Enhancing lecture comprehension in English medium of instruction: a case study of an international business management programme in Belgium

Mejorando la comprensión de clases en Inglés como medio de instrucción: un estudio de caso en un programa de gestión de negocios internacionales en Bélgica

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ABSTRACT

The growing global trend of adopting English as a Medium of Instruction (EMI) in higher education, particularly in non-English-speaking countries, presents a unique set of challenges. This study focuses on a group of students in Belgium navigating EMI within the context of a bachelor's degree programme in International Business Management. It delves into the strategies employed by both lecturers and students to enhance learning outcomes while listening to EMI lectures.

Through classroom observations and focus groups with EMI students, this research uncovers valuable insights into effective teaching and strategies that can be instrumental in ensuring EMI does not hinder the achievement of educational objectives. The study's findings contribute by putting forward a comprehensive repertoire of didactic strategies and resources, offering valuable

guidance to lecturers, students, and curriculum developers involved in the EMI landscape of higher education, with a particular emphasis on improving students' comprehension of lecture content.

Keywords. English medium of instruction; EMI; Higher education; second language; listening, business education

RESUMEN

La creciente tendencia global de adoptar el inglés como medio de instrucción (EMI) en la educación superior, especialmente en países no anglófonos, plantea un conjunto único de desafíos. Este estudio se centra en un grupo de estudiantes en Bélgica que navegan por el EMI dentro del contexto de un programa de licenciatura en Gestión de Negocios Internacionales. Profundiza en las estrategias empleadas tanto por los profesores como por los estudiantes para mejorar los resultados del aprendizaje durante las clases impartidas en inglés.

A través de observaciones en el aula y grupos de enfoque con estudiantes de EMI, esta investigación revela valiosas perspectivas sobre la enseñanza efectiva y las estrategias que pueden ser fundamentales para garantizar que el EMI no obstaculice el logro de los objetivos educativos. Las conclusiones del estudio contribuyen a proponer un amplio repertorio de estrategias y recursos didácticos, que ofrecen una valiosa orientación a profesores, estudiantes y diseñadores curriculares que participan en el panorama de la EMI en la enseñanza superior, con especial énfasis en la mejora de la comprensión de los contenidos de las clases por parte de los estudiantes.

Palabras clave. inglés como medio de instrucción; EMI; educación superior; segunda lengua; escucha, educación empresarial

INTRODUCTION

Following the establishment of the Bologna process, higher education in Europe has been undergoing a linguistic transition. This process aims at enhancing the attractiveness and competitiveness of higher education institutions in Europe (Prague Communiqué, 2001). To achieve this objective, one essential tool was the promotion of academic mobility for students and staff. Language can be a barrier for mobility, as a solution, English has been adopted as the language of instruction in several non-English speaking countries, thus facilitating mobility (see Airey & Linder, 2008 in Sweden; Costa & Coleman, 2012 in Italy; van Splunder, 2010 in Belgium; You & You, 2013 in China). Although adopting English as a medium of instruction (EMI) sounds promising for internationalisation, students' learning processes might be undermined. Both students and teaching staffs need to cope adequately with the EMI context to avoid poorer learning (Jensen & Thøgersen 2011).

Having an additional language, referred to as L2, such as English, as the medium of instruction presents students with the dual challenge of acquiring new academic content while simultaneously engaging with an L2. Moreover, lecturers encounter the demanding task of delivering complex subject matter through an L2. In response to this challenge, the academic discourse acknowledges the arduous nature of teaching and learning in a foreign language. As Doiz and Lasagabaster (2018, p. 659) assert, "there is no doubt that teaching and being taught in English (when it is a foreign language) makes the learning process more arduous and demanding." This observation highlights the added complexity associated with the adoption of EMI. Others point out how EMI introduces challenges for lecturers and students (Curle et al., 2020, p. 11) and raise the issue of whether lecturers can teach in an L2 (O'Dowd 2018, p. 554).

The challenges faced by lecturers extend beyond mere proficiency in the English language. They encompass pedagogical considerations, an understanding of the obstacles confronting students in EMI settings, and the acquisition of effective interactional skills to facilitate content comprehension (Macaro, Akincioglu, & Han, 2020, p. 146). Within the realm of EMI, students face a multitude of challenges, as detailed in Curle et al.'s (2020, p. 35) comprehensive literature review. These challenges include difficulties in spontaneous speech production, struggles in comprehending diverse lecturers' accents, obstacles in academic writing, increased academic workloads, the necessity for extra time to study in English, and the need to actively participate in class discussions. Among these challenges, the most frequently cited issue pertains to insufficient English proficiency, by both students and lecturers, resulting in detrimental effects on the overall learning experience.

Nevertheless, the strategies for effectively coping with EMI remain elusive. Existing research underscores that "there are very few pedagogical guidelines about how to implement courses in EMI effectively" (Dearden, 2018, p. 327). Additionally, the pedagogical challenges encountered and the corresponding coping strategies adopted by educators and learners alike have remained inadequately explored (Pun & Thomas, 2020). To mitigate the potential adverse impact on content comprehension in an L2, it becomes imperative to enhance the pedagogical strategies of EMI instructors, alongside addressing language-related aspects of EMI to ensure EMI success (Dang, Bonar & Yao, 2021, p. 13).

To fill this gap in the literature, in the present study, I focus on challenges related to the listening aspect of language processing, a crucial aspect of EMI, yet not deeply explored in the literature. When listening to lectures, students face challenges in terms of processing and comprehending oral input. These challenges are varied: linguistic, practical, visual, content, cognitive, academic, contextual and knowledge-based (De Chazal, 2014). A previous review of the literature study (Kremer, 2021) has mapped a series of didactic strategies reported in the EMI literature to cope with these challenges and is used as priori categories for the present study. In this study, 43 strategies used by lecturers and 33 by students were identified. They were categorised into the following clusters: language, interaction, checking understanding, lecture delivery, preparation, lecture attendance behaviour and studying strategies. Specifically, we call didactic strategies used by teaching staff 'teaching strategies' and the ones used by students 'learning strategies'.

The present research builds on the strategies found in the literature review aforementioned in the context of an exploratory empirical study. The objective is to report and analyse strategies used by the lecturers and students to cope with lectures delivered through EMI.

LITERATURE REVIEW

EMI has been defined as "the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language of the majority of the population is not English." (Macaro, 2018, p. 37; Dearden, 2014, p. 4). It is essential to distinguish between EMI and Content and Language Integrated Learning (CLIL), wherein subjects are taught through another language while having "two main aims, one related to the subject, topic, or theme, and one linked to the language. This is why CLIL is sometimes called dual-focused education" (Marsh, 2000, p. 6). However, the dual focus of CLIL, equally valuing content and language learning, is seldom found in higher education. Therefore, "the label EMI is the more appropriate choice for most university settings in which English is primarily used as the medium of instruction with very few explicit language learning aims" (Schmidt-Unterberger 2018, p. 529).

While EMI is the prevalent term in the literature, alternative terms and acronyms such as English-Medium Education in Multilingual University Settings (EMEMUS) or, for short, English-Medium Education (EME) have been proposed based on the understanding that the word 'instruction' is too limiting:

the concept [of EMEMUS] is more transparent because it refers to 'education', thus embracing both 'instruction' and 'learning' instead of prioritising one over the other. […] Finally, the term makes it clear that our focus is exclusively on the tertiary level. (Dafouz & Smit 2020, p. 3).

However, while acknowledging the complexity and problematisation surrounding the definition, this study employs the term EMI for its familiarity to readers and widespread usage.

In this research, we focus on the aspect of listening to lectures in an academic context, "an essential component of communicative competence in a university setting" (Flowerdew 1995, p. 7). Academic listening, particularly in this context, demands refined skills and a keen focus on meaning comprehension (Brown 2001, p. 248). Rost (2011, p. 194) categorizes academic listening under 'Extensive listening,' which involves "listening for several minutes at a time, staying in the target language, usually with a long-term goal of appreciating and learning the content". The literature has widely reported difficulties faced by students in following EMI lectures (Airey & Linder 2006, Doiz, Costa, Lasagabaster & Mariotti 2020; Arkın & Osam 2015; Evans & Morrison 2011; Airey, Lauridsen, Räsänen, Salö & Schwach 2017; Soruç & Griffiths 2018).

To enable successful L2 extensive listening, input must be comprehensible on the first listening, requiring high levels of comprehension, preparatory measures (e.g., prior reading, pre-learning key vocabulary), and additional support (e.g., graphics, subtitles, help menus) (Kanaoka 2009; Clement et al. 2009; Camiciottoli 2007 as cited in Rost, 2011 p. 194).

Effective teaching to diverse cultural backgrounds and linguistic levels demands teacher competencies that are still to be established (Macaro, Curle, Pun, An, & Dearden, 2018 p. 146). These authors define competencies as "the expert knowledge, understanding, and skills needed in order to effectively carry out (in our case) teaching an academic subject through the medium of English" (p. 146). Notably, in the same systematic review of EMI research, they found that "teachers clearly recognise that EMI requires a greater range of competencies than merely having a threshold level of general English proficiency" (p. 153). These teacher competencies need to prevent students from "becoming overwhelmed by the quantity of input" and get them "back on track when they are experiencing comprehension difficulties" by providing adequate comprehension strategies (Rost 2011, p. 195). These coping strategies need to tackle "an increased heterogeneity of the students, the need for new pedagogical skills, and an increased focus on intercultural communicative competence" (Klaassen 2001; Tange 2010; Vinke 1995; Wilkinson 2005 in Kling 2015, p. 204).

The evolving landscape of EMI has led to the adoption of pedagogical strategies. A review of the literature (Curle et al. 2020, p. 34) points out that "EMI classes were often more student-centred and interactive mainly as content lecturers wanted to ensure that content matters are delivered appropriately and understood by students." Didactic strategies, as defined by Valcke (2010), are systematic approaches for engaging learners, achieving specific objectives, leveraging learning materials and media, and facilitating evaluation.

Despite these developments, effective strategies for managing EMI remain unclear, Dearden (2018, p. 327) points out that "there are very few pedagogical guidelines about how to implement courses in EMI effectively." Furthermore, Pun and Thomas (2020) emphasise that the pedagogical challenges faced, and coping strategies used remain under-researched. This prompts us to the central research question: How do students respond to the teaching strategies employed by the lecturer in EMI lectures? The subsequent section outlines the research methods employed to address this inquiry.

METHODOLOGY

Context and Participants

Context

This study focuses on a bachelor's degree program in International Business Management offered by a University College in Flanders, the Dutch-speaking region of Belgium. The medium of instruction for this program is English, and the research was conducted within the course Intercultural Communication. These characteristics rendered the programme a suitable authentic setting to study EMI in higher education in non-English speaking countries. While the classes primarily took the form of lectures, the lecturer employed diverse approaches to enhance the learning experience, emphasising student engagement and the use of technology. These strategies will be comprehensively discussed in the Results section.

Participants

All students enrolled in the course 'Intercultural Communication' were invited to participate (N=35). Only five students declined the invitation due to scheduling conflicts, resulting in a total of 30 participants (N=30). Since English proficiency at the B2 level or higher was a prerequisite for program admission, participants were assumed to meet this language proficiency requirement, obviating the need to inquire about their English proficiency in the questionnaire.

Participants in this study hailed from 11 different countries across Europe, Africa, and Asia. The largest group consisted of Belgians, comprising 14 of the 30 participants, making Dutch speakers the most prominent L1 group. None of the participants had English as their L1. In terms of additional language proficiency, two participants reported fluency in only one additional language, while the remaining participants claimed competency in an average of 3 to 4 languages. Roughly one-third of the participants (N=9) had prior experience of living/studying in an English-speaking country, and 11 had previously studied abroad (excluding the present program). Approximately half of the participants (N=16) possessed some degree of familiarity with EMI, which included exposure through MOOCs, secondary education exchange programs, photography courses, or higher education. Concerning prior higher education experience, 16 participants reported having some background, although most had not completed a higher education programme.

Research instruments

The researcher attended lectures and collected related lecture materials such as slides and video clips to gain a comprehensive understanding of lecture content and the didactic scenario. To address the research question, the questionnaire (see Appendix A) was designed to encompass the following aspects:

1. Participants' background: This section gathered information about participants' first and additional languages, experiences abroad, higher education experiences, and familiarity with EMI. The results are presented under the 'Participants' subsection above.

2. A priori category: This section collected participants' opinions on the didactic strategies outlined in the aforementioned literature review (Kremer, 2021). Participants were asked to express their perceptions and whether they applied these strategies or not.

3. Participants' perceptions: This section focused on participants' perceptions of the didactic strategies observed in the specific lecture they had recently attended. Since this section was tailored to each lecture, only participants who had attended a particular lecture completed it. There were five distinct set of questions for this part, one for each lecture watched. Consequently, the number of responses is lower than the total N=30.

The data collection instrument was structured around three pillars: the necessity to construct a participant profile, the a priori strategies derived from the literature review (Kremer, 2021), and the observed classes along with the strategies and resources employed in the classes observed for the study.

Part 1 of the questionnaire included both open-ended questions (e.g., name, country of origin, L1, L2s) and yes/no statements (e.g., "Have you ever lived in an English-speaking country?"). Parts 2 and 3 featured statements to which participants could agree or disagree regarding the use of specific didactic strategies. Participants were required to select one option and provide explanations or arguments. For example:

8 - Requesting additional explanations during lectures:
    ( ) You ask for more explanations during EMI lectures
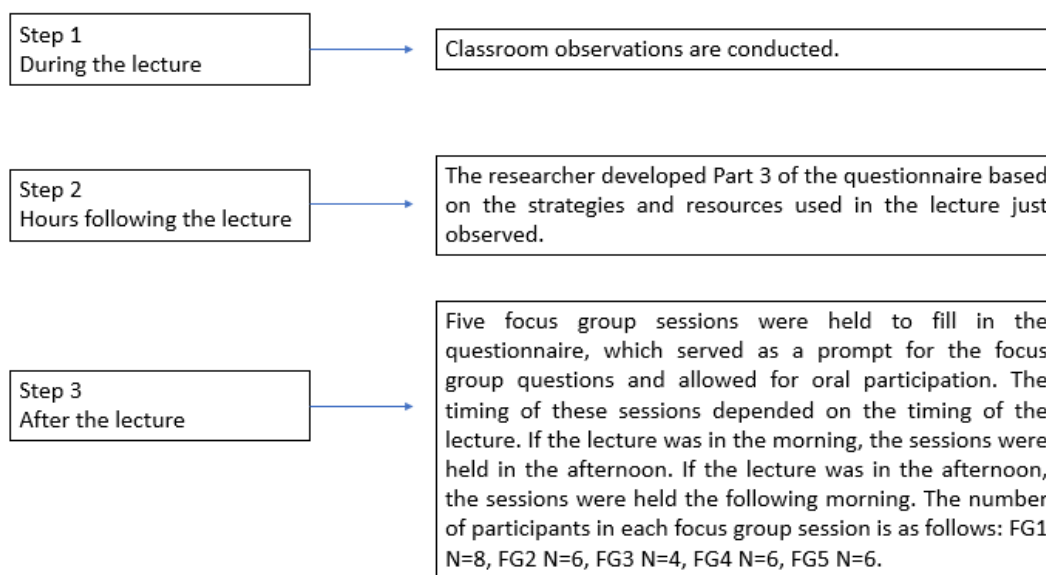   ( ) You ask for less explanations during EMI lectures
    Why?_____

The questionnaires were administered in focus group sessions, during which audio recordings were made. These sessions offered valuable insights, allowing participants to discuss, justify, and clarify their questionnaire responses. The qualitative data was analysed by conventional content analysis of the answers of the questionnaire and the transcripts of the audio recordings of the focus groups sessions.

Research procedure

The researcher attended a total of seven lectures. The initial two lectures served to acclimatize the researcher to the research context. The researcher's presence was acknowledged by the lecturer at the start of every lecture for ethical reasons (Howitt 2010) to ensure participants were aware of the study. The researcher sat inconspicuously at the back of the classroom to observe without disruption, maintaining a non-intrusive presence focused on observation and note-taking. This classroom observation phase was instrumental in developing Part 3 of the questionnaire, as outlined in the research instruments section.

Subsequent to each lecture, participants completed the questionnaire, capitalizing on the recency of the lecture and teaching approaches. During the brief interim between the lecture and the questionnaire, a set of questions tailored to the strategies observed in that particular lecture was prepared to constitute Part 3 of the questionnaire. Five focus group sessions, each corresponding to a distinct observed lecture and involving different groups of students from the 30 participants, were conducted. The questionnaire was used as a prompt in these focus groups, facilitating oral discussions that allowed participants to elucidate and justify their written questionnaire responses. This approach ensured a deeper understanding of the reasons behind participants' actions, encouraged interaction among group members, and provided researchers with opportunities to clarify and confirm their comprehension of participants' responses. Additionally, it allowed the researcher to develop an understanding of why the participants carried out certain actions, offering "opportunities for interaction between members of the group when responding to the questions posed by the moderator" (Howitt 2010, p. 90) and ensuring that the researchers had understood the participants' answers and rationale.

Figure 1. View of the data collection steps.

Step 1 During the lecture	→	Classroom observations are conducted.
Step 2 Hours following the lecture	→	The researcher developed Part 3 of the questionnaire based on the strategies and resources used in the lecture just observed.
Step 3 After the lecture	→	Five focus group sessions were held to fill in the questionnaire, which served as a prompt for the focus group questions and allowed for oral participation. The timing of these sessions depended on the timing of the lecture. If the lecture was in the morning, the sessions were held in the afternoon. If the lecture was in the afternoon, the sessions were held the following morning. The number of participants in each focus group session is as follows: FG1 N=8, FG2 N=6, FG3 N=4, FG4 N=6, FG5 N=6.

RESULTS AND DISCUSSION

The results presented in this section stem from the analysis of data collected in Parts 2 and 3 of the questionnaire. Part 1 of the questionnaire was used to build the participant profile outlined in the Methodology section. Part 2 encompasses participants' perspectives on didactic strategies identified in the literature review (Kremer, 2021), while Part 3 delves into their views on the strategies employed during the observed lectures. This structure was selected to distinguish between the two primary data collection components: Part 2's a priori strategies based on Kremer (2021), and Part 3's strategies derived from the lectures observed for this study.

Each questionnaire item is detailed herein, providing a comprehensive overview of both the strategies identified in the literature and observed in this study, as well as participants' perceptions of these strategies. This approach aligns with the study's aim of documenting and analysing strategies used to manage lectures delivered through English Medium Instruction (EMI). Furthermore, it provides a potential reference for EMI practitioners seeking effective strategies to enhance their teaching practices.

Before delving into the detailed results, an overview of the key findings is provided in Table 1.

Table 1. Summary of the main results found in the present exploratory study.

Main results
Participants are averse to the use of L1 with the teaching staff
A vast majority reports benefiting over time from lecture attendance (to cope with EMI)
15 out of 30 need more time to participate during lectures
A vast majority checks new words online during lectures
25 would watch the lectures if they were recorded and posted online
Participants would appreciate a glossary with main terms (in English)
About 1/3 does not ask for additional explanations in EMI lectures
15 follow the available slides on their own devices

All were positive about group and pair activities
27 were positive about individual participation
12 perceive images as being more important in the EMI context
All affirmed benefiting from videos during the lectures
All express a very positive attitude towards EMI

Part 2: Didactic strategies reported in the literature.

This section focuses on the didactic strategies frequently employed by lecturers and students in EMI contexts, as identified in Kremer (2021). Participants were presented with these strategies and prompted to reflect on each one. Table 2 provides a summary of the primary findings, which are subsequently explored in detail for each item. All participants (N=30) were posed these questions, with a lower N value indicating a participant omitted a response. To exemplify the participants' reasoning, selected responses are quoted.

Table 2. Summary of results part 2.

Results: Didactic Strategies Reported in the Literature
L1 use during lectures: 25 out of 30 prefer to avoid it
L1 use with the teaching staff: 27 out of 30 prefer to avoid it
L1 use with peers: dependent on the person and context
Note-taking: 19 out of 30 stated their note-taking behaviour being similar in L1 or L2
Lecture attendance: 25 out of 30 stated they eventually got used to lectures in English
Lecture participation: 15 out of 30 stated needing more time to speak
Asking for clarification during lectures: 10 out of 30 asked fewer explanations in EMI lectures
Reading the material before the lectures: 28 out of 30 did not read it
New words: 29 out of 30 checked them - mainly online - during the lecture
Online availability of lectures: 25 would watch recordings if available
Contact with teaching staff: 8 out of 29 had more contact in the EMI context
Glossaries: 24 out of 30 would appreciate having glossaries in English
English language courses: 25 out of 30 were in favour of some kind of language course

L1 use during lectures. In this question, participants were surveyed regarding their preference for the use of their first language (L1) during lectures. Specifically, they were asked if they preferred keywords to be translated or if they favoured avoiding language switching during the lectures. A majority of the participants (25 out of 30) expressed a preference for lecturers to refrain from employing L1. They argued that the use of a single language, in this case, English, was more conducive to their understanding of the lecture content. Participants noted that utilizing L1 (e.g., Dutch) would create an unfair advantage for non-Dutch speakers in the class.

These findings contrast with Chuang's (2015) study, which reported positive outcomes from code-switching to Chinese for key terms that students might not be familiar with. Chuang suggests that code-switching "is a great way to retain attention in the class, and the students realise that the key terms their instructor made a point of repeating in Chinese are the important words for the concepts" (p. 65). The discrepancy in findings could be attributed to Chuang's participants perceiving code-switching as emphasis, and the less homogeneous nature of the present study's participants in terms of country of origin and L1, which might explain their preference for avoiding language switching.

L1 use with teaching staff. The subsequent question explored participants' use of L1 with teaching staff outside of lectures (during office hours, in emails, and before/after lectures). Again,

most participants preferred to avoid language switching, finding it easier to communicate in English as it was already used during lectures. Some participants maintained English usage to "stay professional", a preference echoed in literature during lectures and outside classroom interactions with staff (Kim, Dae Son, & Sohn 2009). However, some students appreciate the opportunity to revert to their L1 in certain situations (Wilkinson 2005; Evans & Morrison 2011; Kagwesage 2013; You & You 2013; Liang & Smith 2012; Airey 2011). While many students value this option, it is contingent on shared L1 groups and can potentially exclude students with different L1s.

L1 use with peers. In terms of L1 use with peers in academic settings, participants were asked if they preferred interaction in a shared L1 or avoided language switching given their studies were conducted in English. Many participants indicated that this would depend on the person, context, and topic of conversation.

It is worth noting that the researcher frequently observed instances of code-switching during the lectures among students who shared Dutch as their L1. This code-switching is understandable, as it reflects the common linguistic background of the participants. In certain cases, switching to English may be perceived as an expression of their identity as students enrolled in an English-Medium Instruction (EMI) program, as observed in the study conducted by Hahl, Järvinen, and Juuti (2014) in Finland.

Note-taking. The subsequent question addressed note-taking, a crucial "beneficial strategy that enhances student attention and retention of information" (Dunkel 1988; Aiken, Thomas & Shennum 1975; Howe 1970 as cited in İpek 2018, p. 206). Participants were asked whether they took more or fewer notes during EMI lectures. The majority (N=19) reported no differences, while seven participants reported taking more notes, and four reported taking fewer notes. Those who took more notes justified this by stating they forgot information learned in English faster and "in my mother tongue I remember better". This aligns with Rochecouste et al.'s (2010) report on international students from non-English speaking backgrounds in Australia, where note-taking was a significant strategy for students.

Participants who took fewer notes argued that lectures in English required more processing time and additional efforts to concentrate on what the teacher was saying, similar to the results reported by Airey (2011). These additional efforts can be explained by three psycholinguistic hypotheses suggesting bilingual disadvantages in relation to language processing and memory:

1. The cross-linguistic interference hypothesis, which assumes that second language (L2) processing is more difficult because of competition with representations in the first language (L1) (Weber & Cutler 2004).

2. The weaker-links hypothesis understands that accessing linguistic representations in L2 is slower and less accurate than in L1 since the L2 is less frequently used and builds on weaker knowledge representations (Gollan et al. 2008).

3. The resources hypothesis assumes that L2 processing taxes working memory capacity more intensively than L1 processing, affecting memory performance (Francis & Guttierréz 2012, p. 497).

Lecture attendance. Participants were questioned regarding the impact of lecture attendance on their learning. Given that they were in their second term, they were asked if they believed they now learned more from English lectures or if it remained a challenge. The majority of participants (N=25) affirmed that they had become accustomed to lectures in English and were now learning more from them. This finding aligns with previous studies (Kagwesage 2013; Evans & Morrison 2011), where students cited lecture attendance as a valuable strategy for coping with EMI. Jensen & Thøgersen (2011) also discovered that teachers who predominantly deliver their instruction in English exhibit a more positive attitude towards EMI. These results underscore the necessity of providing support to students at the outset of their English studies.

Lecture participation. Participants were inquired about their level of participation during English lectures, specifically whether they participated more or less than in other contexts. The majority (N=19) indicated that they observed no significant variations in their participation levels. Delving

further into active participation, participants were questioned about whether they required more or less time to express themselves during EMI lectures. Half stated that they needed more time to articulate their thoughts, while the other half asserted that language did not influence their participation speed. This outcome contradicts prior research in which participants reported reduced participation in the EMI context (Airey & Linder 2008; Airey 2011; Flowerdew, Li & Miller 1998; Aguilar & Rodríguez 2011). It is worth considering that the participants in this study displayed a positive motivation towards EMI, which might influence their perception of language production, making them believe it is better than their actual performance (Hernandez-Nanclaresa & Jimenez-Munoz 2017), thus not hindering their lecture participation.

Asking for clarifications during lectures. When asked whether they sought additional explanations during lectures, approximately half of the students indicated that the teaching language did not matter. However, about a third of the participants reported asking for fewer explanations during EMI lectures. This represents a significant proportion of students who may have questions but choose not to ask them during lectures due to the language of instruction. Similar findings were reported in Hong Kong, where lecturers attributed this lack of participation to inadequate English skills, difficulty understanding concepts, and reluctance to risk embarrassment in front of peers and lecturers (Flowerdew, Li & Miller 1998). To prevent students from leaving lectures with unanswered questions due to the language of instruction, lecturers should create more opportunities for participation and clarification during lectures. Additionally, more avenues for seeking clarification outside the classroom should be provided via online forums, email, and office hours.

Reading the material before the lectures. Surprisingly, only one participant consistently reads materials before lectures because they are in English. The other participants (N=28) all indicated that they do not read materials before lectures This aligns with previous research where participants did not "adopt the one strategy that was most likely to maximise the value of lectures or when struggling to enhance their understanding", even though they "acknowledged that this is a potentially valuable learning opportunity" (Evans & Morrison 2011, p. 155 The provision of sufficient material by staff and pre-class preparation by students is also recommended by Rochecouste et al. (2010).

New words. The question about encountering new words during lectures and how participants dealt with them revealed that only one participant stated, "I memorise them without checking." The explanation was: "I would just do it [check the meaning] when it is frequently used". All other participants affirmed checking the meaning of unknown words, primarily online, during lectures. This finding underscores the importance of technology in the classroom. Having an online device is crucial for these students, who have stated discomfort with interrupting classes to ask language-related questions. Similar behaviour was observed in Turkish students who also affirmed using a dictionary as a listening comprehension strategy during EMI lectures (Soruç, Dinler & Griffiths 2018).

Online availability of lectures. In response to the availability of recorded lectures posted online, a recommendation made by Airey (2011) in a study with undergraduate physics students in Sweden, the majority of participants (N=25) expressed their intent to watch these recordings. Their primary rationale is to review content.

Contact with teaching staff. Participants were asked if their interaction with teaching staff (office hours, emails, and questions before/after lectures) increased in an EMI context. The majority of participants (21 out of 29) stated that the language of instruction did not influence their level of interaction. However, 8 out of 29 reported having more contact with teaching staff, citing reasons such as: "because maybe I misunderstand something"; "(to) be sure of what you actually have to do." When they felt the need to contact the teaching staff, participants mentioned "feeling less confident if you have to send an email in English." This sensation of reduced assurance in the EMI context suggests that teaching staff should proactively offer students more opportunities to address

doubts and clarify their understanding of both course content and practical aspects, such as coursework requirements. These opportunities for resolving doubts are essential due to the language of instruction and the pedagogical diversity found in culturally and linguistically diverse classrooms, recognizing that people teach and learn differently (Carroll 2015).

Glossaries. The use of glossaries with key terminology (L1, L2 or L1/L2) was suggested in Aguilar and Rodríguez (2011) and Paxton (2008). Most participants (24 out of 30) expressed a preference for glossaries in English, while 5 out of 30 favoured L1/L2 glossaries. Only one participant stated that glossaries were unnecessary. These results suggest that students are concerned with language-related issues, particularly vocabulary. Participants justified their preference for English glossaries by stating that as it is an EMI programme, glossaries should be in English. Furthermore, since evaluations are in English, they said, "it's better to already have the definition in English." They also highlighted the impracticality of L1 versions.

English language courses. The final question in this section asked participants about their thoughts on English language courses. The majority of participants (25 out of 30) were in favour. Specifically, 17 out of 30 preferred a Business English course; 4 out of 30 favoured a general English language course; 4 out of 30 would take both a general and a Business English language course. Arguments in favour of Business English courses centred on the acquisition of business-specific terminology. Participants mentioned that this vocabulary could not be acquired during general "social interaction". Some participants stressed this helped going beyond vocabulary because "it is more about business communication… what is appropriate and what's not appropriate? These things I do not learn in other [general languages] courses." The prevalence of language-related concerns among teaching staff and students, as highlighted in Kremer (2021), underscores the significance of offering language courses (domain-specific or general) as a natural and expected response to these challenges.

Part 3: Didactic strategies in the observed lectures

Finally, participants responded to questions related to the strategies identified during the observed lectures. This part of the questionnaire was tailored specifically to the lecture just viewed. Some strategies were utilised in all lectures and, consequently, were addressed in all questionnaires (e.g., use of slides), totalling N=30. Other strategies were observed in fewer lectures (some in just one) and were addressed in fewer sessions. Therefore, N is lower than 30 (e.g., test guide). Similar to the previous section, we include citations representing the participants' justifications and explanations to illustrate their argumentation. We commence this section with a table summarising the results, followed by a detailed presentation of the results.

Table 3. Summary of results part 3.

Results: Didactic Strategies Observed in the Lectures
Use of slides: 15 (out of 30) of students use their own devices to follow the slides
Collaborative opportunities: All were positive about group/pair activities
Images/graphics: 11 out of 29 considered them more important in an EMI setting
Individual active contributions: 24 out of 30 were glad to participate individually
Language related questions: 17 out of 30 stated not having language problems
Constructing definitions with examples: Important in all contexts, not only in EMI
Test guide: 2 out of 6 considered this as being more important because of EMI
Video: All participants stated profiting from it
Pear Deck: Seen as a positive tool; but not exclusively in EMI
Padlet: Appreciated as accessible but easy to misuse

Lecture overview and learning objectives: Half of the participants found this of general importance and the other half found these even more important in an EMI context

Use of slides. In the investigated context, the lecturer supplied slides to students prior to each lecture. Half of the participants chose to consult and use these slides on their personal devices, primarily to facilitate additional note-taking. This also enabled them to follow along with the lecture content at their own pace, particularly useful when the teacher had moved on to the next slide. Finally, participants highlighted the utility of the combination of slides and their notes in preparing for examinations. The provision of slides before lectures seems to have a twofold impact: it streamlines note-taking and enhances content review. For participants who refrained from using slides on their devices, their choice was rooted in an alternative strategy – focusing on the teacher's delivery and engaging in peer interactions. This choice may be associated with the additional cognitive demands imposed by EMI, aligning with the bilingual disadvantages hypotheses that illuminate the cognitive challenges of L2 processing.

Collaborative opportunities. Throughout the observed lectures, students frequently engaged in collaborative activities, working in pairs or small groups to develop ideas, which were subsequently shared with the entire class. This pedagogical approach offered students a respite from traditional lectures, providing them with an active role in their learning – a strategy suggested in prior studies (Murphey 1997) and notably effective in the present context.

All participants responded positively to group and pair activities and agreed to the sentence: "I like to listen to other groups' opinions to learn about their cultures"; 27 out of 30 of the participants agreed with the statement "those are good opportunities for me to participate during the lecture". Also, 27 out of 30 agreed: "those are good opportunities for meeting new colleagues and their cultures". However, participants felt challenged when they had to share their thoughts with the whole class. Only half of the participants agreed with the statement: "I like sharing my opinion with the big group afterwards". On the other hand, only two students agreed with: "I feel shy and normally do not share my opinion with the big group afterwards". Only one participant agreed with "I feel shy to participate in group/pair discussions". Participants' positive comments built on the opportunity to check their understanding with colleagues before sharing ideas with the whole group: "I can know if my thoughts are right and if I'm in the right path"; "everyone can say something when you are 3 in a group and one gets a chance to say something [to the whole class]". Participants also appreciated a break from the lecture: "it's like a pause, when the teacher is talking and talking and talking then you get to do a group thing, it's like a change or something"; "we can use our energy". Although sharing with the whole class was partly seen as a challenge, participants stressed how this prepared them for public speaking: "You have more confidence to talk to others. Because you would find confidence that you know how to talk, how to share, like, how you can talk to the big group. It's more important for the smart training for presentations."

These collaborative activities effectively addressed the issue of limited interaction in many EMI classrooms, which has been previously documented in the literature (Flowerdew, Li & Miller 1998; Airey & Linder 2008; Aguilar & Rodríguez 2011). The results from this study strongly support this assertion.

Use of graphics. Images and graphics were a common feature on the lecturer's slides. When asked if these visual aids were "more necessary since they avoid linguistic issues", 11 out of 29 participants agreed that images held more importance in the English-Medium Instruction (EMI) context. The remaining 18 participants did not perceive any difference from an L1 classroom, stating: "I think the images are really important but not only because it is in English". This appreciation for visual aids aligns with previous research on both L1 and EMI lectures, which recommends supporting the subject matter with proper visual aids (Airey 2009; Airey & Linder 2006; Hellekjær 2009; Klaassen 2001 as cited in Björkman 2013, p. 184).

Individual active contributions. During the observed lectures, the teacher frequently prompted students to provide individual contributions, a type of activity that did not permit prior preparation.

In contrast to previous research findings indicating a lack of interaction, our study yielded different results. Predominantly, participants were positive about individual engagement as 24 out of 30 agreed to: "I am glad to participate [individually]". Concerning listening to their peers' opinions, 29 out of 30 were glad to do that. Only 2 out of 30 stated: "I would prefer not having to participate" and none agreed with the statement "I would prefer to listen to the professor than colleagues". Participants' justified: "I think it's good sometimes because of the shy people that don't want to talk will have to talk and then you also hear their opinion and input". They linked individual contributions to staying more attentive: "That's why it [individual participation] is good because you keep paying attention and we are awake" and "sometimes I just lose attention because it's really boring and theoretical and I can study it at home but these kinda classes are fun I really like to... I don't mind going to class because it's actually for the first time fun." A student, not preferring to participate, stated: "If she asks me, I don't have a problem with it. But sometimes I think that my opinion isn't relevant. Sometimes I just have nothing important to say and then she asks me and I'm like I can say something, but I don't think it is important. Why would you listen to it?".

The willingness of students to participate during lectures is considered a positive aspect. In a review of academic listening in the 21st century, Lynch (2011) argues that although lectures are typically characterized by monologues, incorporating more interactive elements can enhance students' ability to follow the lecturer's arguments.

Participants also raised concerns about class size and its impact on individual participation. They referred to a different course with 120 students, where being the centre of attention during individual contributions in a large group was perceived as daunting. One participant remarked, "when I have to participate individually, it makes me the centre of attention in the class… It will be really fun to express your opinion, but in such a big group, being the centre of attention is really quite scary."

Language-related questions. Interestingly, language-related questions were infrequent during lectures. Over half of the participants (17 out of 30) reported no language-related issues. Participants commended the lecturer's awareness of potential language-related problems and her use of didactic strategies, such as defining difficult keywords and explaining concepts in different ways: "She always explains, I think she is a good teacher"; "when she doesn't seem to get the participation she wants, she tries to explain it in another way and I think that's sort of a definition as well for people who don't understand it. And she also tries to give some definition. She also has a good feeling that she can sense when it's unclear." This aligns with Björkman's (2013, p. 157) assertion that it is crucial for speakers in English as a Lingua Franca (ELF) settings to create opportunities to deploy pragmatic strategies.

Among the participants with language-related questions, 9 out of 30 preferred to seek answers online during the lecture, while 6 out of 30 opted to ask a peer. The professor might seem like the natural source for such queries, but students often feel uncomfortable doing so. They provided reasons such as: "It feels weird to ask about language in a class about another topic," "I prefer to do it later at home because I didn't want to interrupt the lesson; I feel like I'd be interrupting the lesson," and "If you ask about every word you don't know, it will probably take a lot of time in the lecture."

In the next section, we address the strategies used in one or two lectures. Hence, they have fewer participants' answers.

List of examples prior to giving definitions. In one lecture, before presenting definitions of two main concepts, the lecturer asked students to download and work individually on a file available in the online learning environment. The file contained sentences exemplifying these two main concepts, which students had to categorise. This activity facilitated the construction of definitions without requiring dense linguistic explanations. When asked if this type of activity was more relevant in the EMI context, all participants asserted that it was not significantly different from an L1 setting; "in the end it's simplifying the way and how something is taught so it's just to make it easier to

everyone, to us, to make most of our time (…) it's good to see some different thoughts through the sentences yet they don't bring the definition, you make it for your own." Although they found this activity useful and expressed positive views on it, they did not consider it exclusive to EMI contexts but also useful in L1 lectures. By activating students' prior knowledge, the lecturer created an opportunity for them "to connect new terms with previously established concepts, reducing the cognitive demands of learning a new term" (Liang & Smith 2012, p. 97).

Test guide. One lecture commenced with a guide on how to prepare for an impending test, inclusive of sample questions. Of the participants, half (3 out of 6) did not perceive this guide as more significant due to EMI. Conversely, a third of the participants (2 out of 6) found the guide valuable, stating that "since the lectures and materials are in English, opportunities to revise and prepare for tests are more important than in courses in my L1." One participant viewed test guides as beneficial irrespective of the language of instruction: "It doesn't really influence, it is handy, it could help you, but it has nothing to do with language (…) it is important, but not because of English."

Participants who appreciated the test guides explained how they assisted in managing the EMI setting: "it really helps because it could help narrow down what you have to study for. Because you need to check for words, so it takes a lot of time to prepare and study for tests." This reflects a recurring pattern where participants value the resource or activity generally, not exclusively in the EMI context. Participants expressed that test guides are helpful in setting expectations for tests in both L2 and L1 contexts. This suggests that teaching practices initially developed for EMI contexts may positively impact L1 course delivery (Guarda & Helm 2017).

Videos. One lecture incorporated a video to introduce key concepts. All participants concurred that the video was beneficial, stating: "I profited from the video, it was a good way of introducing the concepts." They attributed this to the change in lecture flow, with one participant noting: "it takes you away from the class, it refreshes you. It is something different. It is easier." This aligns with Chuang's (2015) findings, where students viewed videos as facilitators of concept comprehension.

Half of the participants found the video more appealing due to its narration by a native speaker, arguing: "I think it was just a really good video. For example, the videos during [another course, name omitted] classes, I normally fall asleep" and another participant added "they are so boring…" None of the participants found the native speaker narration challenging. Furthermore, 4 out of 6 participants stated they focused more on the video than on a teacher's explanation, appreciating the shift away from a teacher-centred lecture. None of the participants reported focusing less on this video compared to teacher explanations.

The use of videos during class received extremely positive feedback from participants. However, two aspects warrant emphasis. Firstly, the quality of the video is crucial - participants noted that poor videos (e.g., those that are boring) had negatively impacted them in the past. The selected video effectively introduced concepts and was well-received by participants. Secondly, breaking up the flow of the lecture was appreciated. It is evident that students value variety during lectures and welcome opportunities that go beyond simply listening to the lecturer.

Pear Deck. Pear Deck, an online Classroom Response System (CRS), was utilised in lectures to enhance student participation and provide real-time feedback to lecturers (see www.peardeck.com). Students used their devices to access a website featuring teacher-prepared questions, the answers to which were subsequently displayed to the entire class. This tool fosters discrete student engagement and aids teachers in accurately assessing student comprehension, a noted challenge in lecturing (Ha, 2018). In the present study, 2 out of 9 students deemed this tool more relevant in an English-Medium Instruction (EMI) context than in an L1 setting, while 7 out of 9 saw no difference. While the tool was valued, its benefits were not exclusively linked to EMI contexts.

Padlet. Similar to Pear Deck, Padlet is another online tool used to promote student participation in lectures (see www.padlet.com). Students accessed a virtual board on their devices to post

comments and answers, which were projected live for the entire class. Padlet facilitates discreet engagement as it does not require public speaking or mandatory real names. In the focus groups, 5 out of 10 of the students agreed to "I profited from it, it was a good way of sharing our opinions"; 6 out of 10 agreed to "I profited from it, it was a good way of learning my colleagues' opinions"; 6 out of 10 stated "I prefer to speak during the class" and 5 out of 10 checked "I prefer to listen to my colleagues during the class". The results are mixed. Positive arguments claim that "it's really accessible for shy people" and allows everyone to contribute. It aligns with previous research where "students valued the ability to share their views anonymously, particularly when in a large classroom environment" (Ellis 2015, p. 196). Negative feedback alluded to the tool's for off-topic posts (jokes). Posting was anonymous, and a formal login might have avoided such abuse of the tool.

Lecture overview and learning objectives. At the start of each lecture, the teacher provided an overview and a list of learning objectives. Approximately half of the students found this strategy beneficial, stating: "I think they are both important, no matter in L1 or L2". The other half deemed it even more crucial in an EMI context. Besides aiding lecture comprehension, students found this overview useful for exam preparation. This aligns with Kremer (2021) findings, where lecturers successfully employed didactic strategies to signal to students their exact location within the lecture (e.g., closely following a book and writing more on the whiteboard). In this study, the lecturer directly addressed this by presenting a lecture overview and learning objectives at the beginning of each lecture.

CONCLUSIONS

This study delves into the realm of English as a Medium of Instruction (EMI) in higher education within a non-English-speaking country. The research explores coping strategies employed by both students and educators in EMI lectures, offering valuable insights into EMI pedagogy, which can benefit lecturers, students, and curriculum developers. The key findings are summarily presented below.

First and foremost, the study reveals a positive trend in learning outcomes over time, as students become increasingly acclimated to EMI through attending more English-medium lectures. The strategies adopted by students and educators play a pivotal role in this process, indicating that with time, students develop effective coping strategies that allow them to derive greater benefits from the lecturers' approaches.

Secondly, technological devices, especially students' personal computers and smartphones, emerge as indispensable tools in facilitating EMI. These devices enable discreet word searches during lectures, self-paced navigation of lecture materials, and note-taking. Furthermore, the availability of lectures online for revision purposes is highly advantageous, offering students the opportunity to reinforce their understanding and resolve doubts at their convenience.

The third major finding underscores the importance of strategies that facilitate lecture comprehension and adapt to the pace of EMI instruction. These strategies, as advocated by Wilkinson (2013, p. 15), are inherently student-centred and encompass various elements: opportunities for clarification, group and pair work, individual participation, lecture overviews, glossaries, test guides, videos, Pear Deck, and Padlet activities. Additionally, these strategies serve the essential function of breaking down lectures into manageable, less fatiguing segments.

Building upon the competencies required for effective EMI teaching (Macaro, Curle, Pun, An, & Dearden 2018) and the prevention of student overwhelm (Rost 2011), the strategies outlined in this study offer valuable guidance on what these competencies might be.

In terms of language use and proficiency, the study indicates that participants refrained from using their first language (L1) with the lecturer, even outside the classroom. This was attributed to the group's heterogeneity and a sense of fairness towards international colleagues. Regarding L2

proficiency, English language courses are recommended as complementary "building blocks" to EMI (Schmidt-Unterberger 2018, p. 535) and coordinators should analyse for each context if a general English language, academic English or a discipline-specific course is more appropriate.

For future research, extending the focus to different disciplines and comparing students' experiences would provide valuable insights. Given the exploratory nature of this study, future research should consider adopting a quantitative approach to delve deeper into the topic. Additionally, exploring various learning styles and tailoring didactic strategies to suit them within an EMI context presents a promising avenue for investigation. Future studies should also address potential barriers to EMI lecture comprehension and propose effective mitigation strategies. Moreover, considering the high motivation demonstrated by participants in this study towards EMI programmes, exploring student engagement, motivation, and student-centred approaches would be beneficial. Furthermore, with the recent surge in the popularity of AI-based resources and strategies, there are ample opportunities to enhance learning outcomes during EMI lectures that warrant exploration. Finally, investigating the experiences of students with varying attitudes towards EMI, including those with no alternative but to engage in English-medium courses, offers a potentially enriching area for exploration.

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