze the perceptions of the participants, the questionnaire items in the second part were divided into four subcategories as “General attitudes towards EMI, reasons for favoring EMI, reasons for not favoring EMI and the impacts of EMI on instructional process” (Kahvecioğlu, 2019). The items in those subcategories were referred to as the dependent variables, which are the variables that are altered because of independent variable manipulation (Bhandari, 2022). The independent variables of this study, which are “those that the researcher chooses to study in order to assess their possible effect(s) on one or more other variables” (Fraenkel et al., 2012, p. 80), were the participating EMI content lecturers as the sample group. Table 1 below lays out the subcategories and relevant items under each subcategory.

Table 1

Items in the subcategories in Part II of the questionnaire

Subcategory	Item number	
General attitudes towards EMI	Item # 10	Item # 14
	Item # 11	Item # 15
	Item # 12	Item # 17
	Item # 13	Item # 24
Reasons for favoring EMI	Item # 18	Item # 22
	Item # 19	Item # 25
	Item # 20	

Table 1 (continued)*Items in the subcategories in Part II of the questionnaire*

Subcategory	Item number	
Reasons for not favoring EMI	Item # 16	
	Item # 21	
	Item # 23	
Impacts of EMI on instruction	Item # 27	Item # 34
	Item # 28	Item # 35
	Item # 29	Item # 36
	Item # 30	Item # 37
	Item # 31	Item # 38
	Item # 32	Item # 39
	Item # 33	Item # 40

To analyze the hurdles that EMI content lecturers experience, parallel to the one in Kairouz's (2023) study, the items in the third part of the questionnaire were classified under three categories named "Language-related challenges, Learner engagement-related challenges and Assessment-related challenges", which constituted the dependent variables in this part whereas the participants were considered the independent variables. The details of the subcategories and the relevant items under each subcategory are presented in Table 2 below.

Table 2*Items in the subcategories in Part III of the questionnaire*

Subcategory	Item number	
Language-related challenges	Item # 43	Item # 51
	Item # 44	Item # 55
	Item # 48	Item # 56
	Item # 49	Item # 59
	Item # 50	Item # 60
Learner engagement-related challenges	Item # 45	Item # 54
	Item # 46	Item # 57
	Item # 52	Item # 58
	Item # 53	
Assessment-related challenges	Item # 47	Item # 64
	Item # 61	Item # 65
	Item # 62	Item # 66
	Item # 63	

Upon the classification of the questionnaire items under subcategories, the quantitative data that were transformed from the participants' responses to the questionnaire were entered onto IBM SPSS Statistics Version 20 to run the analyses, preceded by the creation of the numerical coding. Descriptive and inferential statistics were used to analyze the participants' perceptions of EMI, challenges, and coping strategies and to make some assumptions about the sample based on the results obtained from the data analysis (Fraenkel et al., 2012). In addition, one-way ANOVA was used to find out if any significant differences between the means of the participants' perceptions, challenges and strategies existed to be able to make discipline-based comparisons.

3.6.2 Qualitative Data Analysis

As another data source in this triangulation mixed-methods study, the qualitative data were collected through the semi-structured interviews from the participants that volunteered to be involved in this process and the open-ended questions in the questionnaire. The qualitative data were analyzed systematically through a process of thematic analysis (Braun & Clarke, 2006).

An inductive approach to thematic analysis was adopted in this research study for comprehensive and in-depth analysis of the qualitative data “without trying to fit the themes into a pre-existing coding frame or the researcher’s preconceptions about the research” (Braun & Clarke, 2006, as cited in Dawadi, 2020, p. 67). In accordance with the research questions of the present study, the researcher took each intriguing, unexpected or pertinent theme emerging through the data into consideration to better understand the issues being investigated to achieve high quality and in-depth analysis of the qualitative data.

Initially, the qualitative data that were audio- or video-recorded were transcribed transformed into the written form by using an artificial intelligence- (AI) powered transcription tool. Once the speeches were converted into the text format, the researcher cross-checked the transcriptions against the recordings to revise the information in the transcripts if need be and ensure that there was no missing or inaccurate data in the transcriptions. Inter-rater reliability was tested to guarantee the validity of the qualitative data. All the qualitative data were reviewed by a colleague of the researcher with a doctoral degree in English Language Teaching (ELT) to make sure of accuracy and proper thematic coding. Both the researcher and the colleague came together to discuss and come to an agreement on a few differences between the emerging themes as a result of their analysis. Upon reaching the agreement, necessary adjustments were made on the themes. In order not to violate the confidentiality of the participants’ real identities, the participants were randomly given numbers to be referred to as “Participant 1, Participant 2, Participant 3” and so on.

Cavendish (2011) notes that “thematic analysis is a constant-comparative method that involves reading and rereading the transcripts in a systematic way” (as cited in Dawadi, 2020, p. 67) to ensure a high quality final product. Therefore, the thematic analysis of the qualitative data in this study was done following the six steps proposed by Braun & Clarke (2006). As the first step, despite their familiarity with the data, the researcher had a thorough look at the transcripts several times to seek the possible patterns and interpretations. The familiarization with the data and search for patterns that were likely to emerge was followed by the second step, which was for the researcher to generate initial codes (Braun & Clarke, 2006). Poor content understanding, low English proficiency, a wider range of employment opportunities, more resources written in English, being unsure of students’ understanding of the content and translation of critical terminology in Turkish were among the initial codes. By prioritizing each code equally, the researcher aimed to reduce a massive amount of data by dividing it into smaller pieces through labelling and coding (Radnor, 2002, as cited in Kairouz (2023). After that, the third step came into play as the researcher began to search for potential themes and to classify the initially generated codes under the relevant themes, with some excerpts that would support and exemplify the findings. As the fourth step, the themes that were generated at the previous step were reviewed to see whether they followed a logical pattern through meaningful connections and a thematic map of analysis was created as suggested by Braun & Clarke (2006). The generation of a thematic map of the data was followed by the fifth step in which the researcher set out to define and name each theme clearly. Lastly, upon the creation of the list of the fully developed themes, the researcher presented the findings in an organized manner in relation to the research questions. Within the scope of this study based on the convergent mixed methods design, the qualitative findings were compared with the quantitative findings to check the convergence of both data findings upon a common understanding of the research questions under investigation. The merged results of both the qualitative and quantitative findings were presented in Chapter 4.

CHAPTER 4

FINDINGS

The purpose of this mixed-methods study was to investigate content lecturers' perceptions of English-medium of instruction at higher education level, the challenges they experience while delivering their course content through EMI and the strategies they employ to overcome these difficulties. Furthermore, the study aimed to find out whether EMI content lecturers' perceptions, challenges and strategies differ based on disciplines to be covered through EMI. In order to fulfill its aims, the present study sought to address the following research questions:

1. What are the views of content lecturers teaching different disciplines at higher education level on EMI?
 - 1a. What are the underlying reasons for these content lecturers to favor EMI at university?
 - 1b. What are the underlying reasons for these content lecturers not to favor EMI at university?
 - 1c. Are there any differences among these content lecturers' perceptions, considering the disciplines they teach?
2. What challenges do content lecturers teaching different disciplines face in teaching through EMI?
 - 2a. How do the challenges faced by EMI content lecturers differ, considering the disciplines they teach?
3. What strategies do EMI content instructors use to address these challenges?
 - 3a. How do the strategies used by EMI content lecturers to address the challenges differ, considering the disciplines they teach?

To address each aforementioned research question, the researcher carried out a series of parametric tests on SPSS including descriptive statics to get the means, standard deviation and frequencies to analyze the quantitative data gathered through the online questionnaire, and one-way ANOVA to make discipline-based comparisons. In addition to descriptive statistics, the qualitative data collected from the open-ended questions in the questionnaire and the semi-structured interviews were analyzed through thematic analysis by following the six steps proposed by Braun & Clarke (2006). The findings from the analysis of the qualitative data were compared with the findings from the quantitative data. The details of both quantitative and qualitative data analysis in relation to each research question as well as a summary of all the findings are laid out below.

4.1 Findings of Quantitative Data

4.1.1 Demographics of Participants

An online questionnaire that consisted of 79 5-point Likert-scale items and five open-ended questions asking about EMI content lecturers' attitudes towards EMI, challenges and strategies in EMI teaching was designed and utilized to gather the quantitative data of this convergent mixed-methods research study.

A total of 80 participants from the 8 target universities (n of participating private universities = 4, and n of participating private universities = 4) offering courses in fully English filled out the questionnaire on a voluntary basis. The first part of the questionnaire was designed to gather demographic information about the participants including gender, institution, academic position, years of work experience in an EMI context and mother tongue.

Of 80 participants, 57.5% were female ($n = 46$) and 40.0% were male ($n = 32$). In addition, 1.2% of the participants ($n = 1$) went for the option 'nonbinary' and 1.2% preferred not to reveal their gender ($n = 1$) as can be seen in Table 3 below.

Table 3*Gender Profile of Participants*

Gender	N	%
Female	46	57.5
Male	32	40.0
Nonbinary	1	1.2
Prefer not to say	1	1.2
Total	80	100

As can be seen in Table 4 below, assistant professors ($n = 31$) accounted for the biggest group of the participants with the highest percentage (38.8%). There was almost an equal distribution of the academic ranks of the rest. While 23.8% of the participants were associate professors ($n = 19$), 21.2% were titled as professors ($n = 17$). Lecturers constituted 16.2% of the sample.

Table 4*Academic Ranks of Participants*

Academic Rank	N	%
Lecturer	13	16.2
Assistant Professor	31	38.8
Associate Professor	19	23.8
Professor	17	21.2
Total	80	100

Table 5 includes the details of the faculties of the participating content lecturers. The distribution of the academic disciplines of the participants was almost equal. Content lecturers from Faculty of Education ($n = 21$) were the ones with the highest percentage (26.2%). They were followed by the content lecturers from Faculty of Arts and Sciences ($n = 19$, 23.8%) and the ones from Faculty of Engineering ($n = 18$, 22.5%). On the other hand, 15.0% of the participants were content lecturers of Architecture and Design ($n = 12$), and 12.5% were the ones of Economics and Administrative sciences ($n = 10$).

Table 5*Academic Disciplines of Participants*

Academic Discipline	N	%
Faculty of Arts and Sciences	19	23.8
Faculty of Architecture and Design	12	15.0
Faculty of Economics and Administrative Sciences	10	12.5
Faculty of Education	21	26.2
Faculty of Engineering	18	22.5
Total	80	100

As for the years of undergraduate classes the participating content lecturers taught, more than one-third of the participants (35.0%) offered undergraduate courses to freshmen (first-year students) ($n = 28$). While the participants teaching juniors accounted for 22.5% of the sample ($n = 18$), the percentages of the content lecturers that taught sophomores (second-year students) and seniors (fourth-year students) were equal ($n = 17$, 21.2%). The details of the years of undergraduate education the participants offered courses for are laid out in Table 6 below.

Table 6*Grade Levels Participants Teach*

Grade Level	N	%
Freshman	28	35.0
Sophomore	17	21.2
Junior	18	22.5
Senior	17	21.2
Total	80	100

The participants were also asked about the years of their work experience in an EMI context and in their current institutions. As can be seen in Table 7 below, more than half

of the participants have been teaching in an EMI context for more than 9 years ($n = 43$, 53.8%). 20.0% of the participating content lecturers ($n = 16$) have 7-to-9 years of experience in teaching through EMI. 16.2% of the content lecturers fall into the third category of the participants with 4-6 years of teaching experience in an EMI context ($n = 13$). While 8.8% of the sample have been teaching through EMI for 1 to 3 years, only 1 content lecturer has been new in teaching through English due to their experience for less than one year. As for the years of work experience in their institutions, while 26.2% of the participants have been working in their current institutions for 1 to 3 years ($n = 21$), 25.0% have had more than 9 years of work experience in their institutions ($n = 20$). In addition, there are 17 participants ($n = 17$) with 4-6 years of work experience in their current institutions (21.2%) and 14 content lecturers with 7-9 years of experience in their current workplace (17.5%). Only 8 content lecturers could be considered to be newcomers in their institutions due to having less than 1 year of experience in their workplace (10.0%).

Table 7

Years of Experience of Participants in EMI contexts and their institutions

	Experience in an EMI context		Experience in current institutions	
	N	%	N	%
Less than a year	1	1.2	8	10.0
1-3 years	7	8.8	21	26.2
4-6 years	13	16.2	17	21.2
7-9 years	16	20.0	14	17.5
More than 9 years	43	53.8	20	25.0
Total	80		80	

The analysis of the questions about the background information showed that the mother tongue of the majority of the participants (92.5%) were Turkish ($n = 74$), and only 7.5% were the native speakers of another language than Turkish ($n = 6$). In addition, most of the participants (87.5%) cannot speak a third language other than their mother tongue and English ($n = 70$). For 10.0% of the participants that could comfortably use a third

language for communication, Spanish was the most common third language (3.86%, $n = 3$), with German and Japanese being the second ones (1.2%, $n = 1$ for each).

4.1.2 RQ 1: Participants' Perceptions of EMI

Research Question 1 (RQ 1) aims to explore content lecturers' perceptions of EMI and whether there are any disciplined-based differences between the perceptions. For the ease of readers, RQ 1 and the relevant sub-questions are repeated below:

RQ1: What are the views of content lecturers teaching different disciplines at higher education level on EMI?

1a. What are the underlying reasons for these content lecturers to favor EMI at university?

1b. What are the underlying reasons for these content lecturers not to favor EMI at university?

1c. Are there any differences among these content lecturers' perceptions, considering the disciplines they teach?

To investigate content lecturers' attitudes towards EMI as an answer to RQ 1 and the sub-questions, the researcher classified the questionnaire items in Part II under such four categories as general attitudes towards EMI, reasons for favoring EMI, reasons for not favoring EMI and the impacts of EMI on instructional process. The 30 items in this part were based on 5-point Likert scale, ranging from completely agree (5) to completely disagree (1).

To analyze the quantitative data collected through the online questionnaire to investigate the perceptions, the researcher utilized descriptive statistics on SPSS. As proposed by Atik (2010), the test value was chosen as 3 since a score less than 3 suggests a negative attitude towards EMI, a value of 3 indicates a neutral attitude towards EMI, and a value greater than 3 implies a positive attitude towards EMI. In addition, as item 14 was worded in a negative form "Instruction in English should be abolished in all universities", the value of this statement was reversed for proper analysis, meaning the value of this item that is less than 3 implies a positive attitude towards EMI. A similar

approach was adopted while the frequencies were reported. As ‘completely agree’ and ‘agree’ suggested a positive attitude towards EMI, the frequencies representing these two scales were combined and presented under the scale “agree”. While the scale ‘neutral’ was kept, ‘disagree’ and the frequencies regarding ‘completely disagree’ were presented under the scale ‘disagree’.

Table 8 below presents the percentages, mean scores and standard deviation of the questionnaire items related to general attitudes of the participants towards EMI. When the mean scores of the item in Table 8 are taken into account, overall, the participants held a positive attitude towards EMI as the average mean score of this sub-category is calculated as 3.62, which is greater than the test value, and 91.3% of the participants agree with the statement ‘I find instruction in English beneficial’ ($M = 4.39$, $SD = .803$). Most of the participants (75%) also find instruction in English necessary at higher education level as indicated by the responses to item #11 ($M = 4.00$, $SD = 1.136$). The responses to item #14 also reveal that the participants are positive towards EMI at university because when the reversed value of the statement ‘Instruction in English should be abolished in all universities’ is considered, 88.8% of the participating content lecturers are against this idea ($M = 3.50$, $SD = .928$). Another statement that the majority of the participants agree on is that ‘students will be more successful in numerical and verbal courses if their foundation in English is stronger’. 87.5% of the content lecturers believe that having stronger English background leads to more success in both verbal and numerical courses ($M = 4.39$, $SD = .738$). Many participants (78.85) also think that English-medium instruction does not have adverse effects on their own cultures owing to English being the global language as can be seen from the statistics for item # 24 ($M = 4.00$, $SD = 1.031$).

Table 8

Descriptive Statistics for Participants’ General Attitudes toward EMI

Item number	Item	N	%	Mean	Std. Deviation
# 10	I find instruction in English beneficial.	80	91.3	4.39	.803

Table 8 (continued)*Descriptive Statistics for Participants' General Attitudes toward EMI*

Item number	Item	N	%	Mean	Std. Deviation
# 11	Instruction in English is necessary in universities.	80	75	4.00	1.136
# 12	Numerical courses in universities should be conducted in English.	80	57.4	3.73	1.018
# 13	Verbal courses in universities should be conducted in English.	80	70	3.88	1.107
# 14	Instruction in English should be abolished in all universities.	80	11.3	1.50	.928
# 15	English should be taught as a distinct subject more effectively instead of using it as a means of instruction to teach departmental courses.	80	38.8	3.09	1.407
# 17	Students will be more successful in numerical and verbal courses if their foundation in English is stronger.	80	87.5	4.39	.738
# 24	Because English has become an international language, instruction in English does not lead to cultural degradation.	80	78.8	4.00	1.031
Average Mean				3.62	

Regarding the responses to the first sub-question under RQ 1 that aims to look into the reasons why content lecturers are in favor of EMI, the descriptive statistics are presented in Table 9 below. Considering the mean scores presented in Table 9 below, the primary reason for content lecturers to support EMI at higher education level was its contribution to learners' cognitive development as stated in item #18 ($M = 4.39$, $SD = .738$). This is followed by item #25 as 78.8% of the participants perceive EMI as a chance for learners to enhance their language skills ($M = 4.00$, $SD = 1.031$). However, this contradicts with the responses to a similar statement saying 'Instruction in English improves the students' English because it creates an area of use for this language'. Despite their positive attitude towards EMI as an opportunity for students to develop their language skills, most of the participants do not believe that EMI allows for room for students to use the language ($M = 2.60$, $SD = 1.318$). On the other hand, more than half of the participants believe EMI helps learners to gain respect in the society ($M = 3.80$, $SD = .986$) and to familiarize themselves with the target culture ($M = 3.81$, $SD = 1.080$).

Table 9

Descriptive Statistics for Reasons to Favor EMI

Item number	Item	N	%	Mean	Std. Deviation
# 18	Instruction in English contributes to students' cognitive development.	80	87.5	4.39	.738
# 19	Studying in an institution that teaches in English will make a person earn respect in the society.	80	63.7	3.80	.986
# 20	Instruction in English contributes to the introduction of the culture of the target language (e.g. English).	80	68.7	3.81	1.080

Table 9 (continued)*Descriptive Statistics for Reasons to Favor EMI*

Item number	Item	N	%	Mean	Std. Deviation
# 22	Instruction in English improves the students' English because it creates an area of use for this language.	80	31.2	2.60	1.318
# 25	Instruction in English is an effective way to improve learners' English language skills.	80	78.8	4.00	1.031
Average Mean				3.72	

Concerning the second sub-question under RQ 1 which is designed with the intention of finding out reasons why content lecturers are against EMI, Table 10 below presents the descriptive statistics for the responses to the relevant questionnaire items. The descriptive statistics have revealed that the major concern about EMI has to do with its negative effects on learners' success in departmental courses as stated in item #16. 87.5% of the participants think EMI negatively affects students' success in courses ($M = 4.06$, $SD = 1.035$). As the second reason not to favor EMI, most of the participants (63.7%) agree with the statement 'instruction in English affects the effectiveness of numerical and verbal lessons negatively' ($M = 3.55$, $SD = 1.301$).

Table 10*Descriptive Statistics for Reasons not to Favor EMI*

Item number	Item	N	%	Mean	Std. Deviation
# 16	Instruction in English affects students' success in content lessons negatively.	80	87.5	4.06	1.035

Table 10 (continued)*Descriptive Statistics for Reasons not to Favor EMI*

Item number	Item	N	%	Mean	Std. Deviation
# 21	Instruction in English affects the effectiveness of numerical and verbal lessons negatively.	80	63.7	3.55	1.301
# 23	Instruction in English limits creativity.	80	68.7	2.83	1.300
Average Mean				3.48	

When it comes to the participants' opinions on the impacts of EMI on instruction processes, Table 11 below presents the details of the responses to the questionnaire items relevant to this focus of RQ 1. Considering the fact that the questionnaire items about the potential effects of EMI on instruction mostly focus on the negative sides of EMI, the figures in Table 11 show that the participants mostly hold a positive attitude towards the impacts of EMI on instruction processes (average mean = 2.96). 66.2% of the content lecturers in the study agree with the statement 'students have difficulty asking questions in English' ($M = 3.71$, $SD = 1.333$), followed by item #31. More than half of the participants (61.2%) report that their students have difficulty answering the oral questions they ask in English ($M = 3.55$, $SD = 1.301$). Despite the mean score being 3.29, which could be considered a positive attitude towards EMI, less than half of the participants (41.3%) think EMI positively affects students' success in lessons ($M = 3.29$, $SD = 1.224$), which is aligned with the responses to item #16 highlighting the negative impacts of EMI on learner success in courses. Despite the negative opinions regarding the responses to items #16 and 27, only a small number of participants (5%) agree with the statement 'students can only learn the concepts in lessons in their mother tongues' ($M = 2.36$, $SD = 1.723$). Similarly, only around one-fifth of the participants (21.3%) think EMI makes it hard for learners to remember newly introduced terms and concepts ($M = 2.53$, $SD = 1.432$).

Table 11*Descriptive Statistics for Participants' Opinions on Impacts of EMI on Instruction*

Item number	Item	N	%	Mean	Std. Deviation
# 27	That the lessons are conducted in English affects the success of students in lessons positively.	80	41.3	3.29	1.224
# 28	When I teach in English, students have difficulty grasping the subject.	80	40	3.14	1.230
# 29	Students ask me to translate the subjects I teach in English into Turkish.	80	38.7	3.18	1.589
# 30	Students have difficulty asking questions in English.	80	66.2	3.71	1.333
# 31	Students have difficulty answering the oral questions I ask in English.	80	61.2	3.55	1.301
# 32	Students have difficulty answering the written questions I ask in English.	80	37.5	3.01	1.345
# 33	When I reply to questions in English, students have difficulty understanding my reply.	80	30	2.83	1.300

Table 11 (continued)*Descriptive Statistics for Participants' Opinions on Impacts of EMI on Instruction*

Item number	Item	N	%	Mean	Std. Deviation
# 34	Students have difficulty making an English summary of a lesson I teach in English.	80	40	3.40	1.506
# 35	Students have difficulty understanding the English resource materials I use in lessons.	80	20	2.75	1.373
# 36	Having students learn the Turkish equivalents of English terms related to their major brings an extra burden to students.	80	25	2.93	1.605
# 37	Lessons conducted in English make it difficult for students to remember newly learned terms and concepts.	80	21.3	2.53	1.432
# 38	Lessons conducted in English lead students to learning by memorization.	80	16.3	2.53	1.340
# 39	Students can only learn the concepts in lessons in their mother tongues.	80	5	2.36	1.723
# 40	Exams prepared and administered in English affect the success of students negatively.	80	15	2.55	1.359
Average Mean				2.96	

With regard to the third sub-question under RQ 1 that seeks to find out whether there is any discipline-based differences between the participants' perceptions of EMI, a one-way between-groups analysis of variances was conducted to explore any statistical significance of the differences between the perceptions of the content lecturers from five different faculties (Faculty of Arts and Sciences, Faculty of Architecture and Design, Faculty of Economics and Administrative Sciences, Faculty of Education and Faculty of Engineering). While generating the output, the researcher first conducted Levene's test for homogeneity of variances to "test whether the variance in scores is the same for each of the five groups" (Pallant, 2011, p. 253), namely the five faculties involved in the study. As can be seen in Table 12, the significance value (Sig.) for Levene's test for the general attitude section is .491. The significance value (Sig.) for Levene's test for the impacts of EMI on instructional processes is .455. As the Sig. value for both parts is greater than .05, the homogeneity of variance assumption has not been violated in this step of the study. Therefore, the researcher did not need to consult the table in the output headed Robust Tests of Equality of Means.

Table 12

Tests of Homogeneity of Variances – Perceptions

		Levene Statistic	df1	df2	Sig.
General Attitude (GATot)	Based on Mean	.862	4	75	.491
Instruction Processes (IPTot)	Based on Mean	.923	4	75	.455

When Table 13 below is consulted, there is no statistically significant difference at the $p < .05$ level in general attitudes (GATot) scores for the five faculties in the study: $F(4, 75) = 1.4$, $p = .21$. That is, the Sig. value for GATot in Table 13 is greater than .05, the general attitudes of the participants from five different faculties towards EMI do not differ significantly from each other. Similarly, there is no statistically significant difference at the $p < .05$ level in the impacts of EMI on instruction processes (IPTot) scores for the five faculties in the study: $F(4, 75) = 2.0$, $p = .10$. That is, the Sig. value for IPTot in Table 13 is greater than .05, the perceptions of the participants from five

different faculties of the effects of EMI on instruction do not differ significantly from each other.

Table 13

Discipline-based Comparison of Perceptions of Participants of EMI

		Sum of Squares	df	Mean Square	F	Sig.
(GATot)	Between Groups	150.778	4	37.695	1.490	.214
	Within Groups	1897.609	75	25.301		
	Total	2048.388	79			
(IPTot)	Between Groups	993.984	4	248.496	2.019	.100
	Within Groups	9231.504	75	123.087		
	Total	10225.488	79			

4.1.3 RQ 2: EMI Content Lecturers' Challenges

Research Question 2 (RQ 2) aims to investigate the challenges content lecturers encounter while teaching through EMI and whether there are any disciplined-based differences between the challenges. For the ease of readers, RQ 2 and the relevant sub-question are provided below one more time:

RQ 2: What challenges do content lecturers teaching different disciplines face in teaching through EMI?

2a. How do the challenges faced by EMI content lecturers differ, considering the disciplines they teach?

To investigate the difficulties EMI poses for content lecturers at higher education level as an answer to RQ 2 and the sub-question, the researcher classified the questionnaire items in Part III under three categories: language-related challenges, learner engagement-related challenges and assessment-related challenges. The 24 items in this part were based on 5-point Likert scale, ranging from the most challenging (5) to the least challenging (1).

To analyze the quantitative data gathered through the online questionnaire to explore the challenges facing EMI content lecturers, the researcher utilized descriptive statistics on SPSS. According to Oxford and Burry Stock's (1995, as cited in Kairouz, 2023, p. 55), the mean scores falling between "1.0 and 2.4" were classified as a low challenge, "2.5 and 3.4" were considered a medium challenge, and "3.5 and 5.0" were accepted as a high challenge.

4.1.3.1 Language-related Challenges

The details of the descriptive statistics for each language-related challenge faced by the participating content lecturers are laid out in Table 14 below. The figures in Table 14 demonstrate that the only task that poses a high level of challenge for the participants is "teaching and explaining abstract and complex content ideas in English" in item #43 ($M = 3.58$, $SD = 1.261$). This is followed by "dealing with different levels of English language proficiency/skills of the students" in item #56 ($M = 3.15$, $SD = 1.254$) and "using questions to prompt students for higher order cognitive thinking in English" in item #50 ($M = 3.00$, $SD = 1.212$) as the second and third most challenging tasks respectively. The majority of the tasks stated in the items seem to fall into the category of medium challenge, taking the mean scores into consideration. "Preparing teaching content for presentations in English" in item #55 was perceived as the least challenging language-related task by the participants ($M = 1.78$, $SD = 1.018$).

Table 14

Descriptive Statistics for Language-related Challenges

Item number	Item	N	Mean	Std. Deviation
# 43	Teaching and explaining abstract and complex content ideas in English	80	3.58	1.261
# 44	Teaching students to distinguish vocabulary and technical terminology in English	80	2.96	1.316

Table 14 (continued)*Descriptive Statistics for Language-related Challenges*

Item number	Item	N	Mean	Std. Deviation
# 48	Transmitting content knowledge and skills to students in English	80	2.73	1.283
# 49	Providing opportunities for practice and giving corrective feedback for consolidation in English	80	2.60	1.239
# 50	Using questions to prompt students for higher order cognitive thinking in English	80	3.00	1.212
# 51	Developing students' content skills for investigation study (testing hypothesis, designing working procedures, gathering data, drawing conclusion)	80	2.89	1.293
# 55	Preparing teaching content for presentations in English	80	1.78	1.018
# 56	Dealing with different levels of English language proficiency/skills of the students	80	3.15	1.254
# 59	Choosing appropriate register, words, and orders for explaining content concepts	80	2.65	1.264
# 60	Explaining topics after reading materials	80	2.23	1.180
Average Mean			2.75	

4.1.3.2 Learner engagement-related Challenges

The details of the descriptive statistics for each learner engagement-related challenge in the questionnaire are presented in Table 15 below. When the figures in Table 15 below are considered, the participants find “having students hold discussions in English” as the most challenging task related to learner engagement ($M = 3.86$, $SD = 1.156$), followed by item #45 “having students answer my questions in English” being the second most challenging task ($M = 3.49$, $SD = 1.180$). While the rest of the tasks in this category was considered medium challenges owing to their mean scores, the task “dealing with different levels of content achievements of the students” in item #57 was reported to present the lowest level of challenge in relation to learner engagement ($M = 3.08$, $SD = 1.178$).

Table 15

Descriptive Statistics for Learner Engagement-related Challenges

Item number	Item	N	Mean	Std. Deviation
# 45	Having students answer my questions in English	80	3.49	1.180
# 46	Having students hold discussions in English	80	3.86	1.156
# 52	Asking students to co-construct content knowledge themselves in English	80	3.31	1.014
# 53	Encouraging students to study independently and generate new knowledge through group work by sharing their knowledge in English	80	3.38	1.084
# 54	Initiating students to apply existing knowledge to unfamiliar situations in English	80	3.33	1.077

Table 15 (continued)*Descriptive Statistics for Learner Engagement-related Challenges*

Item number	Item	N	Mean	Std. Deviation
# 57	Dealing with different levels of content achievements of the students	80	3.08	1.178
# 58	Dealing with a diversity of existing content knowledge among students	80	3.18	1.199
Average Mean			3.37	

4.1.3.3 Assessment-related Challenges

Table 16 below presents the details of the descriptive statistics for each assessment-related challenge in the questionnaire faced by the participants in the current study. Considering the figures in Table 16 below, none of the tasks in the table was considered to be of a high difficulty level for the participants due to the mean scores ranging between 2.21 and 2.98. “Evaluating students’ content understanding in English” was identified as a medium challenge but the most challenging assessment-related task ($M = 2.98$, $SD = 1.190$) by the content lecturers in the study. The participants found “making a balance between correcting students’ mistakes in English and in content concepts” as the second medium challenge ($M = 2.68$, $SD = 1.240$). Seemingly, the participants had the least difficulty in deciding on the content topics and levels of difficulty in a test or an exam ($M = 2.21$, $SD = 1.144$). In addition, upon consulting the average mean scores in Table 14, Table 15 and Table 16, while learner engagement-related tasks presented the biggest challenge for the participants ($M = 3.37$), the ones related to assessment were considered the least challenging task group by the content lecturers in the study ($M = 2.46$).

Table 16*Descriptive Statistics for Assessment-related Challenges*

Item number	Item	N	Mean	Std. Deviation
# 47	Evaluating students' content understanding in English	80	2.98	1.190
# 61	Designing a test/ an exam with consideration on the English demand for students (eg. writing, M.C., projects, presentations)	80	2.23	1.169
# 62	Deciding on the content topics and levels of difficulty in a test or an exam	80	2.21	1.144
# 63	Preparing/Producing exam questions in English with consideration on students' English level	80	2.26	1.145
# 64	Assessing English language mistakes in written exams	80	2.41	1.219
# 65	Assessing students' understanding of the major-related terminologies	80	2.49	1.102
# 66	Making a balance between correcting students' mistakes in English and in content concepts	80	2.68	1.240
Average Mean			2.46	

4.1.3.4 Comparison of Challenges Faced by Participants

Regarding the sub-question under RQ 2 that aims to explore the potential of discipline-based differences between the hurdles experienced by the participants, a one-way

between-groups analysis of variances (ANOVA) was conducted to explore any statistical significance of the differences between the challenges faced by the participating content lecturers from five different faculties (Faculty of Arts and Sciences, Faculty of Architecture and Design, Faculty of Economics and Administrative Sciences, Faculty of Education and Faculty of Engineering). While generating the output, the researcher first conducted Levene's test for homogeneity of variances to "test whether the variance in scores is the same for each of the five groups" (Pallant, 2011, p. 253), namely the five faculties involved in the study.

As can be seen in Table 17, the significance value (Sig.) for Levene's test for the challenges is .473. As the Sig. value is greater than .05, the homogeneity of variance assumption has not been violated in this step of the study. Therefore, the researcher did not need to consult the table in the output headed Robust Tests of Equality of Means.

Table 17

Tests of Homogeneity of Variances - Challenges

		Levene Statistic	df1	df2	Sig.
Challenges (CHTot)	Based on Mean	.892	4	75	.473

When Table 18 below is consulted, there is no statistically significant difference at the $p < .05$ level in challenges (CHTot) scores for the five faculties in the study: $F(4, 75) = 2.1, p = .07$. That is, the Sig. value for CHTot in Table 18 is greater than .05, so the difficulties experienced by the participants from five different faculties do not differ significantly from each other.

Table 18

Discipline-based Comparison of Challenges Faced by Participants

		Sum of Squares	df	Mean Square	F	Sig.
(CHTot)	Between Groups	2749.592	4	687.398	2.189	.078
	Within Groups	23555.795	75	314.077		
	Total	26305.387	79			

4.1.4 RQ 3: EMI Content Lecturers' Coping Strategies

Research Question 3 (RQ 3) aims to explore the strategies employed by content lecturers at higher education level to overcome the challenges they face in teaching through EMI. For the ease of readers, RQ 3 and the relevant sub-question are provided below once again.

RQ 3: What strategies do EMI content instructors use to address these challenges?

3a. How do the strategies used by EMI content lecturers to address the challenges differ, considering the disciplines they teach?

The 11 items in this part were based on 5-point Likert scale, ranging from always (5) to never (1). To analyze the quantitative data, the researcher utilized descriptive statistics on SPSS. Table 19 presents the details of the descriptive statistics for the coping strategies utilized by the participants of the current study. The figures in Table 19 show that the participants mostly preferred to “provide more definitions and exemplification of technical words in English but not necessarily translating them into Turkish” ($M = 3.53$, $SD = 1.201$). The second most preferred coping strategy by the participants was “providing additional English explanations and input” ($M = 3.48$, $SD = 1.190$). When the mean scores were taken into accounts, the participants did not have a tendency to simplify the course content or the assessment components. The least preferred coping strategies were reported to be “providing students with additional English language course” ($M = 1.75$, $SD = 1.119$) and “providing students with teaching notes in both Turkish and English” ($M = 1.71$, $SD = 1.093$).

Table 19

Descriptive Statistics for Coping Strategies Utilized by Participants

Item number	Item	N	Mean	Std. Deviation
# 68	Providing Turkish translation of technical vocabulary	80	2.74	1.230

Table 19 (continued)*Descriptive Statistics for Coping Strategies Utilized by Participants*

Item number	Item	N	Mean	Std. Deviation
# 69	Providing Turkish translation of abstract English vocabulary (not technical, eg. metaphor)	80	2.71	1.245
# 70	Providing more definitions and exemplification of technical words in English but not necessarily translating them into Turkish	80	3.53	1.201
# 71	Providing students with additional English language course	80	1.75	1.119
# 72	Providing additional English explanations and input	80	3.48	1.190
# 73	Providing students with teaching notes in both Turkish and English	80	1.71	1.093
# 74	Providing students with more feedback and corrections on their English use in the content subject	80	2.69	1.208
# 75	Receiving more training on English Medium Instruction (EMI) teaching and the knowledge of English language as a content lecturer	80	1.90	1.026
# 76	Providing and encouraging students to attend tutorials	80	2.83	1.394
# 77	Simplifying the content of the course	80	2.88	1.372

Table 19 (continued)*Descriptive Statistics for Coping Strategies Utilized by Participants*

Item number	Item	N	Mean	Std. Deviation
# 78	Simplifying the assessment components	80	2.54	1.272

4.1.4.1 Comparison of Coping Strategies utilized by Participants

With regard to the sub-question under RQ 3 that aims to find out the potential of discipline-based differences between the coping strategies employed by the participants, ANOVA was conducted to explore any statistical significance of the differences between the strategies utilized by the participating content lecturers from five different faculties (Faculty of Arts and Sciences, Faculty of Architecture and Design, Faculty of Economics and Administrative Sciences, Faculty of Education and Faculty of Engineering). While generating the output, the researcher first conducted Levene's test for homogeneity of variances to "test whether the variance in scores is the same for each of the five groups" (Pallant, 2011, p. 253), namely the five faculties involved in the study.

As can be seen in Table 20, the significance value (Sig.) for Levene's test for the challenges is .550. As the Sig. value is greater than .05, the homogeneity of variance assumption has not been violated in this step of the study. Therefore, the researcher did not need to consult the table in the output headed Robust Tests of Equality of Means.

Table 20*Tests of Homogeneity of Variances - Strategies*

		Levene Statistic	df1	df2	Sig.
Strategies (STTot)	Based on Mean	.767	4	75	.550

When Table 21 below is consulted, there is no statistically significant difference at the $p < .05$ level in strategy (STTot) scores for the five faculties in the study: $F(4, 75) = 2.0$, $p = .09$. That is, the Sig. value for STTot in Table 21 is greater than .05, so the coping strategies of the participants from five different faculties do not differ significantly from each other.

Table 21

Discipline-based Comparison of Coping Strategies Utilized by Participants

		Sum of Squares	df	Mean Square	F	Sig.
(STTot)	Between Groups	455.874	4	113.968	2.030	.099
	Within Groups	4211.614	75	56.155		
	Total	4667.488	79			

4.2 Findings of Qualitative Data

This mixed-methods study aimed to explore the perceptions of content lecturers at higher education level of EMI, difficulties presented by EMI for content lecturers and strategies utilized to cope with these issues as well as the potential of discipline-based differences between these points. To reach a more comprehensive set of findings and gain additional and important insights into the purpose of the current study, the researcher gathered qualitative data through the open-ended questions in the online questionnaire and the semi-structured interviews. The focus of the qualitative data was consistent with the quantitative data focus because both aimed to find answers to all the research questions in this study. The details of the qualitative data findings from both the interviews and open-ended questions have been presented below.

Semi-structured interviews were designed to gain deeper insights into the perceptions of the participants of EMI, the challenges they faced while teaching through EMI and their coping strategies. The interviews were also conducted to ensure the convergence of both qualitative and quantitative data upon a shared understanding of the questions being researched. The semi-structured interviews were held with 13 participants who both filled out the online questionnaire and volunteered to take part in the interview process. Table 22

below presents background information about the participants that were involved in the interviews on a voluntary basis. The qualitative data gathered through the semi-structured interviews were analyzed through thematic analysis by adopting an inductive approach and following the six steps proposed by Braun and Clarke (2006) to decide on the recurring themes.

Table 22

Demographics of Participants in Semi-structured Interviews

	Type of University	Academic Rank	Academic Discipline	Grade Level	Years of Experience in EMI
Participant 1	Private	Professor	Faculty of Education	Freshman	40
Participant 2	Private	Lecturer	Faculty of Arts and Science	Sophomore	8
Participant 3	Private	Assistant Professor	Faculty of Arts and Science	Freshman	27
Participant 4	Private	Assistant Professor	Faculty of Economics and Administrative Sciences	Sophomore	3
Participant 5	Private	Professor	Faculty of Education	Senior	35
Participant 6	Private	Associate Professor	Faculty of Engineering	Junior	20
Participant 7	Private	Assistant Professor	Faculty of Arts and Science	Freshman	10
Participant 8	Private	Professor	Faculty of Architecture and Design	Junior	15
Participant 9	Private	Associate Professor	Faculty of Education	Freshman	15
Participant 10	Private	Associate Professor	Faculty of Engineering	Sophomore	5

Table 22 (continued)*Demographics of Participants in Semi-structured Interviews*

	Type of University	Academic Rank	Academic Discipline	Grade Level	Years of Experience in EMI
Participant 11	Private	Assistant Professor	Faculty of Education	Sophomore	15
Participant 12	Private	Lecturer	Faculty of Education	Senior	3
Participant 13	Private	Lecturer	Faculty of Economics and Administrative Sciences	Freshman	8

The number of the responses to the open-ended questions in the questionnaire was not consistent and equal because these open-ended questions were optional to answer. While the number of relevant responses to the first open-ended question was 6, it was 43 for the second open-ended question. Therefore, this inconsistency did not enable the researcher to present the background information about these participants through tables. Nevertheless, while these participants' comments on the open-ended questions were shared as examples, they were referred to as "Participant A, Participant B, Participant C" and so on so that the interview participants and the ones responding to the open-ended questions in the questionnaire would be differentiated from each other.

4.2.1 RQ 1: Perceptions of Participants of EMI

RQ 1 seeks to investigate the views of content lecturers regarding EMI by exploring their reasons to and not to favor EMI and see whether these views differ according to discipline. With this regard, the participants were asked to share their opinions on EMI at higher education level by stating their reasons to and not to favor EMI. In line with the first question in the interview, the first open-ended question in the questionnaire asked the participants to share their additional comments on their attitudes towards EMI if there is any. 18 out of 80 participants provided answers with mostly short phrases to

this question. Of these 18 responses, only 6 were considered relevant and 4 were mostly related to the challenges. However, the rest was not taken into account since they were simply “no”.

4.2.1.1 Participants’ Reasons to Favor EMI

Upon the thematic analysis of the responses to this question in the semi-structured interviews and the first open-ended question in the questionnaire, it was found that, overall, the participants adopted a positive attitude towards teaching content courses through EMI at tertiary level, which was in line with the quantitative data findings considering the mean scores of the questionnaire item #10 ($M = 4.39$, $SD = .803$), item #11 ($M = 4.00$, $SD = 1.136$) and item #14 ($M = 3.50$, $SD = .928$). They reported that teaching through EMI was a necessity in the global world due to its benefits such as a wider range of resources, raising global citizens and English being the language of science to all stakeholders, which proved a consistent result with the results of the relevant quantitative data as 91.3% of the participants agreed with the statement ‘I find instruction in English beneficial’ ($M = 4.39$, $SD = .803$). Most of the participants (75%) also found instruction in English necessary at higher education level as indicated by the responses to item #11 ($M = 4.00$, $SD = 1.136$). The comments below are to exemplify this:

Participant C: “English is the language used by the scientific community nowadays... University must prepare students for facing the academic and business life in general, and English has become an indispensable asset.”

Participant E: “It is beneficial to have EMI universities in countries where English is taught as a foreign language, as these institutions serve as gateways to the international sphere for many students who would like to become global citizens.”

The participants shared several reasons to support their positive attitudes towards EMI. As the primary reason, 76.9% of the participants in the interviews ($n = 10$) stated that EMI provided both learners and content lecturers with “a wider range of employment

opportunities around the world”, which could be seen in the excerpts below. They believed that EMI equipped learners for their careers much better than any other medium of instruction. Similarly, the second open-ended question in the questionnaire focused on the participants’ reasons to be supportive of EMI. 43 participants shared their opinions on the positive sides of teaching through EMI. More than half of these 43 responses (69.7%, $n = 30$) were related to “*better employment opportunities*”. Below are representative comments to exemplify this opinion.

Participant 2: “... and this of course helps them when they graduate, whether they are going to get a job in academia, whether they're going to get a job in the industry, definitely if they're going to apply for something, anything they want. So, I think there is a reason why firms want students from certain universities and almost invariably those universities adopt English as language of their education.”

Participant 5: “Of course, they find better jobs with higher status, with higher salary. They can have more opportunities in the country and outside the country.”

Participant 12: “Receiving university education in English provides you with a wider range of job opportunities. We have the chance to access more up-to-date information in the field. You are learning more things.”

Participant F: “EMI can improve students' employment prospects in the future (depending on their chosen field of course)”.

46.1% of the participants in the questionnaire ($n = 6$) and 51.1% of the responses ($n = 20$) to the second open-ended question mentioned “*easier access to a greater variety of resources*” written for academic studies as the second benefit of EMI. Some of them stated that either there was no available coursebooks or materials written in Turkish in their fields or the ones in Turkish were not as effective in presenting their course content as the ones in English.

Participant 9: "Having access to more resources I could say is the first benefit."

Participant 10: "I really prefer it to teach in Turkish because in engineering most of the written educational material is in English."

Participant A: "The resources are richer if the instruction is in English..."

Participant B: "In science subjects, there are more resources in the English language, and it is the international language of science."

Another reason to favor EMI that was mentioned by 46.1% of the participants ($n = 6$) in the interviews and 69.7% of the content lecturers responding to the second open-ended question ($n = 30$) was *"its contributions to students' academic studies"*. They stated that EMI was a great opportunity for learners to improve not only their English language skills but also disciplinary knowledge due to English being the language of science, which would enable learners to pursue further academic studies in any corner of the world. They associated this point with having more resources in English that were better designed and richer in terms of content, which they believed would lead to increased creativity. These explanations were in consistency with the responses to the questionnaire item #23 ($M = 2.83$, $SD = 1.300$), and item # 25 ($M = 4.00$, $SD = 1.031$).

Participant 2: "I think it so vastly contributes to their command of English. All of their listening abilities, speaking abilities, definitely really writing abilities.... If you expose people to different languages, their brain benefits from this on so many different levels. I mean, this is about, it's about retention, memory. It's about acquisition, it is about being able to take perspective more easily and more readily. Creative thinking seems to be again benefiting from being exposed to different languages. It definitely shapes the brain in a different way and in a way that actually aids in this."

Participant 8: "This allows them a smooth transition to Master's programs, graduate programs abroad. I see that they don't feel like it's a different culture, because they are already familiarized with all the terminology."

Participant D: “Many of our students pursue a master's degree abroad, so their academic background gives them a competitive advantage too”.

“Internationalization” was another term that the interview participants (38.4%, n = 5) and 44.1% of the responses to the second open-ended question (n =19) referred to while explaining their reasons to favor EMI. They expressed that English as the lingua franca and the language of science helped to raise global citizens since it allowed for room for people to be exposed to a different culture, develop themselves both personally and professionally, and keep up with the rest of the world. The following comments are some examples of this point of view.

Participant 5: “They become global citizens. I mean they have many opportunities because English is the language in the world.”

Participant 7: “They publish in English, communicate in English, all collaborations are formed in English, and it is impossible to become an international without English.”

Participant 13: “The first is that English is the scientific lingua franca, right? We have to accept that. We have to accept that if you want to stay competitive in a scientific discipline, you need to have the necessary foreign language skills. ... You need to be able to stay competitive. You need to be able to, you know, engage with the rest of them. Again, you need English for that. ... The nature of the world economy, the nature of global culture, and just the fact that even the people who are sort of caught in this. I mean, they themselves have to somehow engage with global culture as well.”

Participant H: “Better integration with scientific lingua franca, great ability to communicate with a global workforce and better integration with global culture”

23.1% of the interview participants (n = 3) and 11.6% of the responses to the relevant open-ended question (n = 5) touched on “easier course preparation and delivery” as another argument in favor of EMI. They stated that EMI enabled them to prepare and conduct their courses with considerable ease. They also added that they would suffer a

lot if they had to teach through Turkish-medium instruction as their disciplines were designed based on English.

Participant 2: "It is indeed easier for me to teach in English than in Turkish. So when I was looking for jobs, the idea of having to teach in Turkish itself was a challenge for me. To be honest, I don't know the terms in Turkish. I don't know. I would struggle seriously.. I mean you know with your Turkish business you know we have to publish in Turkish. That was the most challenging thing to me. I don't know the terms. Honestly, I don't know academic language in Turkish because I wouldn't have been schooled up."

Participant 9: "It's better for me to prepare and read something and present something in English."

Participant M: "no need to translate materials. A lot of resources are written in English. This is a great comfort in terms of course preparation."

In addition to these reasons, only several interview participants (30.7%, $n = 4$) and 23.2% of the participants ($n = 10$) responding to the relevant open-ended question also stated that EMI contributed to *intellectual and professional development* by linking it to easier content comprehension in such fields as Physics and International Relations. This is in line with the responses to the questionnaire item #27 ($M = 3.29$, $SD = 1.224$). Below are some comments to support these views.

Participant 7: "It's like creating a basic... a basis for understanding their own disciplines as well."

Participant I: "I think it enhances students' target language conceptualization and learning as they are authentically immersed in language use environments in their own fields and have constant exposure to English language. They have cultural awareness necessary to engage with international communities. It also fosters students' intellectual growth as they push their limits in understanding very complex concepts in their second languages."

Participant Z: "In our field (design), there is not much literature in Turkish. It is a dynamic discipline so having a good grasp of concepts and terminology makes it easier to follow professional developments, technologies, etc."

Regarding RQ 1, the participants were asked about their roles as EMI content lecturers in the language development process of learners as there has been a great deal of literature with inconclusive and controversial results on that point. Likewise, there was no agreement on this discussion topic among the participants, either. While half of the participants stated that helping learners improve their language skills was within their responsibility as EMI content lecturers, the other half agreed that they were solely EMI content lecturers with no such responsibility.

Participant 2: "I would definitely identify with the latter group. I mean, I think I try my best. I try to enhance their vocabulary; I try and use complex sentences in fact. So, I actually do this knowingly, willingly. I can say that I think that one of the things I can teach in here, above and beyond psychology, is command of English. So I try to, I do try to do that."

Participant 8: "I don't think it's my job to teach them English, but it's my job to make sure they do understand the content I deliver. But, for example, most of my assignment briefs, it requires writing. There's always a note about the use of English. That would be part of my assessment. I will say it should be understandable, it should be clear, and you should use the correct terminology. This is always important for me. However, I don't fix the grammar one by one as it's not my job and I didn't receive any training on that."

Participant 10: "I expect them to be ready. I accept that since they are here, they must be ready. So I don't see myself qualified to teach English or to solve problems in English language for the students. And I don't have any effort to make my English texts clearer or something. I can teach my stuff in English, but for example, in a technical report, I never correct grammar. I see the mistake, but that's not my job. I never correct grammar. I'm not an English teacher and I don't see myself as an English teacher."

4.2.1.2 Participants' Reasons not to Favor EMI

Despite the positive attitudes towards EMI at higher education level, the interview participants shared their concerns regarding EMI, which turns the focus to the second sub-question under RQ 1, which aims to discover the participants' reasons not to favor EMI. In addition, 39 participants shared their opinions on the drawbacks of EMI by responding to the third open-ended question in the questionnaire. All the participants agreed that the biggest obstacle in the way of EMI was *learners' low language proficiency level*. They stated that language barriers posed difficulties for both themselves and learners such as poor content comprehension, a low level of motivation and interest in the chosen field and poor academic performance. These responses were consistent with the responses to the questionnaire item #16 "Instruction in English affects students' success in content lessons negatively". 87.5% of the participants thought EMI had negative effects on students' success in courses ($M = 4.06$, $SD = 1.035$). In relation to that, the participants also reported that EMI might result in a low level of engagement, which could cause all the stakeholders to suffer in class. The following comments are to exemplify these points.

Participant I: "For students do not have basic skills of English, the lessons can be challenging and boring for them. Learning then becomes superficial and unfortunately memorized."

Participant B: "Students whose English background is weak have difficulty in understanding questions or expressing themselves in oral and written forms. when students do not understand, they lose the meaning and the logic behind it."

Participant K: "If students' language skills do not match with instructors', students avoid participating in class discussions."

Although they were well-aware of the opportunities provided as a result of EMI, almost 50% of the interview participants ($n = 6$) reported to be vocal *proponents of instruction in mother tongue*. What was more striking was that two of the participants that chose instruction in mother tongue over EMI were native speakers of English. All these 6

participants stated that there was a mismatch between the expected language level of learners and the existing language proficiency of learners. They attributed this discrepancy to insufficient prep year education and even K-12 education. They stated that there was a gap between prep year English language education and EMI courses. It was reported that while prep programs were designed to equip learners with general English, EMI courses were primarily based on disciplinary discourse. Likewise, 15.3% of the participants ($n = 6$) responding to the relevant questionnaire question associated students' low proficiency level with insufficient English education offered at K-12 levels and prep programs at universities. They all mentioned that having a stronger background in English would ease the way for learners to benefit from EMI. Likewise, the responses to the questionnaire item #17 highlighted the importance of having a stronger foundation in English for a more effective implementation of EMI at tertiary level ($M = 4.39$, $SD = .738$). In addition, they suggested university administrations make discipline-based decisions regarding EMI instead of placing extra burden on students and lecturers by forcing them to EMI. Another startling point was that the two native speakers of English stated that they would definitely make use of Turkish in their classes if they knew and could speak it. Even one of them preferred to call the use of English as the medium of instruction at schools around the world "language imperialism", and suggested instruction in mother tongue to preserve other languages.

Participant 1: "Our teaching of English is problematic at the primary level or secondary level, so it becomes a more problematic situation for them at the tertiary level. Some courses or some subjects are very difficult. So, I believe that it should be in the native language. ... I think we should teach English as a separate course for human communication in general. And departmental courses should be offered in the native language of the students."

Participant 4: "I feel like, if I were a Turk, I'd be like, why aren't we doing this in my language? You know, I mean, I think that's a frustrating thing. You know, the reasons why English is a useful language are strictly based on imperialism, right? That's frustrating. I can completely understand that. ... If you think about other languages, especially indigenous languages, they're dying out all over the

world. It would actually be really good to be doing those kinds of languages as opposed to English or Spanish or whatever the dominant language is. So that was all my point. ... I think If I could speak in Turkish in my classes, I totally would do so to like explain certain points because I think they could learn better that way."

Participant 5: "EMI has always been a problem in our country. For almost 12 years they study English but when they begin their university education, most of them start with a very low proficiency and they have one year here or maximum two academic years and this is not a sufficient time to learn the language to have education in English they might come to a certain level but what we expect them is a very high level. And I'm afraid we cannot succeed because they might have passive knowledge, but they don't use it... Knowing a language at a good level is different from having education in that language."

Participant N: "I think the current educational system of our country does not encourage nor allow children and young adults to build foreign language skills until they become university students. As a result, at the undergraduate level, English becomes a barrier and affects student motivation to learn very negatively."

Overall, the participants were found to be supportive of EMI at higher education level. Although some of them shared their concerns regarding EMI and opinions on TMI vs EMI, no discipline-based difference was identified among those participants as there was at least one representative of each faculty presented in Table 5 and Table 22 above.

4.2.2 RQ 2: Challenges Faced by Participants in Teaching through EMI

RQ 2 seeks to investigate the challenges encountered by content lecturers while teaching through EMI and whether there are any discipline-based differences between the challenges. Within this scope, the participants were asked about difficulties they faced while delivering their course content through EMI. 13 participants in the interviews and

13 out of 80 participants in the questionnaire shared their opinions on RQ2. However, of 13 responses to the fourth open-ended question in the questionnaire, only 10 were considered relevant. The rest was not taken into account since they were simply “no”. Like in the questionnaire results, three groups of challenges faced by the participants were identified upon thematic analysis. The details of each category of challenge were presented below.

4.2.2.1 Language-related Challenges

The major challenge that all the participants ($n = 13$) in the interviews and 60% of the participants ($n = 6$) responding to the relevant open-ended question reported to face in EMI teaching was found to be “language-related”, more specifically students’ low proficiency level. The participants stated that despite long years of K-12 education and prep year education at EMI universities, they ended up having classes of students with varying levels of English. They believed that there was a mismatch between learners’ existing language proficiency level and the expected level. The aspects of the English language that the learners were struggling with in EMI classes were reported to be lexis, grammar, writing and speaking. They added that having low English proficiency discouraged students from speaking in class as they were afraid of making mistakes. The items relevant to these points in the questionnaire such as item #45 ($M = 3.49$, $SD = 1.180$), item #46 ($M = 3.86$, $SD = 1.156$) and item #56 ($M = 3.15$, $SD = 1.254$) yielded similar results.

Participant 1: “... I experience difficulties related to the lack of knowledge of some grammar points. ... In addition, in writing, they have difficulties. They don’t know how to organize their ideas in a coherent way.”

Participant 4: “One thing that I do notice is that the students really, they're afraid to put things in their own words. Because they have this idea that it should sound academic, which I think sounds like... It's always like passive voice...”

Participant 8: “We have to accept that, but we have to see that they are not equally fluent in English. And this does have an impact on their academic success at the end of the day.”

Participant 11: “They come with a bad vocabulary, insufficient vocabulary. They come with insufficient verbal skills, pronunciation skills, and so on, okay? So, in addition, they are very much, I guess, aware that they can't use English efficiently. therefore, less motivated to use it. So it becomes a burden for them and us.”

The participants stated that low level of proficiency in English resulted in some other issues as well. One of them was reported to be “insistence on L1 use and constant demand for L1 translation”.

Participant 7: “I see the students trying really hard but there are still those who do not understand English well. And even in class when they are trying to ask a question, they ask it in Turkish first.”

Participant 9: “To make things clear, I explain things again and again my classes. However, students, especially the ones with low level of English, ask me to do so in Turkish.”

Participant 11: “Turkish students wait for the time during which you switch to Turkish.”

Another issue stemming from students' low level of English was reported as “poor content comprehension” by most of the participants (69.3%, $n = 9$) in the interviews and 80% of the content lecturers ($n = 8$) responding to the relevant open-ended question experienced. The participants reported to observe that students with poor English proficiency endured a great deal of hardships grasping their course content, which is in line with the responses to the questionnaire item #28 ($M = 3.14$, $SD = 1.230$).

Participant 3: “I teach a broad range of students with varying levels of English. The ones with low English proficiency can’t follow me and they say: I can’t really understand what you are saying.”

Participant 4: “I do think that teaching courses through English has negative impacts on students’ success such as poor content comprehension.”

Furthermore, 5 interview participants mentioned that having students with poor English proficiency put some pacing- and course preparation-related burdens on them. They stated they had to spend more time on planning and transmitting course content by considering their students’ different levels of English. The responses to the questionnaire items #43 ($M = 3.58$, $SD = 1.261$) and #59 ($M = 2.65$, $SD = 1.264$) also presented similar results.

Participant 5: “This semester my classes consist of students with different profiles – I mean there is diversity in their existing disciplinary knowledge and level of English. With this profile, we can never be sure of what they know and what they don’t know. That causes me to fall behind my schedule. In addition, I need to spend more time on course preparation.”

Participant 7: “That makes the class flow slower. And that actually takes the focus away from the course content.”

Participant 11: “I am not much knowledgeable about using the English language for mathematical notations. Therefore, I had to study a bit to say ‘2 to the power of 8’, which means extra time spent on preparation.”

Considering the sub-question under RQ 2, upon in-depth analysis of language-related challenges, no discipline-based difference was discovered as “poor English proficiency” was a common issue uttered, in one way or another, by all the participants from 5 different faculties.

4.2.2.2 Learner engagement-related Challenges

The second hurdle that was reported by 38.4% of the interview participants ($n = 5$) and 30% of the participants ($n = 3$) responding to the fourth open-ended question in the questionnaire was related to “learner engagement”. These participants stated that one of the adverse effects of EMI was students’ reluctance and resistance to participate in class. The participating content lecturers added that this unwillingness reduced students’ level of motivation, which could, in return, lead to ineffective class discussion. The responses to both the relevant questionnaire items like item #46 ($M = 3.86$, $SD = 1.156$), and item #45 ($M = 3.49$, $SD = 1.180$) yielded parallel results. The following comments are given to prove this issue.

Participant 6: “Students with low level of English are afraid to talk in English, they're afraid to ask questions in English. It is just very hard to get any response from those students.”

Participant 11: “It’s not beneficial because we’re losing contact, personal contact with students. It becomes a simple performance context for everyone. Since we lose contact, we can’t hold effective discussions in class. It’s impossible to involve students in discussions with this level of motivation and English.”

Participant B: “Students who think they cannot use English language well prefer to stay silent and do not become the part of the classes and discussions.”

Considering the sub-question under RQ 2, upon in-depth analysis of learner engagement-related challenges, no discipline-based difference was discovered as “low level of student involvement and motivation” was a common issue uttered, in one way or another, by the 8 participants from different faculties.

4.2.2.3 Assessment-related Challenges

The third category of challenge posed by EMI for the participants was related to assessment practices. 15.3% of the interview participants ($n = 2$) reported to have difficulty in preparing exam questions as they had to spend extra time adjusting the

language they used in exams. The qualitative data analysis showed that the least challenging area for the participants was “assessment” as it was reported by only 2 participants involved in the interviews. The rest stated that they would never sacrifice their assessment components in any way as it was of vital importance for them to stick to the high standards both their institutions and they as content lecturers set. This resonates with the quantitative data findings reporting assessment-related challenges as the least challenging task group ($M = 2.46$) by considering the average mean scores of the challenge groups.

Participant 11: “Before I administer an exam, I think about the terms that I use in the questions and even instructions, asking myself whether they know them. I don’t want it to contaminate my assessment and also, I don’t want the students to attribute their failure to the medium of instruction if they happen to fail.”

Participant 12: “There are times when I think about the exam questions. There are times when I wonder if they can answer this exam question or if I should make some changes on the way the questions are worded.”

Considering the sub-question under RQ 2, upon in-depth analysis of assessment-related challenges, no discipline-based difference was discovered as there were only 2 participants having those issues - basically very similar issues, and they were not the members of the same faculty.

4.2.3 RQ 3: Strategies Utilized by Participants

RQ 3 set out to explore the strategies employed by content lecturers to cope with the challenges while teaching through EMI and whether there are any discipline-based differences between the challenges. Within this scope, the participants were asked about the strategies they employed to deal with the challenges in their EMI classes. In addition to 13 content lecturers in the interviews, 15 out of 80 participants who filled out the questionnaire provided answers with mostly short phrases to the fifth open-ended question about that point. Of these 15 responses, only 10 were considered relevant. The rest was not taken into account since they were simply “no”. Like in the questionnaire

results, three groups of challenges faced by the participants were identified upon thematic analysis. The details of each category of challenge were presented below.

4.2.3.1 Providing Additional Support

The most preferred strategy followed by all the interview participants ($n = 13$) and half of the content lecturers ($n = 5$) responding to the relevant open-ended questionnaire were found to “provide learners with additional support”. The in-depth analysis of the qualitative data revealed that although the form of additional support varied, the participants from five different faculties reported to assist their learners to ease the processes for themselves and students’ content comprehension as well as increase learner engagement in their EMI classes. 5 of the interview participants mentioned that they “paraphrased unknown or unclear parts through exemplification and more explanations in English” to help students having trouble grasping content knowledge due to their low English proficiency. Similarly, the quantitative data also discovered that the top coping strategy utilized by the participants was “providing additional explanations, examples or definition in English” as can be seen in the responses to the item #70 ($M = 3.53$, $SD = 1.201$) and the item #72 ($M = 3.48$, $SD = 1.190$).

Participant 1: “When I realize that the topic is not understood very well, I try to paraphrase what I had said or I try to give more examples to students.”

Participant 3: “I think they don’t always get everything (covered in class). Therefore, I am constantly asking ‘Do you know this word? Do you understand that?’ To make sure of content comprehension, I use different ways of explaining things through examples and paraphrasing.”

Participant 4: “I am always happy to explain the meaning of an unknown word again and again through restatement or examples.”

38.4% of the participants ($n = 5$) in the interviews stated that they provided their students with additional resources to ease content comprehension.

Participant 5: “I try to provide them with some background knowledge. To do so, if they need supplementary materials, I provide them with those supplementary materials.”

Participant 7: “We have a professor whose videos were taken into video recordings a few years ago. They are available on YouTube. I put the links to these videos on our school’s sharing system to motivate them to take things slow and to learn material week by week.”

Participant 8: “I try to prepare the lecture slides as the main source of important knowledge. And I also always add the sources under that wherever I am. Sometimes it’s a website, sometimes it’s a book or an article. And I always announce at the beginning of the semester that if you are interested, you can go check. If you cannot access the books, let me know. I can share the PDF versions with you.”

15.3% of the participants ($n = 2$) in the interviews and 30% of the content lecturers ($n = 3$) responding to the relevant questionnaire question reported that they provided their students with additional help through learning strategies.

Participant 11: “I am quite interested in etymology so I sometimes show them how they can make sense of a word, especially critical ones. For example, I try to show them how to decompose a word into its root to figure out the possible meaning.”

Participant E: “I am using mostly strategies where I think would help students’ psychology of language use, especially for the students who feel anxious in using English language and hesitates to participate in the discussions. I have individual talks with my students and help them to identify the reasons behind their deficiencies and then provide some strategies they can try to both improve their language to become more active language users and to feel more comfortably in expressing themselves and their opinions and understanding in English.”

4.2.3.2 Use of L1

The second most common strategy among the participants was found to be the “use of L1” (Turkish in this context). Even though some of the participants ($n = 5$) in the interviews were quite against the idea of providing Turkish translations, the rest of the interview participants ($n = 8$) and 30% of the lecturers ($n = 3$) answering the relevant questionnaire question reported to utilize L1 use, mostly in the form of code-switching. They made use of L1 in their EMI classes for several reasons such as making content comprehension easier for students, promoting learner engagement and effective time management instead of wasting time explaining the difficult parts in English over and over again with no good results. Below are some comments to exemplify this point.

Participant 6: “I say the Turkish translation of the technical terms. This is what I do. Sometimes I see that they are totally lost. This is something I do at least three times per semester, but not more than three. Just only two to five minutes. I speak in English first and then I apologize from my English-speaking students that I'll be talking in Turkish and it will be the same things for some of my students to get their attention. Then I speak very fast saying that this is it and I see some of the students rising and going oh this is what you were saying as this is what I was saying.”

Participant 11: “So I have a general sense about whether the students know or not the meaning of the word, so if I suspect that they don't get the word, I at least provide a definition to it. I mean providing the Turkish meaning especially for some key terms.”

Participant H: “The students are obviously allowed to use Turkish in group work and to ask one another how to say things! I let them use it whenever they need to. It would be weird to punish that!!”

What is compelling about this finding is the difference between the responses to the questionnaire items relevant to the use of L1 and the responses to the interview questions, which remarks the only discrepancy between the findings of the quantitative

and qualitative data. The mean scores of item #68 ($M = 2.74$, $SD = 1.230$) and item #69 ($M = 2.71$, $SD = 1.254$) in the questionnaire revealed that “providing learners with Turkish translation” was not among the first three popular strategies. However, the in-depth analysis of the interview data presented the use of L1 as the second most popular coping strategy of the participants.

4.2.3.3 Simplification

61.5% of the participants ($n = 8$) in the interviews reported to benefit from “simplification” to overcome the challenges related to EMI and better implement EMI. Unlike 5 participants who were very explicitly vocal opponents of simplification in any way, these 8 participants were found to utilize simplification of their course content, exam questions or the language they used in class.

Participant 2: “Not the content.. I have never had to do that.. but as I said, my questions are difficult to understand. So I'm actually working on that. I am trying to simplify my questions. Without like, without dumbing down the content, I mean, I still want to extract the same knowledge.”

Participant 7: “I can't simplify the content or the assessment. It's not that it is simple, it is supposed to be difficult, right? The midterms that we give them is actually very difficult and we are sort of proud of it, I guess. But I can't simplify it and I do not want to simplify it. I want them to learn physics well, right?.. I try to simplify the exact words that I use to define an important concept. I try to choose simpler, shorter terms means to dissect the meaning of it.”

Participant 8: “To deal with students with poor English background and promote learner involvement, I feel need to simplify my course content. That's why, each year some of my lectures get shorter and shorter. It's like should I get into that or are they going to benefit from that or are they going to be bored?. However, when it comes to assessment, it's a big no. I have very high standard in there.”

Participant 10: “Not the course content, but I simplify the examples I make use of in class to ease content comprehension.”

4.2.3.4 Integration of Fun and Real life-like Elements into Courses

The fourth coping strategy adopted by 23.0% of the participants ($n = 3$) in the interviews and 40% of the content lecturers ($n = 4$) responding to the relevant open-ended question in the questionnaire was adding fun elements as well as making connections to real life into course plans to elevate learner engagement and motivation.

Participant 3: “I try to be more engaging and kind of funny. I'm a bit old now, I used to stand on chairs and I swear and tell jokes and play the guitar occasionally and all that kind of thing just to keep people's kind of attention.”

Participant S: “I tell jokes and stories (in English) that mirror the difficult content, in order to help the students understand the concept in other ways.”

Participant T: “I try to surprise them to attract their interest and allocate a percentage of their grade to in-class participation.”

Considering the sub-question under RQ 3, upon in-depth analysis of coping strategies, no significant discipline-based difference was discovered as almost all the strategies identified were employed by at least one participating content lecturer from each faculty.

4.3 Summary of the Findings

The present research study set out to address three RQs via both quantitative data collected through an online questionnaire and qualitative data gathered from the open-ended questions in the questionnaire and the semi-structured interview. RQ 1 aimed to explore the perceptions of the participating EMI content lecturers of EMI at higher education level by examining their reasons to favor and be against EMI as well as making discipline-based comparisons. RQ 2 was designed to find out the challenges the participants faced during the process of conveying their course content in English and whether they differed based on disciplines. RQ 3 aimed to identify the coping strategies

of the participants to handle the difficulties in teaching through EMI by making discipline-based comparisons. The questionnaire data were analyzed quantitatively on SPSS while the data coming from the interviews and the open-ended questions in the questionnaire were analyzed qualitatively through thematic analysis. The summary of the findings of both qualitative and quantitative data is presented below.

Regarding the purpose of RQ 1, both the quantitative and qualitative data revealed that the participants were quite positive towards EMI at tertiary level. The primary reasons why they valued EMI at higher education were its contributions to learners' cognitive development, a wider range of employment opportunities, more chances for further academic studies, becoming global citizens, and its role in enhancing learners' language skills. As for the reasons not to favor EMI, the analysis of the quantitative and qualitative data revealed that the participants had concerns about the adverse effects of EMI on students' academic success. The findings demonstrated that there were no statistically significant discipline-based difference between the perceptions of the participants.

As for RQ 2, both the qualitative and quantitative data identified three categories of challenges faced by the participants while teaching through EMI. The first one was related to linguistic issues. That is, the participants reported to suffer from low proficiency level of English of students due to insufficient K-12 and prep year education. It was found that poor English proficiency resulted in some other serious issues including poor content comprehension, students' demand for L1 translation, longer course preparation time and falling behind schedules. As the second category, learner engagement-related challenges were reported to affect the implementation of EMI as the participants stated that they ended up having ineffective class discussions and monologues in class due to students' reluctance to participate in in-class tasks, low level of motivation and high level of anxiety. Thirdly, some participants were found to experience assessment-related challenges like spending too much time preparing exam questions due to their concerns about students' language level. The findings revealed that there were no statistically significant discipline-based difference between the challenges experienced by the participants.

With regard to RQ 3, the qualitative and quantitative data yielded similar results except for one point. The analysis of the responses to the online questionnaire and the semi-structured interviews found that the most popular coping strategy followed by the participants was to provide additional support to students in various forms such as paraphrasing, sharing additional sources and training in learning strategies. Another strategy identified in both qualitative and quantitative data was simplification. Although the participants mostly preferred to simplify the language they used in class or exams, the majority of them were explicitly against the simplification of course content or assessment components, which proves the consistency between the findings of both data types. The participants in the interviews also mentioned the integration of fun and real life-life elements into classes to promote learner involvement. The only discrepancy between the qualitative and quantitative data regarding the coping strategies was related to the use of L1. While the responses to the questionnaire presented that providing learners with Turkish translations of unknown or difficult concepts was not among the favorite strategies of the participants, the analysis of the interview data revealed that it was the second most popular way for the participants to overcome the challenges in their EMI classes. Except for that, there were no statistically significant discipline-based difference between the strategies employed by the participants.

CHAPTER 5

DISCUSSION AND CONCLUSION

This chapter aims to provide a discussion of the present study's findings in connection with the existing relevant literature, their implications, several suggestions for further studies and the limitations of the study.

The primary purpose of this convergent mixed methods study was to investigate the perceptions of content lecturers towards EMI, the challenges encountered by content lecturers in teaching through fully EMI and their coping strategies to tackle those challenges in a university context in Turkey by making discipline-based comparisons to see whether content lecturers' opinions on EMI, challenges and strategies would differ from each other based on academic disciplines. With regard to the nature of convergent mixed methods studies, the data were collected through an online questionnaire for the quantitative part from 80 content lecturers working at different faculties of 8 different universities, and semi-structured interviews for the qualitative part from 13 participants that filled out the questionnaire and volunteered for the interview. The qualitative and quantitative data were collected separately and independently to seek answers to all the RQs. Then, the quantitative data were analyzed using descriptive statistics and one-way ANOVA while the qualitative data were analyzed through thematic analysis. Then, the results from the analysis of interview data were compared with the quantitative analysis to see their convergence on a common understanding of the topic of interest and the merged results were interpreted in relation to each RQ in the presentation of the qualitative data.

5.1 Discussion

5.1.1 Content Lecturers' Perceptions of EMI

RQ 1 with three sub-questions aimed to explore the participants' attitudes towards EMI at higher education level and whether there was any significant difference between the participants' opinions on EMI, based on academic disciplines. The analysis of the

responses to RQ 1 coming from the questionnaire and the semi-structured interviews found that the participants overall had a positive attitude toward EMI. A number of reasons were reported by the participants to support the idea of English being used as the medium of instruction at tertiary level, which were considered the answers to the first sub-question under RQ 1. The main reasons why EMI at higher education level was mostly favored by the participants included a wider range of employment opportunities in both local and global contexts, access to more resources in their fields in English, enhanced language skills, more and better chances for further academic studies, increased creativity and thinking skills and turning to global citizens. These findings resonate with the findings of Briggs et al. (2018), Dafouz et al. (2014), Khatri (2019), Turhan and Kırkgöz (2018), Yang et al. (2019) and Yüksel et al. (2021) reporting that EMI is seen as a major factor that contributes to the development of learners' English language skills. Likewise, in their study, Turhan and Kırkgöz (2018) and Yang et al. (2019) demonstrated that EMI enhanced learners' thinking skills and creativity in addition to their language skills. Similarly, a brighter future with more job opportunities, further academic studies and strong global perspectives were reported as the benefits of EMI in studies by Altay and Yüksel (2021), Dewi (2017), Hu and Lei (2014), and Ozer and Bayram (2019). In a study that was conducted with content lecturers at university level in Indonesia, Dewi (2017) also reported that EMI provided both learners and teachers with easier access to a wide range of resources in English, which supports the findings of this present study.

In line with the second sub-question under RQ 1 that aimed to explore the reasons for the participants not to favor EMI, the analysis of both qualitative and quantitative data sets revealed the participants' concerns regarding EMI at higher education level. Despite its potential benefits, EMI was reported to have some adverse effects on academic success and the effectiveness of content courses due to language barriers and low level of learner engagement. This finding corroborates with Baltabayev (2020), Ibna Seraj and Hadina (2021), Manalastas and Botang (2018), Oktaviani et al. (2021) and Sela and Luke (2020) reporting that EMI negatively affects academic success by impeding content comprehension due to students' low English proficiency and low level of motivation. In the present study, when the participants were asked to elaborate on the

ineffectiveness of EMI, they attributed this failure to insufficient K12 and prep year language education preceding higher education. They all agreed on the fact that having a stronger background in English would ease students' learning process and contribute to their academic success. These findings are in consistency with the British Council Report/TEPAV (2015) and the studies by Dearden et al. (2016), Kır (2024) and Soruç et al. (2021). In their research project to explore stakeholders' perceptions of EMI in Turkey, Dearden et al. (2016) reported EMI lecturers' dissatisfaction with prep school education which was believed to be inadequate to equip learners with English language skills necessary for their undergraduate studies. The participants believed that there was a huge gap between prep school education and EMI. The area of deficiency was reported as the lack of focus on discipline-specific English in prep year language programs, which causes prep year programs to fail to equip learners with English language proficiency to succeed in their undergraduate courses. In a similar vein, Soruç et al. (2021) conducted a study to explore the correlation between English language proficiency and linguistic challenges faced by students at a university in Turkey. Upon the analysis, Soruç et al. (2021) found that high level of English proficiency eased content comprehension for learners and contributed a lot to students' academic success. In the present study, due to a number of concerns including students' low level of English, poor content comprehension, low level of learner engagement and motivation, half of the participants were found to choose instruction in mother tongue (Turkish-medium instruction in this context) over EMI. This is in line with the findings of previous research on this ongoing controversial debate over EMI vs. instruction in mother tongue including Cho (2012), Jensen and Thøgersen (2011), Kılıçkaya (2006) and Kırkgöz (2014) that revealed the tendency to prefer instruction in L1 to EMI in their studies. Jensen and Thøgersen's study (2011) yielded similar results regarding lecturers' preferences for the medium of instruction at higher education level. In Jensen and Thøgersen's (2011) study carried out in Denmark, the participating lecturers expressed their strong preference for instruction in L1 as well as publishing in L1 (Danish in this context) to preserve their mother tongue. This corroborates the findings of the present study as one of the participants in the semi-structured interviews regarded the use of English as language imperialism and voiced her preference for instruction in L1 to

prevent other languages from dying out. Similarly, Kırkgöz's study (2014) that was conducted at a university where both TMI and EMI were adopted as the medium of instruction revealed the tendency for TMI due to easier acquisition of disciplinary knowledge in TMI.

Within the scope of RQ 1, the analysis of both data sets revealed tensions over the issue of EMI content lecturers' roles in terms of content teaching and language teaching. Like in many other previous studies (Banks, 2018; Huang & Fang, 2023; Liu & Yuan, 2023; Pun & Thomas, 2020), the present study reported that half of the content lecturers strongly believed that they were solely content lecturers, and language teaching was not within their teaching responsibilities, which demonstrated the core and concrete belief system of this group of the EMI content lecturers. The rationale behind this belief system was based on that "the improvement of students' English language proficiency is not an explicit aim, yet students are expected to master academic content of their discipline through English" (Curle et al., 2024, p. 2). Conversely, the other half of this study's participants believed to be responsible for both students' mastery of content knowledge and English language proficiency. They expressed their stiff opposition to the idea that "the language development goal remains merely implicit" in EMI contexts (Curle et al., 2024, p. 2). They had the tendency to help learners with language improvement exposing them to language models needed for their fields and providing them with feedback. In a similar vein, in their study conducted at a Chinese university, Huang and Fang (2023) reported that the EMI content lecturers in the study mainly self-positioned as content or discipline teachers. On the other hand, Liu and Yuan (2023) yielded conflicting results in their case study conducted in a Macau university. The analysis revealed that the participant considered teaching English to be part of her job and adopted a teaching approach integrating content and language teaching. This view could be associated with the claim that "a more balanced approach to integrating content and language, not sacrificing one for the other" (Liu & Yuan, 2023, p. 2) to foster learners' language skills and ensure the full benefit of EMI in academic studies.

As for the third sub-question under RQ 1, the results of the one-way ANOVA revealed that there were no significant differences between the attitudes of the EMI content

lecturers in the present study towards EMI, which is in contradiction with the findings of Dearden and Macaro (2016). In their small-scale study conducted in three countries, Dearden and Macaro (2016) identified some within-country and between-country variances in the lecturers' opinions on the adoption and implementation of EMI including "the speed, lack of agency, low linguistic proficiency and general support for EMI programmes" (p. 479). However, the quantitative data converged with the qualitative data on a common understanding of potential benefits of EMI and concerns regarding EMI practices at higher education level in Turkey.

5.1.2 Challenges of EMI Content Lecturers

RQ 2, with its sub-question, intended to investigate the hardships that EMI content lecturers had to bear in EMI teaching by making discipline-based comparisons. Considering the findings of both qualitative and quantitative data sets, the present study found that language-related challenges mostly stemming from students' low level of English put severe strain on the EMI content lecturers in the study. It was reported that low proficiency level led to many other serious issues in class, ranging from poor content comprehension, ineffective in-class discussions, and insistence on and constant demand for L1 use. These results lend support to the findings of Cho (2012), Doiz et al. (2018), Galloway et al. (2017), Galloway et al. (2020), Kırkgöz (2014), Oktaviani et al. (2021) and Ozer (2020) reporting language barriers as the main factor that hinders the acquisition of disciplinary knowledge. In their large-scale study conducted at several universities in Japan and China, Galloway et al. (2020) identified students' poor English proficiency as the primary reason for inadequate content comprehension, a lack of mutual communication in class and falling behind weekly schedules. In addition, the present study found that students' low level of English resulted in longer course preparation time for the lecturers, which resonates the findings of Doiz et al. (2018) and Oktaviani et al. (2021).

The language-related challenges were followed by some learner engagement-related challenges in the present study. Learners' unwillingness and resistance to participate in class due to their low proficiency level was reported to result in low level of motivation

and monologues being the main mode of conversation in class. The findings of Ibna Seraj and Hadina (2021) echo these results. In their study, Ibna Seraj and Hadina (2021) reached the conclusion that lexis-related issues like difficulty in understanding scientific terminology were the causes of low level of student engagement and low level of motivation. Besides these challenges, in this study, assessment-related challenges like difficulty in preparing exam questions and spending more time than planned on language adjustment were also reported, which is in line with the findings of Kairouz (2023). In his study conducted at a university in Kuwait, Kairouz (2023) found that the content lecturers in the study had trouble preparing exam questions due to their students' low level of English.

In this present study, the results of one-way ANOVA revealed that no significant difference was identified between the challenges encountered by the EMI content lecturers from five different faculties. However, the analysis of the qualitative data set yielded similar results to the quantitative data findings regarding the linguistic challenges and learner engagement-related challenges faced by the participants, which proves the convergence of both data sets on the shared understanding of this point. The findings of the two data sets revealed that language-related and learner-engagement related challenges accounted for the two biggest serious issues that the participants suffered in their EMI classes. Learners' poor command of English, dealing with students with varying levels of English, and teaching and explaining abstract and complex content ideas and field-specific terminology in English were repeatedly mentioned in both the qualitative and quantitative data. Regarding learner-engagement challenges, engaging learners in discussions in class, getting responses from students and motivating learners to get involved in pair or group work without being afraid of their English were reported to pose a high level of challenge for the participants. The reason for no discipline-based differences in terms of challenges could be attributed to the fact that despite not being a large group, the majority of the participants from five different faculties experienced similar challenges. Furthermore, each faculty's mean scores of these challenges were high and close to one another, which might have resulted in no significant difference across disciplines.

5.1.3 EMI Content Lecturers' Coping Strategies

When it comes to RQ 3, the aim was to identify the strategies employed by the EMI content lecturers in the study to tackle the challenges, all the participating content lecturers were found to provide additional support to their learners to overcome language-related issues in one way or another like paraphrasing, elaboration, additional resources and learning strategies to ease content comprehension and better implement EMI in class. These findings lend support to previous studies including Alhassan (2021), Kairouz (2023) and Yuan (2020) reporting the use of paraphrasing and elaboration as two of the top strategies used by the participants in their studies.

In addition, in the present study, the qualitative data revealed that L1 use was the second most popular strategy used by the participants, which is in accordance with Ozer (2020) revealing that L1 was highly preferred by lecturers as they felt more comfortable delivering their course content through TMI, and L1 use facilitated disciplinary learning. In the present study, the underlying rationale behind Turkish translations was found to ease content comprehension, foster learner motivation and engagement as well as better manage time spent in class. Whilst several participants in the present study did not consider the use of Turkish a valuable teaching tool, the majority were inclined to be supportive of L1 use within the predetermined limits such as providing Turkish translations for a limited period of time throughout each semester or code-switching while giving instructions. This indicates that content lecturers are mostly in favor of L1 use but cautious at the same time as they consider it “a source rather than deficit” (Ruiz, 1984, as cited in Dafouz et al., 2023, p. 3) to facilitate course subject learning. On the other hand, the content lecturers' cautiousness echoes Pun and Macaro (2019) warning against excessive and too flexible use of L1 as “the unfettered use of the L1 is not going to promote quality EMI” (p. 74, as cited in Pun et al., 2023, p. 12).

Simplification and integration of fun elements into course plans were the other two strategies identified in the present study. The participants reported that they attempted to simplify their course content, their examples, the language they used in exams, instruction and exam questions. In addition, giving examples from real life and adding

fun thing into classes were utilized to foster learner engagement and content comprehension. These findings corroborate the results of Alhassan (2021), Kairouz (2023), Mouhana (2016) and Ozer (2020). In his study conducted at a university context in the United Arab Emirates, Mouhana (2016) found that the participants had to simplify their course content, teaching resources and assessment components to deal with the learners' low level of English.

While the analysis of one-way ANOVA spotted no significant discipline-based difference between the strategies utilized by the EMI content lecturers in the study, findings of the qualitative and quantitative data analysis regarding the lecturers' coping strategies were quite overlapping to a great extent. That is, the responses to both the questionnaire and semi-structured interviews found providing additional support to learners in various forms, language adjustment, simplification of examples given in class are integration of fun elements into course plans were common practices employed by the participants. However, use of L1 was the only finding of the qualitative data that diverged from the quantitative data results. Whilst L1 use was not regarded as one of the most popular coping strategies of the content lecturers by considering the quantitative data results, the qualitative data findings identify use of L1, especially in the form of code-switching, as the second most preferred way of dealing with students' linguistic insufficiency. This divergence might stem from the flexible nature of semi-structured interviews (Alamri, 2017). That is, unlike the online questionnaire with predetermined fixed scales, the semi-structured interviews might have given the participants to elaborate their answers regarding L1 use, which might have enabled the researcher to obtain more in-depth and enriched qualitative data.

Overall, the present study revealed a mix of the lecturers' positive and negative attitudes toward EMI. While the participants were in favor of EMI at higher education level due to its potential benefits, they were quite vocal in their criticism of the adverse effects of EMI. In line with many previous studies, the present study found recurring challenges and strategies that were common in all five faculties participating in the study. Students' insufficient language proficiency and their reluctance to get involvement in discussions was the biggest barriers to the effectiveness of EMI. To compensate for students'

inadequate English proficiency, simplification, L1 use and additional support were reported to be the most common ways utilized by the participants. No discipline-based significant difference was identified between the participants' perceptions, challenges and coping strategies. The only point that the qualitative data analysis diverged from the quantitative analysis was that while L1 use was identified as the second most common coping strategy according to the qualitative data analysis, it was not a popular choice of the participants according to the quantitative data analysis (the mean scores of item #68: $M = 2.74$, $SD = 1.230$, and item #69: $M = 2.71$, $SD = 1.254$).

5.2 Implications

The purpose of this study was to present a heightened awareness of content lecturers' beliefs and opinions on EMI, their hardships while delivering their courses through fully English and coping strategies to overcome barriers in their way as content lecturers are one of the key drivers of successful EMI implementations. Despite its limitations, the present study's findings could propose significant and enlightening implications for all stakeholders to ensure high quality university education in an effective manner.

In light of the findings of this study, students' poor command of English is a common concern, which is primarily attributed to insufficient prep year English language education at universities. It would not be wrong to claim that the effectiveness of universities' preparatory programs has been a heated debate in Turkey for many years as one of the studies on EMI practices is conducted by British Council/TEPAV (2015), which resonates with the results of this study. The British Council Report/TEPAV (2015) noted that "the root cause of Turkey's 'English deficit' is the problems in the school system and that these will take a generation to rectify. In the meantime, universities have little choice but to operate with an intake whose English level is 'rudimentary; even after 1,000+ hours (estimated at end of Grade 12) of English classes'. Under these circumstances (as is stated in Section 3.1.1) it is 'virtually impossible' to reach the target level of B2 in the eight months of the preparatory school programme – they are expected to do too much with too many students in too little time." (p. 20). The concerns regarding time constraints at prep schools might imply that

the curriculum of English language education at universities' prep schools should be spread over a longer span to increase the effectiveness and quality of language education at prep schools. In addition, in the present study, the content lecturers mentioned the gap between prep year English language education and EMI courses. That is, whilst the focus of prep schools is primarily on general English, EMI courses are grounded on disciplinary terminology, which echoes the findings in the studies by Chang et al. (2017), Karakaş (2019) and Kırkgöz (2009). In her study, Kırkgöz (2009) noted that dissatisfaction with prep school education resulted from "the lack of a 'frame of reference'; that is, lack of practice in and unfamiliarity with the disciplinary discourse make things difficult for students because they struggle to read, speak and use 'specialised lexis'" (as cited in Ekoç, 2020, p. 236). This implies that this matter should be given urgent consideration to be able to bridge the gaps between prep year English language education and EMI courses by integrating disciplinary discourse into prep schools' curricula at a basic level. In addition, all stakeholders (content lecturers, language instructors, administrators, institutional policymakers and so on) need to acknowledge that successful implementation of EMI at HEIs are mostly dependent on not only content lecturers but also language instructors conducting prep year programs. Therefore, collaboration between these two cohorts plays a vital role in the reduction of challenges faced at undergraduate levels (Ozer, 2020).

The findings of this study imply that EMI universities inevitably face a number of short-term and long-term issues due to their "one-size-fits-all language policies across an institution" (Ozer, 2020, p. 626) as each HEI is unique in its own context with its own members and one practice that works perfectly in one institution may not be applied to another one. Instruction in L1 vs English is among these issues that are worthy of consideration. The participants of this study expressed their preference for TMI due to their concerns. They stated that despite its potential benefits, EMI was likely to place heavy burden on both lecturers and students in case their future careers would not require them to use English actively. In addition, instead of pretending to implement EMI successfully, the participants suggested adopting TMI. These findings might imply that discipline-based decisions regarding the adoption of EMI to offer undergraduate and graduate courses should be made.

Another major finding of this study is that use of L1 (Turkish in this context) is welcomed as a useful teaching tool by most of the participants. The rationale behind code-switching is to ease disciplinary subject learning, foster learner engagement and increase interaction without reducing “students’ opportunities for learning academic English through rich descriptions of specific ideas with contextual information” (An et al., 2019; Pun & Macaro, 2019, as cited in Pun et al., 2023, p. 12). Institutional language policymakers might need to reconsider the role of L1 in EMI practices and determine the extent to which code-switching is allowed in EMI classes, weighing its benefits and drawbacks. Andersson & Rusanganwa (2011) note that “students’ and teachers’ diverse linguistic resources could play a beneficial role in meaning-making and knowledge-construction since their bi-/multilingual competence provides spaces for teaching and learning, such as official instructional space where English is only used, and personal space where students’ L1 could be used for improving interaction and scaffolding” (as cited in Pun et al., 2023, p. 12). The insights gained into the content lecturers’ attitudes towards L1 use in EMI classes could also imply that translanguaging could be given consideration as “a powerful scaffolding tool that can be used to create “co-learning instances” in English-taught courses, both by EMI teachers and learners” (Tai & Wei, 2021b, as cited in Genc et al., 2023, p. 4). Translanguaging might be also used to ease meaning-making processes and support learners by creating a cozy, supportive learning environment (Genc et al., 2023).

Students’ unwillingness to participate in class tasks is one another important finding of this study as one of the major challenges faced by EMI content lecturers. As discussed previously, this issue might be attributed to learners’ low proficiency level (An & Thomas, 2021). On the other hand, subject content, which is of vital importance in the “teaching efficacy of the lecturer” might impede learners’ willingness to engage in class activities (Ozer, 2020, p. 624). Therefore, the curricula of undergraduate studies conducted through EMI might need to be revised in such a way that students will relate course content to their lives and future careers, value EMI as a means of communication, and content lecturers will enjoy using interactive approaches in class instead of simplifying their course content.

In this study, assessment-related challenges were found as the least challenging tasks by the participants. They reported that they had no serious difficulty in assessing learners' content knowledge, deciding on exam content or making a balance between correcting learners' language use-related mistakes and content-related mistakes. This might be attributed to their strong opposition to sacrificing assessment components due to language barriers. To exemplify, most of the participants in the interviews stated that they would never give up on the high standards they planned to achieve, and one of the ways to achieve these standards was to ensure students' disciplinary knowledge acquisition through quality assessment tools.

5.3 Limitations and Suggestions for Further Research

The primary purpose of the present study was to explore EMI content lecturers' challenges and coping strategies as well their perceptions of EMI by making discipline-based comparisons. To achieve this purpose, the study was designed in a convergent mixed methods design which enabled the researcher to collect both qualitative and quantitative data separately to obtain a more comprehensive set of findings. The analysis demonstrated that the EMI content lecturers in this study were mostly in favor of EMI at higher education level due to its potential benefits including a broader range of career opportunities, further academic studies abroad, easier access to resources, becoming global citizens and keeping up with internationalization. Despite their supportive attitudes toward EMI, the participants expressed their concerns which caused them to struggle in EMI classes. The major issues were primarily attributed to learners' inadequate language proficiency and unwillingness to engage in any in-class tasks. Despite ranking as the least challenging group, several tasks such as preparing exam questions were also reported as assessment-related challenges. The most favorable coping strategies of the EMI content lecturers were identified as simplification, L1 use and providing additional support in various ways. One of the biggest aims of this study was to explore any potential discipline-based differences between the participants' attitudes towards EMI, their challenges and coping strategies if any. One-way ANOVA tests yielded no significant variances in the lecturers' perceptions, challenges and strategies across disciplines. Reaching the conclusions of no significant discipline-based

difference and the divergence of the qualitative data about L1 use from the quantitative data could be attributed to several factors that are outlined below.

In this study, the convergent mixed methods design was adopted with the intention of obtaining a more comprehensive set of both qualitative and quantitative data that would enable high quality and in-depth analysis of the topic of interest. Despite that, the current study has some limitations; therefore, the findings of this study are not meant to be generalized. The foremost limitation of this study was related to the sample size. This present study was designed to be conducted with content lecturers from 8 Turkish universities that offered undergraduate and graduate courses in fully EMI. Although a very large number of academic staff delivering their course content in fully English were invited to the study, only 80 content lecturers responded to the questionnaire, and 13 of these participants volunteered for the interview part. Therefore, the results cannot be generalized. Further research with the involvement of a larger number of content lecturers from the target universities might allow for room to obtain more meaningful and more comprehensive results that could be applied to the university setting in Turkey.

Second, in line with Macaro's (2018) definition of EMI, the present study targeted the content lecturers at 8 universities in Turkey that adopted English as the sole medium of instruction at all faculties. Although the location is not considered one of the variables in the present study, almost all of these universities are situated in urban areas in big cities, which could have an impact on student and academic staff profile as well as backgrounds of these stakeholders. This might be one of the reasons why the participants' perceptions, challenges and coping strategies did not significantly differ based on academic disciplines. Further research might include 17 aforementioned universities in Chapter 3 that offer EMI in most of their faculties so that discipline-based comparisons between content lecturers' attitudes toward EMI, challenges and strategies could be made in a more meaningful way. In addition, further research might aim to compare these variables based on location, which means beliefs, hardships and strategies of EMI content lecturers working at rural universities and urban universities could be also compared.

The present study could be considered one of the few studies conducted on EMI content lecturers' challenges and strategies through discipline-based differences in Turkey. One of the recent studies on this topic was conducted by Ozer (2020) but Ozer's (2020) study aimed to shed light on lecturers' EMI practices, challenges encountered and training needs, which means coping strategies and discipline-based comparisons were not the topic of interest. To be able to make healthier comparisons, there is a need for further research to be conducted on EMI content lecturers' challenges and coping strategies in the university context in Turkey. In addition, further research to explore whether any differences between EMI content lecturers' challenges and coping strategies exist among EMI universities in Turkey might contribute to the field.

The analysis of the present study revealed that despite acknowledging the benefits of EMI, half of the participants expressed their preference for TMI. Due to the limited number of the participants in the present study, this result cannot be generalized. However, it indicates that tension over EMI vs instruction in L1 seems to be an ongoing discussion with inconclusive results. Considering this, further research with more participants might be conducted to better explore higher education EMI content lecturers' perceptions of English being the medium of instruction.

5.4 Conclusion

The present study delved into content lecturers' perceptions of EMI, challenges faced by EMI content lecturers and their coping strategies to tackle these challenges through discipline-based comparisons. To this end, this study was based on a convergent mixed methods design integrating qualitative and quantitative data given equal priority to obtain a more comprehensive set of study findings on the topic of interest. The primary purpose of selecting EMI content lecturers as the target population of this study was that content lecturers' role in the implementation of EMI effectively is of vital importance as they are "the bridge between the objectives of an HEI and students' expectations" (Ozer, 2020, p. 625).

The analysis of the quantitative and qualitative data revealed a mix of attitudes of EMI content lecturers towards EMI. On the one hand, they all agreed on the potential benefits

of EMI for both themselves and learners. On the other hand, they vocalized their concerns regarding the drawbacks of EMI they observed in their context, which resonates with previous study findings. The striking finding was that half of the participants stated they would prefer TMI to EMI due to their concerns such as students' low level of English proficiency that might primarily stem from insufficient prep year English language education, learners' poor content comprehension and low level of learner engagement. The insight gained from this study's findings is that there is an urgent need for further research on the tension over TMI vs EMI at higher education level.

Another major finding of this study was that linguistic challenges and students' resistance and reluctance to engage in discussion were two tremendous challenges experienced by all the participants whereas assessment-related challenges were reported by several content lecturers. The issues here were mainly attributed to learners' poor command of English and insufficient prep year education. This might be considered a call for all stakeholders to come together to pinpoint and fix the defects of prep year programs in Turkey for the success of institutional language policies.

This study's findings also found that EMI content lecturers made use of various strategies to overcome the challenges encountered in instruction and ensure students' meaning-making and knowledge-learning in the best way possible. Providing extra support through paraphrasing, additional resources and elaboration, code-switching, simplification and integration of fun elements into course plans were reported as the most common ways to deal with the challenges.

The one-way ANOVA results revealed that there was no significant difference across disciplines in any of the sections of the online questionnaire. However, the findings of the qualitative data converged with the quantitative data results to a great extent by yielding similar results to the three research questions under investigation, which proves the convergent mixed methods design has served its purpose in this study. That is, both data sets found the content lecturers had overall positive attitudes towards EMI due to overlapping reasons like better employment opportunities, more resources written in English, further academic studies around the world, easier course preparation and

internationalization. In addition, the analysis of both the quantitative and qualitative data identified three challenges of the content lecturers: 1) language-related challenges (primarily students' linguistic insufficiency) 2) learner engagement-related challenges (low level of learner engagement and motivation) and 3) assessment-related challenges. Furthermore, the coping strategies of the participants identified as a result of the two data sets were overlapping to a great extent and included providing learners with additional support, simplification and integration of fun elements into course plans. The only point that the qualitative data diverged from the quantitative data was related to L1 use. While the former one found it as a very popular coping strategy, the latter did not regard it as one of the most common ones. Considering no significant differences across disciplines between the variables in this study, to accept the call by Dearden and Macaro (2016) for more discipline-based comparisons, further research with more participants should be conducted to see any potential discipline-based differences between content lecturers, perceptions of EMI, their challenges and coping strategies if any.

To conclude, the purpose of this study was to promote greater awareness of EMI content lecturers' challenges and coping strategies in the Turkish setting. Despite the content lecturers' positive attitudes towards EMI to some extent, four major strategies were identified utilized by the participants to deal with the challenges including language-related challenges, learner engagement-related challenges and assessment-related challenges. Despite its limitations, the insights gained from the present study and its findings are hoped to shed light on the understanding of EMI content lecturers' experiences and provide all EMI stakeholders with some illuminating implications.

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APPENDICES

Appendix A – Questionnaire

Dear Professors,

This questionnaire was prepared as part of a Master Thesis study run by Ş. Merve DEMİR (Instructor at TEDU English Language School and MA student at TEDU English Language Education Dept.) under the supervision of Assoc. Prof. Dr. Zeynep BİLİKİ (Faculty Member at TEDU English Language Education Dept.). The primary aim of this research is to explore the perceptions of content course lecturers teaching different disciplines and different grade levels at universities where the medium of instruction is English (EMI) on EMI, find out the challenges that EMI content course lecturers encounter and identify the strategies they use to cope with these challenges.

This questionnaire consists of 4 parts. The questionnaire will take around 15 minutes to complete. In terms of this questionnaire,

- During and after the span of the study, your personal information will never be disclosed.
- The scientific data obtained within this study will be used by the researchers only for scientific publications, presentations and online media with educational purposes.
- The collected data will be stored on a computer in an encrypted file without your personal information.
- Participation in this questionnaire is on a completely voluntary basis, and you are free to leave the questionnaire halfway through without providing an explanation. In this case, the researcher will be able to use the data you've provided only with your permission.
- In order to receive further information about the study and for any enquiries you might have, you may contact the researcher via the email address stated below.
- If you would like to volunteer for a short interview, which will take approximately 30 minutes, to provide the researcher with further information, please share your e-mail address below in order for the researcher to contact you.

e-mail: _____

If you accept these terms, please click "Next" to begin the questionnaire. Thank you for your contribution.

Ş. Merve DEMİR

English Language Instructor, Teacher Trainer, CELTA Trainer

e-mail:

Part I: Demographic Information

1. Gender identity: ☐ Female ☐ Male ☐ Transgender ☐ Nonbinary
☐ Other (Please specify: _____) ☐ Prefer not to say
2. Your academic position:
☐ Lecturer ☐ Research / Teaching Assistant
☐ Assistant Professor ☐ Associate Professor
☐ Professor
3. Your institution:
4. Please write down the faculty and department you are teaching at in the space provided below.
5. Which grade level(s) are you teaching?
☐ Freshman (1st-year students) ☐ Junior (3rd-year students)
☐ Sophomore (2nd-year students) ☐ Senior (4th-year students)
6. How long have you been teaching in an English medium instruction (EMI) context?
☐ less than 1 year ☐ 7-9 years
☐ 1-3 years ☐ more than 9 years
☐ 4-6 years
7. How long have you been working at your institution?
☐ less than 1 year ☐ 7-9 years
☐ 1-3 years ☐ more than 9 years
☐ 4-6 years
8. Is English your native language?
☐ Yes ☐ No
8a. If your answer is 'Yes', please indicate your native language(s):
9. Can you communicate comfortably in any other foreign language than your native language and English?
☐ Yes ☐ No
- 9a. If your answer is 'Yes', please indicate in which language(s):

Part II: Content Course Lecturers' Perceptions of English-Medium Instruction (EMI) at Tertiary Level

1. General Attitude

Please indicate your level of agreement with the statements below by selecting the appropriate choice.

(5) Completely agree (4) Agree (3) Neutral (2) Disagree (1) Completely disagree

STATEMENTS ABOUT EMI	Completely Agree	Agree	Neutral	Disagree	Completely Disagree
GENERAL ATTITUDE					
10. I find instruction in English beneficial.	5	4	3	2	1
11. Instruction in English is necessary in universities.	5	4	3	2	1
12. <i>Numerical</i> courses in universities should be conducted in English.	5	4	3	2	1
13. <i>Verbal</i> courses in universities should be conducted in English.	5	4	3	2	1
14. Instruction in English should be abolished in all universities.	5	4	3	2	1
15. English should be taught as a distinct subject more effectively instead of using it as a means of instruction to teach departmental courses.	5	4	3	2	1
16. Instruction in English affects students' success in content lessons negatively.	5	4	3	2	1
17. Students will be more successful in numerical and verbal courses if their foundation in English is stronger.	5	4	3	2	1
18. Instruction in English contributes to students' cognitive development.	5	4	3	2	1
19. Studying in an institution that teaches in English will make a <u>person earn</u> respect in the society.	5	4	3	2	1
20. Instruction in English contributes to the introduction of the culture of the target language (e.g. English).	5	4	3	2	1
21. Instruction in English affects the effectiveness of numerical and verbal lessons negatively.	5	4	3	2	1
22. Instruction in English improves the students' English because it creates <u>an area</u> of use for this language.	5	4	3	2	1
23. Instruction in English limits creativity.	5	4	3	2	1
24. Because English has become an international language, instruction in English does not lead to cultural degradation.	5	4	3	2	1
25. Instruction in English is an effective way to improve learners' English language skills.	5	4	3	2	1

26. Please add below if you have additional comments on your attitudes towards EMI.

2. Instruction Process

Please indicate your level of agreement with the statements below by selecting the appropriate choice. If a situation in the statements is not valid in your institution or has never existed, please select "N/A" (Not Applicable). Please do not leave any statement unanswered.

(5) Completely agree (4) Agree (3) Neutral (2) Disagree (1) Completely disagree (N/A) Not applicable

Teaching Content Lessons

STATEMENTS ABOUT EMI - INSTRUCTION PROCESS	Completely Agree	Agree	Neutral	Disagree	Completely Disagree	Not Applicable
27. That the lessons are conducted in English affects the success of students in lessons positively.	5	4	3	2	1	N/A
28. When I teach in English, students have difficulty grasping the subject.	5	4	3	2	1	N/A
29. Students ask me to translate the subjects I teach in English into Turkish.	5	4	3	2	1	N/A
30. Students have difficulty asking questions in English.	5	4	3	2	1	N/A
31. Students have difficulty answering the oral questions I ask in English.	5	4	3	2	1	N/A
32. Students have difficulty answering the written questions I ask in English.	5	4	3	2	1	N/A
33. When I reply to questions in English, students have difficulty understanding my reply.	5	4	3	2	1	N/A
34. Students have difficulty making an English summary of a lesson I teach in English.	5	4	3	2	1	N/A
35. Students have difficulty understanding the English <u>resource materials</u> I use in lessons.	5	4	3	2	1	N/A
36. Having students learn the Turkish equivalents of English terms related to their major brings an extra burden to students.	5	4	3	2	1	N/A
37. Lessons conducted in English make it difficult for students to remember newly learned terms and concepts.	5	4	3	2	1	N/A
38. Lessons conducted in English lead students to learning by memorization.	5	4	3	2	1	N/A
39. Students can only learn the concepts in lessons in their mother tongues.	5	4	3	2	1	N/A
40. Exams prepared and administered in English affect the success of students negatively.	5	4	3	2	1	N/A

41. What do you believe are the positive sides of teaching lessons in English? Please indicate them below.

42. What do you believe are the negative sides of teaching lessons in English? Please indicate them below.

Part III: Challenges faced by EMI Content Course Lecturers at Tertiary Level

Considering your experiences in teaching EMI classes, please rank the following challenges from (1) the least challenging to (5) the most challenging.

Challenges faced by EMI content course lecturers	<i>The Most Challenging</i>				<i>The Least Challenging</i>
43. Teaching and explaining abstract and complex content ideas in English	5	4	3	2	1
44. Teaching students to distinguish vocabulary and technical terminology in English	5	4	3	2	1
45. Having students answer my questions in English	5	4	3	2	1
46. Having students hold discussions in English	5	4	3	2	1
47. Evaluating students' content understanding in English	5	4	3	2	1
48. Transmitting content knowledge and skills to students in English	5	4	3	2	1
49. Providing opportunities for practice and giving corrective feedback for consolidation in English	5	4	3	2	1
50. Using questions to prompt students for higher order cognitive thinking in English	5	4	3	2	1
51. Developing students' content skills for investigation study (testing hypothesis, designing working procedures, gathering data, drawing conclusion)	5	4	3	2	1
52. Asking students to co-construct content knowledge themselves in English	5	4	3	2	1
53. Encouraging students to study independently and generate new knowledge through group work by sharing their knowledge in English	5	4	3	2	1
54. Initiating students to apply existing knowledge to unfamiliar situations in English	5	4	3	2	1
55. Preparing teaching content for presentations in English	5	4	3	2	1

56. Dealing with different levels of English language proficiency/skills of the students	5	4	3	2	1
57. Dealing with different levels of content achievements of the students	5	4	3	2	1
58. Dealing with a diversity of existing content knowledge among students	5	4	3	2	1
59. Choosing appropriate register, words and orders for explaining content concepts	5	4	3	2	1
60. Explaining topics after reading materials	5	4	3	2	1
61. Designing a test/ an exam with consideration on the English demand for students (eg. writing, M.C., projects, presentations)	5	4	3	2	1
62. Deciding on the content topics and levels of difficulty in a test or an exam	5	4	3	2	1
63. Preparing/Producing exam questions in English with consideration on students' English level	5	4	3	2	1
64. Assessing English language mistakes in written exams	5	4	3	2	1
65. Assessing students' understanding of the major-related terminologies	5	4	3	2	1
66. Making a balance between correcting students' mistakes in English and in content concepts	5	4	3	2	1

67. What (other) challenges do you experience in your EMI classes?

Part IV: Strategies employed by EMI Content Course Lecturers at Tertiary Level to Deal with Challenges

Considering your experiences in teaching EMI classes, please indicate how frequently you use the following strategies to deal with the challenges you face in your EMI classes.

(5) *Always* (4) *Generally* (3) *Sometimes* (2) *Rarely* (1) *Never*

Strategies employed by EMI content course lecturers	<i>Always</i>	<u><i>Generally</i></u>	<i>Sometimes</i>	<i>Rarely</i>	<i>Never</i>
68. Providing Turkish translation of technical vocabulary	5	4	3	2	1
69. Providing Turkish translation of abstract English vocabulary (not technical, eg. metaphor)	5	4	3	2	1
70. Providing more definitions and exemplification of technical words in English but not necessarily translating them into Turkish	5	4	3	2	1
71. Providing students with additional English language course	5	4	3	2	1
72. Providing additional English explanations and input	5	4	3	2	1
73. Providing students with teaching notes in both Turkish and English	5	4	3	2	1
74. Providing students with more feedback and corrections on their English use in the content subject	5	4	3	2	1
75. Receiving more training on English Medium Instruction (EMI) teaching and the knowledge of English language as a content lecturer	5	4	3	2	1
76. Providing and encouraging students to attend tutorials	5	4	3	2	1
77. Simplifying the content of the course	5	4	3	2	1
78. Simplifying the assessment components	5	4	3	2	1

79. What are some (other) strategies that you employ to deal with the difficulties in your EMI classes?

Appendix B – Semi-structured Interview Questions

1. What is your academic position?
2. Which academic discipline(s) are you teaching?
3. Which grade level(s) are you teaching?
4. How long have you been teaching in an English medium instruction (EMI) context?
5. How long have you been working at TED University?
6. How would you evaluate your experience of teaching your subject in English? (some pros and cons of teaching your subject in English)
7. How would you describe the challenges you face in your EMI classes? / How would you comment on these challenges? Or to what extent would you relate to these challenges?

Prompt card: some challenges reported in the literature.

Here are some challenges reported in the literature and said to have encountered by teachers teaching their subject in English.

- Lack of strategies and techniques for EMI classroom management
- Lack of resources for teachers to prepare their subject content classes and to enhance teaching and learning process
- Use of first language (in case the teacher shares the same language with the students) in EMI classroom as a facilitator to teaching and learning (some researchers view this practice positively and others view it negatively)
- EMI subject teachers would simplify the content and the language due to the students' low level of English, and this in turn would compromise the quantity and quality of the subject content and knowledge delivered to students.
- EMI subject teachers might have some language challenges to teach their subject comfortably and effectively in English (second language).
- Many teachers felt challenged lecturing/teaching in English: explaining terms and concepts in English.
- EMI teachers have a Lack of awareness of and attending to students' learning styles, preferences and strategies when designing and delivering content lectures.
- Lack of linguistic and pedagogic (teaching issues) ability would lead to challenges in effectively delivering conceptually complex matters in English.
- In some cases, it was found that EMI subject teachers would tend to "stick very closely" to the "subject textbook(s)" when designing and delivering the content lecture to "minimize spontaneous interaction and improvisation" (Airey & Linder, 2006; Hu et al., 2014, p. 35; Zacharias, 2013, as cited in Albakri, 2017, p. 56).

8. What are the strategies that you use to overcome the challenges you experience in your EMI classes?
9. If you were asked to give some tips to your colleagues who are teaching their subject contents in English, what would you give them to make their classes more accessible to students?
10. Do you have any comment, or would you like to add anything to what we have talked about throughout this interview?

Appendix C – Human Research Ethics Committee Approval



TED ÜNİVERSİTESİ
İNSAN ARAŞTIRMALARI ETİK KURULU
ETİK KURUL KARARLARI
Sayı: 2024-23 Tarih: 31.01.2024

Toplantı Sayısı: 2024-23
Toplantı Tarihi: 31 Ocak 2024
Toplantı Saati: 11.00
Toplantı Yeri: Zoom üzerinden yapılmıştır.
Katılanlar: Dr. Öğr. Üyesi Kıymet Duygu ERDAŞ - Başkan
Dr. Öğr. Üyesi Duygu Onay Çoker - Raportör
Dr. Öğr. Üyesi Çağla Öneren ŞENDİL - Üye
Doç. Dr. Melike Ünal GEZER - Üye
Dr. Öğr. Üyesi Elçin Emre AKDOĞAN - Üye

Raportör: Dr. Öğr. Üyesi Duygu Onay Çoker - Raportör

GÖRÜŞME MADDELERİ

G.05 :TED Üniversitesi, Yabancı Diller Eğitimi Bölümü İngiliz Dili Eğitimi Anabilim Dalı Dr. Öğr. Üyesi Zeynep Bilki' nin "Content Lecturers' Perceptions of English Medium Instruction, Challenges and Coping Strategies in English Medium Instruction Classes at Tertiary Level" başlıklı çalışmasının araştırma etiğine uygunluğu görüşüldü.

Karar 2024-23/05 : TED Üniversitesi, Yabancı Diller Eğitimi Bölümü İngiliz Dili Eğitimi Anabilim Dalı Dr. Öğr. Üyesi Zeynep Bilki' nin "Content Lecturers' Perceptions of English Medium Instruction, Challenges and Coping Strategies in English Medium Instruction Classes at Tertiary Level" başlıklı çalışmasına,

ONAY KARARI VERİLDİ.



TED ÜNİVERSİTESİ
İNSAN ARAŞTIRMALARI ETİK KURULU
ETİK KURUL KARARLARI
Sayı: 2024-23 Tarih: 31.01.2024

Toplantı saat 13.30 sona erdi.



TED ÜNİVERSİTESİ
İNSAN ARAŞTIRMALARI ETİK KURULU
ETİK KURUL KARARLARI
Sayı: 2024-23 Tarih: 31.01.2024

e-imzalıdır
Dr. Öğr. Üyesi Kıymet Duygu ERDAŞ
Başkan

e-imzalıdır
Dr. Öğr. Üyesi Çağla Öneren ŞENDİL
Üye

e-imzalıdır
Dr. Öğr. Üyesi Duygu Onay Çöker
Raportör

e-imzalıdır
Dr. Öğr. Üyesi Elçin Emre AKDOĞAN
Üye

e-imzalıdır
Doç. Dr. Melike Ünal GEZER
Üye

Appendix D – Informed Consent Form

INFORMED CONSENT FORM

ONAM FORMU

Sayın Katılımcı,

Bu araştırma, TED Üniversitesi, İngiliz Dili Eğitimi Bölümü'nde Doç. Öğr. Üyesi Zeynep BİLKİ'nin danışmanlığında, TED Üniversitesi İngilizce Dil Okulu'nda öğretim görevlisi ve TED Üniversitesi İngiliz Dili Eğitimi bölümü Yüksek Lisans programında öğrenci Ş. Merve DEMİR tarafından yürütülmektedir. Çalışmanın amacı, yükseköğretim düzeyinde bölüm dersi veren hocaların eğitim dilinin İngilizce olmasına bakış açılarını, eğitim dili İngilizce olan sınıflarda yaşadıkları zorlukları ve bu zorluklarla başa çıkma yöntemlerini araştırmaktır. Bu çalışmanın katılımcılarını TED Üniversitesi bünyesinde bölüm dersi veren tam zamanlı ve yarı zamanlı olarak çalışan akademisyenler oluşturmaktadır.

“Yükseköğretim Düzeyinde Bölüm Dersi Veren Hocaların İngilizce Dilinde Eğitime Bakış Açıları, Eğitim Dili İngilizce Olan Sınıflarda Yaşadıkları Zorluklar ve Bu Zorluklarla Başa Çıkma Yöntemleri” isimli bu araştırmaya katılımınızı onayladığınız takdirde, araştırmacı tarafından size 5'li Likert ölçeği ile hazırlanmış, toplamda 79 sorudan oluşan, yaklaşık 15 dakikanızı alacak olan ve çevrimiçi yolla iletilecek bir anket gönderilecektir. Ayrıca, gönüllü olduğunuz ve onayladığınız takdirde, yaklaşık 30 dakika sürecek olan kısa bir sözlü görüşme gerçekleştirilecek ve bu görüşmenin yeri ve zamanı, sizin ve araştırmacının uygunluk durumu göz önünde bulundurularak ortak bir şekilde belirlenecektir.

Çalışma süresince ve sonrasında kimlik bilgileriniz proje dışındaki hiç kimseyle izniniz dışında paylaşılmayacaktır. Bu çalışma kapsamında elde edilecek olan bilimsel bilgiler sadece araştırmacılar tarafından yapılan bilimsel yayınlarda, sunumlarda ve eğitim amaçlı çevrimiçi bir ortamda paylaşılacaktır. Toplanan veriler isminiz silinerek, bilgisayarda şifreli bir dosyada tutulacaktır.

Bu çalışmaya katılım gönüllük esasına dayalıdır. Bu uygulamada yer alan hiçbir aşama, kişisel rahatsızlık verecek nitelikte değildir. Ancak herhangi bir nedenden ötürü kendinizi rahatsız hissederseniz, uygulamaları nedenini açıklamaksızın yarıda bırakıp araştırmadan çıkmakta serbestsiniz. Çalışmadan ayrılmanızın size olumsuz herhangi bir sonucu olmayacaktır. Böyle bir durumda vermiş olduğunuz bilgilerin araştırmacı tarafından kullanılması ancak sizin onayınızla mümkün olacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederim. Çalışma hakkında daha fazla bilgi almak ve yanıtlanmasını istediğiniz sorularınız için araştırmayı yürüten Şeyma Merve DEMİR ile aracılığıyla iletişim kurabilirsiniz.]

