STUDENTS' PERCEPTIONS OF ENGLISH AS A MEDIUM OF INSTRUCTION (EMI) IN NON-ENGLISH MAJOR COURSE

Abstract

This study investigates the nuanced meanings and lived experiences of non-English major students with the rapid increase of English as a Medium of Instruction (EMI) in non-Anglophone higher education, an area that is often neglected within research. This qualitative, descriptive-exploratory study was conducted Higher Education institutes in Pakistan correcting a substantial research gap. Using semi-structured interviews, thematic analysis, and governed by Cognitive Load Theory (CLT), Sociocultural Theory (SCT), and the overarching Student Voice framework, the research identified a variety of meaningful linguistic challenges for students, and a significant extraneous cognitive load with implications beyond surface learning and impacts on their academic stress. Participants also acknowledged some benefits to their academic journey, such as improved English skills and enhanced access to global academic learning with EMI, but they also stated their lack of confidence and participation was inhibited by the language barriers. Overall, they had a pragmatic attitude towards EMI, but also expressed the immediacy of pedagogical scaffolding and flexibility in the way instructors delivered their courses. The findings provide critical perspectives on the student experience for educators and policy makers, creating momentum for the development of more effective, equitable, and sustainable EMI programs in global higher education that embrace aspirational policy intentions alongside actual classroom realities.

Keywords: English as a Medium of Instruction (EMI), Student Perceptions, Non-English Major Courses, Cognitive Load Theory (CLT), Sociocultural Theory (SCT),

Introduction

1.1 Background of the Study

The global landscape of higher education has been significantly altered by an increasing commitment to internationalization in the last few decades. This multilayered process includes the rising mobility of students, staff and knowledge across borders, as well as the intent of universities to increase their competitiveness and legitimacy in a global higher education arena (Knight, 2004; Altbach& Knight, 2007). A key and increasingly prominent aspect of this strategic change, for universities where English is not the first language of society, is the adoption of English as a Medium of Instruction (EMI) (Jenkins, 2015; Seidlhofer, 2011; Kirkpatrick, 2014; Macaro&Akincioglu, 2021). Operationally defined here as the use of English to teach academic content in situations where English is not the first language of society, EMI has emerged as a verified, albeit problematic and increasingly global pedagogical reality across educational systems (Kirkpatrick, 2014; Hultgren &Klima, 2018; Hyland, 2019).

The reasons for institutions adopting EMI are not simple and refer to strategically directed wants. First, there is a strong desire to recruit more international students and larger numbers of diverse international students as the latter seek international study opportunities presented in a widely-accepted lingua franca (Lo & Hyland, 2019; Doiz, Lasagabaster& Sierra, 2013;

Bradan&Maru, 2022). While providing educational offerings in English may allow institutions to remove linguistic barriers and possibly increase international enrolment and demographic diversity, institutions also want to enhance their global academic rankings and expand their international reputation (Macaro et al., 2018; Sahan, 2019). Institutions often view EMI as a clear marker of a university's international outlook and international engagement capacity, such that the belief EMI represents a "world-class" education is a strong motivation for many universities (Hultgren, 2014). Third, and importantly, EMI is seen as a way to develop local graduates' linguistic and intercultural competencies as it is believed to be necessary for navigating an increasingly English-dominant global workforce and interconnected academic space (Evans & Morrison, 2018; Valcke& De Witte, 2019; Pecorari& Malmström, 2018).In a world of unprecedented global collaboration and communication, proficiency in English is often considered a "must-have" within academic disciplines and access to an international pool of research and knowledge (Airey, 2011).

This shift is particularly relevant and entrenched within fields: engineering, business, natural sciences (e.g., physics, chemistry, biology), information technology, and medicine (Airey, 2011; Sahan, 2019; Evans & Morrison, 2018; Gao & Zhang, 2025). English is now so often used as the common language for globally significant scientific research activity, and for international communication in professional contexts, academic publishing, and dissemination of the latest knowledge in specific disciplines (Hyland, 2019; Macaro, 2018a). In this way EMI in these "content" or "non-English major" disciplines is viewed as more of a practical matter, simply allowing students to engage with the latest developments in their discipline, and for students to engage with newer conceptions of being part of an international academic, and professional community. Advocates of EMI frequently attest to benefits in some contexts that favour an understanding in terms of more than just learning language.These purported benefits may include the enhancement of students' overall English language ability, improved intercultural communication abilities, greater and more immediate access to international academic resources and contemporary research, and ultimately the improvement of future employment prospects by preparing graduates for a globalized labour market (Dearden&Macaro, 2016; Phan &Leng, 2019; Costa & Coleman, 2013). In addition, some supporters argue that EMI develops critical thinking skills by necessitating that students consider ideas from an alternate linguistic and cultural perspective (Hellekjær, 2010; Lasagabaster&Doiz, 2019).

1.2 Statement of the Problem

Even though English as a Medium of Instruction (EMI) is increasingly utilized in Pakistan's higher education system, substantial gaps remain in our understanding of its effect on non-English major students. Likewise, while higher education institutions are increasingly implementing EMI in ways intended to provide opportunities for internationalization, there was little consideration of the cognitive and linguistic demands students would need to negotiate, resulting in incidences of surface-level learning, a decrease in engagement, and a greater level of academic stress students experienced (Lasagabaster, 2018; Valcke& De Witte, 2019). Existing evidence and research lacks understanding of discipline-specific learning and arguably over-researches the focus in EMI to be solely on language learners rather than on both language and learning (Macaro, 2018b). This study examines Pakistani students' perceptions of EMI and identifies some of the linguistic barriers, academic outcomes, and attitudinal responses that can inform better educational policy to ensure it is more effective and student targeted (Pecorari& Malmström, 2018).

1.3 Research Objectives

This study aims to:

1. To identify perceived language difficulties of EMI for non-English major students.

2. To explore students' perceptions of academic merits and problems of EMI.

3. To determine students' overall attitudes and preferences towards EMI in non-English major courses.

1.4 Research Questions

This study will address:

1. What language challenges do non-English majors perceive in EMI courses?

2. What are non-English majors' academic advantages and disadvantages of EMI?

3. What are non-English majors' overall attitudes and preferences towards EMI?

1.5 Significance of the Study

The results of this study have important implications for various stakeholders in the Pakistani higher education context. For EMI instructors, it identifies the linguistic and academic difficulties that students experience, which can inform more student-centered teaching. University administrators will have evidence-based knowledge that will help them refine their EMI policies, and that is equitable in terms of their curriculum design, training faculty, and allocating resources. The study expands the EMI literature globally through presenting the under-researched standpoints of non-English majors in disciplinary contexts. The student experience, centered in this study, sheds new light on understandings of EMI that are strictly based on neoliberal notions of competition and institutional superiority, and instead presents the need for quality pedagogical implementations of EMI that support collaborative learning and meaningful learning outcomes.

Literature Review

2.1 Introduction to Literature Review

This chapter provides an extensive assessment of the existing academic literature relating to English as a Medium of Instruction (EMI) in higher education with attention to its use in courses where English is not the focus of study. This chapter begins with an examination of the worldwide emergence of EMI in terms of internationalization of universities and the motivations for using EMI. Following this, the article will examine the purported benefits of EMI, then review the main challenges relating to EMI during the application stage, particularly the omitted student voice. Finally, the chapter will describe the three theoretical frameworks (Cognitive Load Theory, Sociocultural Theory, and the Student Voice/Student Experience) underlying this study and how these provide the framework within which to review students' perceptions of EMI.

2.2 The Rise of EMI in Higher Education

Globalization continues to increase, bringing pressure on universities across the world to internationalize their operations, curriculum, and students (Knight, 2004; Altbach& Knight, 2007). The widespread use of English as a Medium of Instruction (EMI) has been a central part of their internationalization strategies, particularly in non-Anglophone countries, and EMI has been adopted extensively in Europe, Asia, and other regions, radically changing the language of higher education (Jenkins, 2015; Seidlhofer, 2011; Kirkpatrick, 2014; Macaro&Akincioglu, 2021). In its most functional sense, EMI is when English is used for teaching subject areas in academic contexts where it is not the societal language of the country (Kirkpatrick, 2014; Hultgren &Klima, 2018; Hyland, 2019); EMI is a separate entity from English language instruction programs.

The motives behind institutions adopting EMI are numerous. A main motivation is to attract international students, who represent a crucial source of income and a contributor to campus diversity (Lo & Hyland, 2019; Doiz, Lasagabaster& Sierra, 2013; Bradan&Maru, 2022). By providing programs in English, universities are opening their educational offerings to a worldwide pool of potential students without the linguistic hurdle. Secondly, EMI is a means of enhancing global academic rankings and, at least in an implicit sense, international prestige. The idea that EMI is equivalent to "world-class" education has led universities to adopt EMI as a marker of their internationalization (Macaro et al., 2018; Sahan, 2019; Hultgren, 2014). Thirdly, EMI is touted as a way of preparing local graduates with important linguistic and intercultural skills for the English-speaking and globalized professional and academic environments (Evans & Morrison, 2018; Valcke& De Witte, 2019; Pecorari& Malmström, 2018). This emphasis on the need for English proficiency in order to succeed in one's profession and to access global research is becoming increasingly pronounced (Airey, 2011).

This pedagogical shift is especially notable in disciplines such as engineering, business, natural sciences, information technology, and medicine (Airey, 2011; Sahan, 2019; Evans & Morrison, 2018; Gao& Zhang, 2025). In these disciplines, English is typically the language of the latest research, international dialogue, and published scholarship (Hyland, 2019; Macaro, 2018a). For this reason, EMI becomes a pragmatic necessity, allowing students to gain direct access to the latest developments and participate in international academic and professional communities (Fortanet-Gómez & Ruiz-Madríd, 2014).

2.3 Benefits of EMI

Supporters of EMI suggest that the potential benefits exist well beyond simply learning the language itself. These benefits may include a higher level of English language proficiency overall, specifically regarding terms and language used within specific subjects (Dearden&Macaro, 2016). Students are presumed to improve, especially their listening, speaking, reading and writing skills through continued exposure and use of English in academic contexts. EMI is also believed to enhance intercultural communication skills through students' interactions with fellow international peers and faculty (Phan &Leng, 2019).

In addition, EMI provides wider and more direct access to international research and scholarly resources, many published in English (Costa & Coleman, 2013; Airey, 2011). Access to extensive international knowledge is vital for keeping current in dynamically

changing disciplines; ultimately, EMI is argued to bolster career prospects because graduates are qualified for an increasingly globalized job marketplace where English competency is a requirement (Bradford et al., 2017). Scholars have also suggested that EMI could engender critical thinking, as students mentally process ideas through a different language and cultural reality (Hellekjær, 2010; Lasagabaster&Doiz, 2019). Students' exposure to a variety of international continuing sources, and lateral academic conversations in English could expand their cognitive dimensions and analytical capabilities (Björklund& Malmström, 2020).

2.4 Challenges in EMI Implementation

Even with the strong rationalizations and supposed benefits, EMI is a complex and multifaceted process. The theoretical benefits may not neatly or easily transition to practical realities in the classroom (Macaro et al., 2018; De Jong, 2018; Tsui, 2003). In terms of input as research on EMI has typically focused on either policy (top-down) contexts, pedagogically developing educational practices for EMI teachers or investigating the English language and teaching readiness for academic staff (Koizumi &Fujii, 2025; Galloway &Ruegg, 2017; Valcke& De Witte, 2019; Airey & Linder, 2009). The key student or students' perspectives and the often subtle nature of that perspective, however, is somewhat missing, under-represented or simply not studied in the EMI literature (Pecorari& Malmström, 2018; Kim & Kim, 2020).

This oversight is especially important for students who are not English majors since they generate the largest impact from EMI policies in many universities. Differences in exposure to language learning lead to different experiences between students from language departments who were focused on learning English (specifically a language) while engaging with disciplinary content (e.g., complex principles of engineering, nuanced models of business, or advanced theories of a scientific discipline) in a foreign language (Dafouz& Smit, 2016; Han & Yin, 2021; Aguilar, 2017) and students who do not study English and whose English level may vary from intermediate to advanced (Rao, 2017), adding another layer of difficulty to their responsibilities. The heavy load of processing, learning, and explaining new content through a second language may be extremely taxing for students, which in turn may detract from the attainment of deeper meaning in their learning, resulting in content learning that may be characterized as either mechanically reproduced from various resources or a result of ruptures in learning processes and misinterpretation (Lasagabaster, 2018; Doiz&Lasagabaster, 2019; Chang, 2010).

This dual burden can lead to increased academic pressure, anxiety, decreased engagement in the classroom, few chances for authentic expression and critical inquiry, and continuous feelings of academic or social alienation (Costa & Coleman, 2013; Pecorari& Malmström, 2018). An additional, ongoing challenge is a lack of strong, contextally relevant support models and well-considered and flexible pedagogies for non-English major students in EMI contexts to accommodate their particular linguistic and learning needs (Galloway &Ruegg, 2017; Fortanet-Gómez & Ruiz-Madríd, 2014). This is a significant research gap, which makes this study important.

2.5 Theoretical Frameworks

This study employs three complementary theoretical frameworks to investigate the students' experiences of English as a Medium of Instruction (EMI) within the context of higher education in Pakistan.

Cognitive Load Theory (CLT) (Sweller, 1988) provides an important view on how EMI is experienced with a focus on cognition. CLT identifies three types of cognitive demands: (1) intrinsic load (difficulty of the content), (2) extraneous load (poor pedagogical design), and (3) germane load (meaningful learning). EMI presents a dual obligation to both figure-out disciplinary content and process the content through a foreign language; hence, EMI creates a significant degree of extraneous cognitive load (Lasagabaster, 2018), which can result in students engaging in shallow learning while experiencing more academic stress and strain. This framework was useful to analyse issues related to language problems and how it facilitated or impeded students' content acquisition (Research Question 1).

Sociocultural Theory (SCT) (Vygotsky, 1978) emphasizes the social nature of learning through the ideas of the Zone of Proximal Development (ZPD) and scaffolds. In a EMI context, limited language proficiency may limit students' access to collaboration with peers or guidance from instructors (Fortanet-Gómez & Ruiz-Madríd, 2014). SCT aids in examining how classroom actions and existence of support agency impact academic outcomes (Research Questions 2-3).

The Student Voice framework (Cook-Sather, 2006) advocates for the centrality of learners epistemology in educational research and practices and educational policy. This framework ensures that researchers are prioritizing and privileging the students' stories and understanding of their EMI experiences, which in many cases will reflect the lived reality of classrooms as opposed to institutional or researcher expectations.

Research Methodology

3.1 Research Design

In this study, a qualitative, exploratory-descriptive design was used to explore the non-English major students' experiences with EMI. A qualitative approach enables a full exploration of the students' perspectives, obstacles, and attitudes (Creswell & Creswell, 2018). This approach equips researchers with rich information that quantitative approaches could miss and provides the full scope of the influence of EMI on learning.

3.2 Research Paradigm

This study is framed as interpretivist, with reality being shaped by experiences, not absolute truths (Guba & Lincoln, 1994). Students' perspectives on EMI are regarded as unique and subject to the influence of their language proficiency and academic background and field of study (Cohen et al., 2018). The study did not aim to establish universal principles, but instead was primarily concerned with students' individual perspectives in order to gain a deeper understanding.

3.3 Population and Sampling

3.3.1 Population

The target population for this study consists of university students who are not English majors and are currently taking EMI courses. This group includes non-English major undergraduate students in Bachlor of Engineering, Business and Administration, Natural Sciences, Information Technology, and Medicine who took EMI courses. Therefore, English has been used as a medium of instruction for these courses despite their not being the students' native language or the official language of the wider community. This study is focused on students from Higher Education Institution in Pakistan .

3.3.2 Sampling

This study used purposive sampling to select participants who could provide meaningful insights about EMI experiences (Patton, 2015). Selection criteria included:

- Current enrollment in EMI courses for non-English majors
- Non-native English speakers
- Willingness to share detailed experiences
- Representation across disciplines (STEM, business, etc.)

The sample size (20-30 participants) was determined by data saturation when new interviews stopped revealing new themes (Guest et al., 2006). This approach ensured diverse perspectives while maintaining depth of analysis.

3.4 Data Procedures

3.4.1 Data Collection Instrument

The main means of data collection was the semi-structured interview, which provided scope for both structure and flexibility (Bryman, 2016). The researchers used pre-ordained questions but were prepared for students to elaborate their experiences of EMI. These open-ended questions explored:

- Language difficulties
- Benefits and challenges in academia
- Personal attitudes toward EMI

To provide some context for responses (age, discipline, EMI exposure, and English proficiency), a short demographic survey preceded each session, enabling a balance between focused inquiry and the engagement of natural discussion relating to the issues.

3.4.2 Data Collection Process

Participants were identified through department coordinators and EMI instructors. Initial contact occurred via email or in-person meetings, where researchers explained the study's purpose and confidentiality protections. All participants:

- Received and signed informed consent forms
- Were assured of voluntary participation/withdrawal rights
- Understood data usage policies

Interviews lasted 45-60 minutes, conducted privately either on-campus or via secure platforms (Zoom/Google Meet). With participant permission, all sessions were audio-recorded and later transcribed verbatim for analysis

3.5 Data Analysis

The qualitative data resulting from the semi-structured interviews was analyzed using thematic analysis, based on Braun and Clarke's (2006) six-step framework: 1) Focusing on familiarization with the data through transcription of the interview, and also repeated reading and reflection over the transcribed text; 2) Initial and descriptive codes from initial segments of the relevant text; 3) Searching for themes by clustering codes into patterns in relation to the research questions; 4) Reviewing provisional themes by checking each theme against the relevant coded extracts, and finally checking those themes against the complete data set; 5) Defining and naming themes based on capturing the essence and story told through the themes; and, 6) Producing the report by telling an analytical narrative weaving together the theme narrative with examples of data to illustrate the findings in relation to the research questions and the existing literature.

Data Analysis and Discussion

In this chapter, the researcher presents the results from the thematic analysis of the semi-structured interview data. This chapter is intended to provide a thorough investigation of non-English major students' perceptions of English as a Medium of Instruction (EMI). The analysis used Braun and Clarke's (2006) six-phase process to identify, review, define and name the themes associated with the recurring patterns and meanings highlighted in the transcribed interviews. The discussion will connect the themes and findings to the theoretical frameworks of Cognitive Load Theory (CLT) and Sociocultural Theory (SCT), and the Student Voice framework, the literature review in Chapter 2, and the research questions of the study.

4.2.1 Perceived Linguistic Difficulties in EMI Courses (Responses to Research Question 1)

Research Question 1: What are the linguistic difficulties perceived by non-English major students in EMI courses?

The analysis indicated that students consistently faced significant linguistic difficulties in EMI courses, predominantly seen as a tremendous increase in extraneous cognitive load, which was consistent with predictions from Cognitive Load Theory (CLT). Participants often described a "dual-processing" struggle in which their working memory was strained from needing to process meaning in English while also needing to understand complex disciplinary content.

Theme 1.1: Linguistic Processing Burden: Many students said that factors like the instructor's accent, speed, or academic English vocabulary were often barriers to understanding the class lecture delivery. Many students described an ongoing internal translating process that took up cognitive resources that could have been deployed to process deeper content understanding. This directly reflects on Lasagabaster's (2018) notion that processing content in a foreign language can create extraneous cognitive load which could

lead to superficial processing. For example, students commented that when introduced to new technical terms in English without adequate explanation or repetition, they just struggled with feelings of being a bit overwhelmed. This aligns with CLT's focus on how instructional design (or lack of it) can create extra load.

Theme 1.2: Reduced Participation Due to Language Barriers: A key finding was that students' were hesitant to have an active role in discussions or ask questions based on their perceived level of English language proficiency. Based on their comments, a number expressed fears that they would make grammatical mistakes, mispronounce words and be misunderstood. This issue does not just affect individual learning, but has consequences to social and collaborative learning, which is the focus of sociocultural theory (Vygotsky, 1978). When students are reluctant to engage in verbal interaction, they miss out on opportunities to co-construct knowledge and learn from each other. This raises an issue related to Student Voice, as the students' inability to express themselves is compromised.

Theme 1.3: Difficulty with Academic Reading and Writing: In addition to oral comprehension, the students had difficulty with reading academic texts in English. The data showed that they reported slower reading speeds and needed to consult a dictionary frequently which increased their cognitive load even more. Likewise, they also struggled to express complex ideas in academic English writing, often becoming frustrated and simplified instead of using complex language, which impacted their ability to demonstrate deep understanding and critical thinking - two fundamental academic expectations.

4.2.2 Perceptions of EMI's Academic Benefits and Drawbacks (Addressing Research Question 2)

Research Question 2: The academic advantages and disadvantages of EMI: how do students' perceptions differ in terms of their major?

Students expressed a mixed perception of the academic implications of EMI, recognizing both academic benefits and downsides, reflecting the experience of lived reality of their student experiences and the complicated relationship of linguistic and disciplinary learning.

Theme 2.1: Perceived Linguistic Improvement:A lot of students mentioned that they felt EMI exposure did boost their general English language ability, especially vocabulary specifically related to their academic fields. They viewed this positively as useful skills for future career opportunities in the globalized labour market, and, in this case, recognized the advantages pointed out by scholars like Dearden and Macaro (2016) and Evans and Morrison (2018). This suggests that, despite the cognitive load, the immersion does provide some incidental language learning opportunities.

Theme 2.2: Enhanced Access to Global Resources: Student access to international textbooks, academic articles, and online resources, all of which are ultimately English-language-based, was an important IV; the EMI offered students an academic advantage, increasing students' intellectual breadth, and linking them to contemporary legacies and emerging knowledge in their respective fields of study (Airey, 2011; Hyland, 2019).

Theme 2.3: Risk of Superficial Content Understanding: Students highlighted a significant concern that EMI resulted in superficial understanding and rote learning rather than true deep learning. Many felt that they were aware of the "what" but were not able to understand the

"why" or "how" due to the language barrier. The students' fears corroborate the literature previously raised by Chang (2010) and Doiz and Lasagabaster (2019) and relate directly to the situation where extraneous cognitive load detracts from germane load. The students mentioned spending cognitive load on the language detracted from their conceptual mastery.

Theme 2.4: Academic Stress and Reduced Confidence: Many participants expressed heightened academic stress and anxiety linked to EMI, particularly when undertaking assessments or when assessed in presenting in a set task in English - this reduced their academic confidence even if them potentially being competent in the area of study if the education was being delivered in their first language. This emotional aspect of the student experience is an important disadvantage the higher education sector often ignores in top-down policy considerations.

4.2.3 Overall Attitudes and Preferences Towards EMI (Addressing Research Question 3)

Research Question 3: What are the attitudes and preferences of non-English major students generally in relation to EMI implementation?

Overall, students' attitudes towards EMI were multifaceted, marked by a pragmatic acceptance of necessity along with a wish for more individualized support and flexibility. Their preferences were largely influenced by the experiences of classroom interactions and the overall adequacy of pedagogic strategies, echoing SCT principles and Student Voice.

Theme 3.1: Pragmatic Acceptance of EMI: While students recognised the difficulties surrounding EMI, most expressed a general feeling that EMI was an acceptable "necessary evil" or at least a "useful stepping stone" an effective tactic for future workplace success later in life and internationally orientated careers. They understood the institutional drivers of EMI (increasing international students, improving global ranking, preparing graduates for the global workforce) outlined in the literature (Lo & Hyland, 2019; Macaro et al., 2018), but even students who accepted and subscribed to EMI activities recognised that implementation could be improved; they did not want EMI just to be an expected expectation that they followed.

Theme 3.2: Desire for Increased Pedagogical Scaffolding:A clear desire emerged for instructors to provide more explicit pedagogical scaffolding and language support for students in EMI courses. Students expressed suggestions for this, such as clearer explanations of complex terminology, slowing their speech, offering visual aids, providing glossaries, and utilizing opportunities for collaborative learning in smaller group, less intimidating contexts. These suggestions seem to closely reflect SCT's principles of scaffolding within the Zone of Proximal Development (ZPD) to promote learning. The perceived absence of such strong support mechanisms as identity was introduced, as indicated in the problem statement contributed to inhibiting their learning.

Theme 3.3: Call for Flexible and Differentiated Instruction: Participants showed a desire for more flexible and differentiated instruction that recognized differences in English proficiency levels. Some participants suggested that teachers provide bilingual explanations of complex concepts, students talking to peers to clarify points in their home language, or teachers offering optional supplementary materials in the students' home language. This emphasizes the importance of sincerely hearing the Student Voice and changing our practices

for the specific needs of the students. They believed that a one-size-fits-all approach to EMI detracted from their learning.

Theme 3.4: Importance of Instructor's Linguistic and Didactic Skills: Students repeatedly emphasized the importance of how well an instructor could communicate English as well as how much they were able to communicate complex content and idea in EMI. Students appreciated instructors who used EMI and were seen as clear communicators, patient, and who empathetically recognized that fluency often takes different forms within EMI courses. These results are aligned with the literature already discussed on how instructor preparedness is key to EMI (Galloway &Ruegg, 2017).

4.3 Discussion

The results of this study emphasize the important notion of investigating EMI from the students' perspective, addressing a clear gap in the literature (Pecorari& Malmström, 2018; Kim & Kim, 2020). Institutions embrace their EMI approach strategically, to help internationalize their institution and provide a competitive edge, while non-English major students are obliged to navigate a more complicated and banal experience riddled with cognitive and linguistic burdens.

The overwhelming finding related to the linguistic processing burden corroborates the application of Cognitive Load Theory (CLT) to EMI contexts. The students are unquestionably entering a significant extraneous cognitive load, where their effort to process the communication medium (English) is inhibiting their efforts to assimilate the message (i.e., disciplinary content). The pernicious danger of shallow learning compared to deeper learning is an important issue with significant implications for academic performance and graduate quality.

In addition, the indications of decreased participation and the strong evidence of a desire for pedagogical scaffolding and flexibility further confirm the legitimacy of Sociocultural Theory (SCT). In instances where languages apart from the target language restrict social interaction and collaborative learning, the nature of knowledge construction as human and social is challenged. Students' requests for educational scaffolding point to an apparent need for instructors to act as mediators of learning in the ZPD, which allows for temporary support to enable students to cross the chasm between their current knowledge and their potential knowledge.

The overall emphasis on Student Voice in the analysis of the datasets reinforces the study's first principle. Students, although challenged, are not passive agencies in EMI; they are insightful observers of EMI's efficacy and voice their needs for a more student-focused enactment of EMI. Their pragmatic interpretation of EMI, combined with their ability to articulate their desired changes, provides policymakers and educators with valuable, evidence-informed information. Not incorporating these primary perceptions may block EMI policies from connecting with the reality of the classroom and may jeopardize reaching its intended effects.

Chapter 5: Conclusion

The findings show that the study came to a number of important conclusions. EMI has a significant cognitive load on non-native English-speaking students because they are trying to

learn both disciplinary content and a language that is foreign to them. Their cognitive load impacts student agency and the extent to which they can engage socially of through academic activities in the classroom dialogue. Students do acknowledge useful aspects of EMI, such as their English language proficiency, and availability to access global resources, which might have some benefits in their academic and/or future career prospects. However, none of this replaces their more immediate concerns related to their current level of understanding as well as academic assessments and coursework. Most importantly, student voices confirm the need for adapted pedagogy and good quality teaching when being taught by an EMI instructor. Furthermore, student experiences suggest that the current "one-size-fits-all" approach is damaging. Therefore, EMI policies need to be reconsidered from the standpoint of students to learn about how they experience the classroom engagement, and try to understand how unintended consequences of EMI might be affecting their learning or academic well-being.

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