

Professional paper

Alice Brian <sup>(1,2)</sup>

Katherine Ackerley <sup>(1)</sup>

(1) Università degli Studi di  
Padova, Via VIII Febbraio,  
2 - 35122 Padova, Italy  
[brianalice18@gmail.com](mailto:brianalice18@gmail.com)

(2) Dante Alighieri Institut,  
Leopoldstrasse, 4 - 6020  
Innsbruck, Austria  
[katherine.ackerley@unipd.it](mailto:katherine.ackerley@unipd.it)

Received  
1 May 2025

Accepted  
24 November 2025

Corresponding author

Alice Brian  
[brianalice18@gmail.com](mailto:brianalice18@gmail.com)

DOI: 10.70856/p.2.2.6



## Bringing Specialised Language into Focus in English-Medium Instruction: A Model for Subject-Specific Materials Development

**Abstract:** *The current trend for internationalisation in European universities, which includes the implementation of English-taught courses and degree programmes (British Council & Studyportals, 2024; Marginson & van der Wende, 2007; Wilkinson, 2017), is resulting in an increase in numbers of students who need advanced and specialised English language competences to meet the demands of studying academic content in a foreign language. This paper explores the main linguistic challenges that some students face in English-Medium Instruction (EMI) contexts, particularly their limited command of specialised English and lack of familiarity with subject-specific vocabulary (Ackerley, 2017; Al Zumor, 2019; McKinley & Rose, 2022). It also suggests how a corpus of subject-specific texts provided by lecturers can be used to develop specialised language learning materials in the form of subject-specific terminology and phraseology exercises, thereby providing the opportunity to turn students' language development from an accidental by-product to a planned and tangible objective of an EMI language support syllabus. The approach was investigated through the creation of subject-specific corpus-informed activities designed for a group of undergraduate students enrolled in an English-taught degree programme at a northern Italian university (Brian, 2020). The exercises were informed by a careful investigation of a corpus of module materials and were delivered via an interactive online learning platform.*

**Key words:** *English-Medium Instruction, English for Specific Purposes, Corpus-Informed Learning, Materials Development, Language Training*

## 1. Introduction

As universities compete to attract increasing numbers of domestic and international students, English-taught programmes (ETPs) have become an established feature of the European higher education landscape. English is now considered the default language of higher education (Brumfit, 2004), and English-medium instruction (EMI) is seen as a key tool for successful internationalisation (van der Walt, 2013). This expansion of EMI and consequent rise in the number of students from diverse linguistic backgrounds in HE institutions has led to research into the impact of English language proficiency on student success in EMI programmes (Rose et al., 2020) and the availability of language support (Guarda, 2021). Some studies identify “language-related challenges as the foremost barrier to successful implementation of EMI” (McKinley & Rose, 2022: 85), with English for Academic Purposes (EAP) and English for Specific Purposes (ESP) courses playing a key role in providing targeted language support. Without this fundamental support, students may be at risk of academic failure (McKinley & Rose, 2022: 85). Indeed, studies show that students’ difficulties following lectures, delivering presentations in English, taking part in seminar discussions and writing essays in an appropriate academic style may hinder their ability to successfully follow an EMI programme. One frequently cited challenge is posed by the technical and specialised vocabulary required to follow lectures and understand course materials (Guarda, 2021; Galloway et al., 2024). This will be the focus of the current paper.

This paper begins by addressing the issue of language support in EMI courses, followed by a discussion of the challenges faced by students following courses in a foreign language. It will then suggest how specialised corpora can be used in the development of ESP materials, illustrated with examples of interactive language learning activities informed by an ‘EMI module content corpus’, consisting of course materials from an EMI module from a degree course in psychology. We conclude with a discussion of the benefits and practical considerations involved in using such a specialised corpus for materials development.

## 2. English-Medium Instruction

Internationalisation processes in higher education in Europe in recent decades have led to a rapid increase in the number of English-taught programmes (ETPs) at both undergraduate and postgraduate level, to the extent that EMI is now seen as “a successful means of attracting international students and internationalizing at home” (Bowles & Murphy, 2020: 8). Despite this

rapid expansion in EMI, with the resulting spread of English as an academic lingua franca (Jenkins, 2014), there is an “outstanding shortage of pedagogical guidelines about how to implement effective courses” (Lasagabaster, 2018: 400), which includes guidelines about how to address the issue of teachers and students dealing with complex academic materials in a foreign language. Although English is not explicitly taught in EMI modules, learning academic content through the language is often seen as a valuable way to develop linguistic competence (Rose & McKinley, 2024), with some studies suggesting that improving language proficiency is one of the primary motivations for enrolling in English-medium instruction courses (Galloway & Ruegg, 2020; Wächter & Maiworm, 2014). However, it cannot be taken for granted that the students enrolling on EMI programmes have sufficient language skills to fully comprehend lectures and course materials. While some see ETPs as a way to learn English, McKinley & Rose (2022: 87) observe that “many students are entering into EMI university programs ill-prepared for the level of proficiency required”, a pervasive issue that is “notably unregulated worldwide” (Bowles & Murphy, 2020:10). Despite this well-documented problem, not all universities meet the demand for language support. Indeed, in the Italian context, a general lack of emphasis has been given to language-related issues (Costa & Coleman, 2013). This highlights the demand for language support in the form of pre-courses, parallel courses and self-access materials tailored to meet the needs of students following highly specialised courses in English.

Parallels have been drawn between Content and Language Integrated Learning (CLIL) programmes and EMI. As the name suggests, CLIL ideally involves full integration of both content and language, supported by close collaboration between content and language teachers. This should ensure that the content teacher is able to integrate a language focus in their lessons at a level that is appropriate for their students. CLIL, however, is very much associated with primary and secondary education, whereas the term Integrating Content and Language in Higher Education (ICLHE) (Wilkinson 2004) has been coined specifically to distinguish the higher education context where content learning has priority, but language learning is still considered an (indirect) objective of EMI programmes. In EMI courses, the lecturers are primarily concerned with content, with any language learning often (mistakenly) seen as an incidental, but almost unavoidable by-product (Macaro, 2018). Indeed, it is commonly assumed that exposure to English will automatically lead to some degree of language acquisition, even without explicit language instruction (Pecorari, 2020). However, these anticipated improvements in English proficiency are far from guaranteed and

cannot be left to chance. Just as language teachers play an essential role in CLIL, their expertise should also be recognised and integrated into EMI programmes (see Lasagabaster, 2018). To foster effective language learning and, thereby, increase chances of content learning success for students, opportunities must be planned to promote explicit rather than incidental learning of the language and to “bridge the divide that [...] still exists between EMI and ICLHE” (Guarda, 2021).

### 3. Students' linguistic challenges

EMI is generally recognised as the “use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language (L1) of the majority of the population is not English” (Macaro, 2018: 19). Consequently, students enrolled on EMI programmes may not be fully proficient in English (Costa & Coleman, 2013). Some of the main challenges EMI students have reported are understanding and making use of the specialised vocabulary, phraseology, and discourse rules of their discipline of study (Ackerley, 2017; Al Zumor, 2019; Galloway et al., 2024; Guarda, 2021). These are indeed considered essential skills for developing a deep knowledge of the subject and becoming functioning members of its discourse community (Northedge, 2002). Given that mastering the specialised language of a discipline takes time and effort, it is then to be expected that students who are new to the disciplinary field may encounter difficulties, with this linguistic barrier often affecting their academic performance across various tasks. For example, EMI students may struggle with understanding the content of their lecturer's presentation, particularly when complex concepts are explained using unfamiliar discipline-specific vocabulary (Othman, 2024). Since the continuity and rapidity of lecture delivery leaves little time to build, check, and repair understanding, EMI students that need to ponder over unfamiliar words for a few seconds may lose track of what is being talked about (Buck, 2001). Additionally, EMI students often feel anxious when they have to use English in class, especially when asked to orally describe subject-specific concepts (Ackerley, 2017; Airey, 2010; Karakaş, 2017). They may be afraid of making mistakes while speaking in front of the class, being laughed at or considered not good enough. As a result, interaction between teachers and students and among students can be greatly reduced in EMI classes, which means that students are reluctant to ask and answer questions during lectures and to express their opinions in class discussions (Airey & Linder, 2006; Öztürk & Gürbüz, 2014). Such challenges are not confined to the classroom setting but also arise during self-directed learning, for instance, when reading specialised textbooks and journal articles

in English. Due to the complexity of the language, some EMI students need much more time to read through this kind of materials, and there are higher chances of miscomprehension and superficial learning (Bernhardt, 2005; Karlgren & Hansen, 2003). Written tasks can also be challenging, as EMI students often lack the specific competences for writing about their discipline of study and incorporating subject-specific vocabulary (Arnbjörnsdóttir & Prinz, 2017; Gundermann, 2014; Hellekjær & Westergaard, 2002).

#### **4. English for specific purposes and corpus-informed language learning**

As highlighted in the previous section, understanding discipline specific terminology is one of the most challenging aspects of EMI courses, suggesting that ESP courses and materials should be offered to provide language support for students. Guarda (2021) notes a lack of EMI-focused language training at university language centres, with much of what is available being in the form of EAP courses. While such courses are of value, they focus on general academic literacy skills, but tend to lack attention to ESP (Galloway et al., 2024; Guarda, 2021; Lasagabaster, 2018). Aizawa et al. (2025) suggests that students “may benefit more from receiving subject-specific language support tailored to their particular academic needs rather than generalised academic English courses”, one such benefit being increased confidence in students (Thompson et al., 2022). Galloway et al. (2024: 248) also call for “more discipline-specific language support, particularly in understanding technical or academic terms.”

However, while ESP is recognised as “central to language and academic support in EMI” (Galloway et al., 2024: 239), developing syllabi and materials that meet the needs of students in highly specialised EMI courses presents significant challenges. Language practitioners often have little or no knowledge of the academic disciplines involved, and acquiring such expertise is rarely feasible, especially considering that teachers may work with students from a wide range of subject areas. Gaining knowledge of the language used in specific disciplines would require cooperation between content lecturers and language teaching practitioners. This would promote the “cross-fertilization” that is currently lacking between ESP and EMI (Galloway et al., 2024: 239), thus bridging the gap and providing the specialised language support, which would “target the vocabulary, language, and academic needs associated with the subject area” (Rose et al., 2019: 10).

Costa and Mastellotto (2022: 46) highlight the need for a “bilateral process among EMI/ESP instructors with curricular alignment of content and language integrated learning as a mutual goal”.

Lasagabaster (2018) suggests that language and content teachers engage in team teaching, which involves a phase in which language teachers become familiar with the course materials and observe lessons, which would enable them to focus on the language of the discipline, leading to the design of a glossary and the development of language activities which students access in a 'language-focused guide'. This is where a corpus-informed approach to ESP materials development can be particularly useful, as it can enable non-subject-expert language practitioners to create discipline-specific language learning resources.

Numerous studies have shown how discipline-specific academic corpora and specialised corpora can be used in the teaching of writing (Charles, 2012; Charles & Frankenberg-Garcia, 2021; Flowerdew, 2023), the development of language learning materials and data-driven learning (DDL) (for a comprehensive overview, see Boulton, 2012a). There has been less focus, however, on how corpora can be used to explore the language of specific university modules – rather than broader academic disciplines – and how this can inform the development of teaching materials for EMI students.

The framework for this study is grounded in a corpus-informed approach (Boulton et al., 2012), whereby a corpus of discipline-specific texts is investigated to pinpoint linguistic features and patterns that may be of interest to the students of a module. In the present paper, the corpus concerned consists of teaching materials. Hunston (2002: 16) describes a "pedagogic corpus" as one that consists of "all the language a learner has been exposed to. [...] it can consist of all the course books, readers etc. a learner has used". Meunier and Gouvenor (2009: 5-6) expand the definition of pedagogic corpus to mean "being a large enough and representative sample of the language, spoken and written, a learner has been or is likely to be exposed to via teaching material, either in the classroom or during self-study activities". In their study the 'pedagogic corpus' is based on EFL contexts, but Braun (2005: 53) highlights the importance of the content of a "pedagogically relevant corpus", in which the materials are tailored to the needs of the target group, where coherence is brought about by a "common overall theme around which all texts in the corpus revolve". In our study we extend the concept of a pedagogically relevant corpus to an EMI context, where the language the students are exposed to includes the course materials produced and/or selected by the EMI lecturer. We refer to this type of corpus as an 'EMI module content corpus'. A corpus which represents the immediate target domain can provide valuable insight into the specific language that students need to master in order to successfully follow an EMI module. Taking the word list of an

EMI module content corpus as a starting point can allow the identification of terminology, collocations, phraseology and other textual conventions that may be of immediate benefit to students enrolled on an EMI course, facilitating their comprehension and production of the specialised language. An example of how such a corpus has been used to create ESP language learning activities is described in the following section.

## **5. Corpus collection, analysis, and development of language exercises**

This section provides a general overview of the educational context for which the abovementioned ESP language learning activities were developed. It then describes the process of collecting and analysing the corpus of subject-specific materials used to design ESP training tailored to the needs of a selected group of students. It also delves into the development of different types of language exercises for training sessions, reflecting on their objectives and pedagogical rationale, and provides an extensive range of illustrative examples.

### **5.1 Educational context**

During the 2019/2020 academic year, a group of students attending an English-taught psychology degree programme at a northern Italian university were provided with online language exercises specific to a first-year module in social psychology and communication (Brian, 2020). Although no linguistic prerequisites were stated on the official webpage of the module, students were required to have at least an intermediate level of English to enrol in the degree programme. Module attendance was highly recommended, but not compulsory. In addition to traditional lectures, students attending the module would be engaged in more interactive seminars and practical activities. The final assessment for both attending and non-attending students was described as a written exam with open questions. Adjustments to the module delivery mode and assessment format were necessary due to the lockdown measures introduced in response to the spread of the Covid-19 pandemic. This also affected how the ESP language learning activities were delivered, as shall be outlined below.

## 5.2 Corpus collection and analysis

To ensure that the exercises targeted the specialised vocabulary and language patterns students would encounter in the module, the lecturer provided full access to the teaching materials of the module, which included an electronic version of the module textbook, the slides to be used as visual aids during lessons, and several journal articles that students were expected to read on their own. All these materials were used to create a highly specialised corpus of 460,779 tokens and 19,938 types. In order to compile and consult the corpus, Laurence Anthony's free software tools were used, in particular AntFileConverter (Anthony 2017), TagAnt (Anthony 2015), and AntConc (Anthony 2019a). By means of the first two programmes, all files received were converted into plain text format and were assigned parts-of-speech tags before being uploaded to AntConc for linguistic investigation. Both the 'word list' and the 'concordance' functions of AntConc were used to explore the corpus, identify the most frequent words, and analyse how they are typically used in context. Attention was paid not only to the use of specialised nouns, but also to other parts of speech, such as adjectives, verbs, prepositions, as well as to numbers and percentages. In addition, the 'keyword list' function made it possible to compare the corpus created with a larger and less specialised corpus of psychology texts generated by AntCorGen (Anthony, 2019b), which totalled 192,673,447 tokens. Similarly, a comparison was made also between the EMI module content corpus and a 10-million-word corpus of general British and American English (BNC and COCA), which was accessed through Cobb's 'Compleat Lexical Tutor' (2020), a free website that contains a variety of corpus tools. By doing so, two lists of keywords<sup>1</sup> specific to the social psychology and communication module content were created, including all those terms that occur with an unusually high frequency in the corpus of module materials compared to the two reference corpora used. These key terms were then examined through AntConc's concordance tool to search for patterns of use, collocations, and related phraseology. All terms occurring in frequently attested lexico-grammatical patterns, particularly those that were considered central to understanding and speaking about the subject matter or that could pose difficulties for the students, were compiled into a third and final keyword list (see Table 1). Both the key terms and their associated collocations were then incorporated into the language exercises.

---

<sup>1</sup> Keywords are "words that occur with an unusually high frequency in a text or corpus when that text or corpus is compared with another corpus" (Bowker & Pearson, 2002: 114-5).

*Table 1: Keyword list used to inform the language exercises.*

Aggression	Identity
Alienation	Impression
Attitude	Interaction
Authority	Isomorphism
Behavior	Mediation
Commitment	Negotiation
Communication	Patient
Criticism	Person
Deception	Physician
Deviance	Processes
Disclosure	Psychology
Embarrassment	Relation
Emotions	Relationships
Goals	Research
Group	Responsibility
Schemas	Stigmatization
Self	Symbol
Socialization	Theory
Speech	Threat
Stereotypes	Violence

### 5.3 Development of language exercises

The language exercises created for the students were directly informed by the results of the corpus investigation and were organised in the form of three training sessions to be completed online during the first four weeks of the module (see Table 2). The language exercises are aimed at B2 learners of English and do not necessarily get progressively more difficult from one session to the

next. The main focus of the training sessions is the teaching of subject-specific vocabulary and phraseology, but they also incorporate a number of exercises designed to address common pronunciation, spelling, and grammar mistakes among Italian students, as previous studies have indicated that their language level can be a barrier to successful participation in EMI programmes (Guarda & Helm, 2016). The exercises were created using Wooclap, an online learning platform that is designed to boost students' motivation, active participation in class, and long-term learning (Lebbe & Alzetta, 2015). It can be used in two modalities: the 'votes' mode, which enables students to interact with their teachers during lessons by asking and answering questions in real time through their smartphones, tablets, and laptops, and the 'participant pace' mode, which allows them to complete questionnaires and activities from home and at their own pace (Lebbe & Alzetta, 2015). In this case, the latter modality was chosen because it seemed to fit better with the unusual circumstances under which these online training sessions were delivered. At the end of February 2020, universities in Italy suspended face-to-face classes and moved courses online due to the spread of the Covid-19 pandemic. Therefore, even though the original plan was to make language training part of the EMI lesson routine with the tasks carried out in class, in the end the only possible solution was to ask students to complete the language exercises from home.

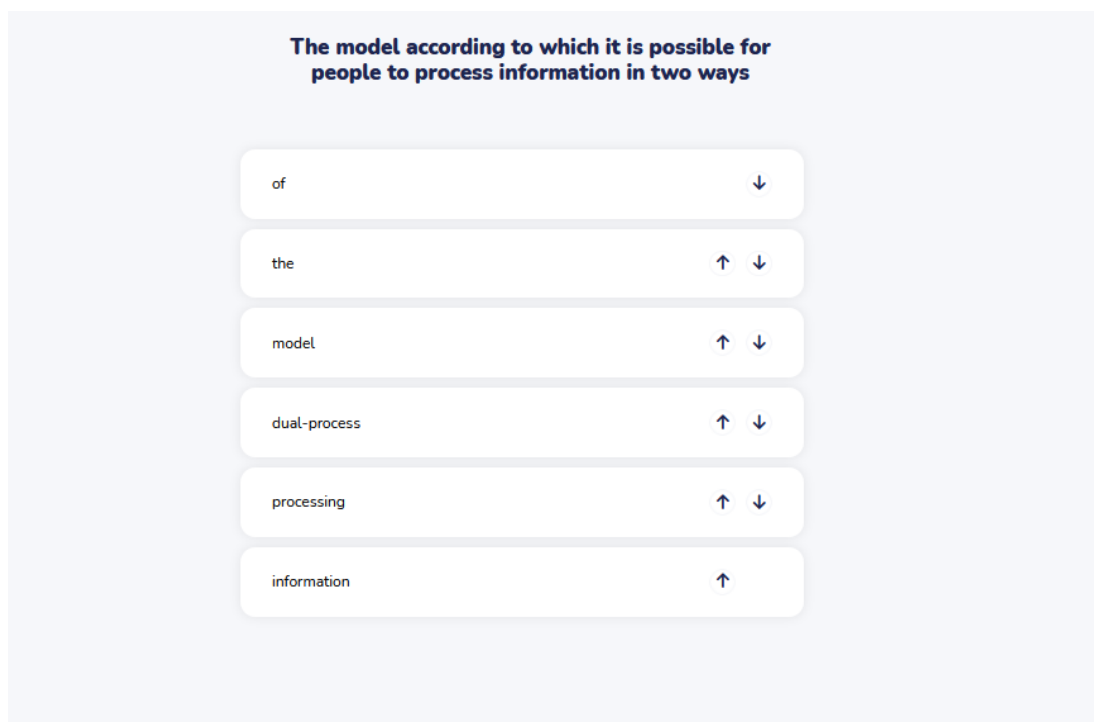
*Table 2: Activity plan.*

<b>Session</b>	<b>Week of the course</b>	<b>Focus of the tasks</b>
session 1	1st week	pronunciation, specialised nouns and adjectives, noun phrases, nominalisation
session 2	2nd week	spelling, numbers and percentages, verbs and prepositions
session 3	4th week	pronunciation, spelling, compound nouns, noun phrases, specialised nouns and adjectives, numbers and percentages

The following subsections illustrate the different types of language exercises developed for the training sessions. These exercises are grouped according to recurring linguistic features identified in the corpus, such as extended noun phrases typical of academic discourse, compound nouns, compound adjectives, nominalised forms of verbs, and expressions involving numerical data and percentages used to report research findings.

### 5.3.1 Specialised nouns and adjectives

Three different types of exercises on discipline-specific nouns were included in the first and third training sessions focusing on noun phrases, compound nouns, and nominalisation. These are typical features of the academic texts that students were expected to encounter during the module, as emerged from the investigation of the corpus. The first type of exercise presented students with the components of some noun phrases along with the definition of each term, which they were asked to rearrange in the correct order (see Figure 1). Both shorter noun phrases with few premodifiers preceding the head noun, such as “human communication apparatus”, and longer ones characterised by premodifiers and postmodifiers, such as “a positive mental health effect stemming from participation in the group”, were included, so as to provide a range of tasks that were accessible for students with lower levels of English and challenging for those with higher levels. The second type of exercise focused on compound nouns (see Figure 2). Here students were asked to match some compound nouns with “self-”, such as “self-deception”, “self-discrepancy”, “self-enhancement”, and “self-schema”, with the definition of each term taken from the APA Dictionary of Psychology (2020). In the third type of exercise, students had to complete a crossword by converting the verbs provided in the clue section into nouns.



*Figure 1: Example of exercise on noun phrases.*

**In your academic field, compound nouns with "SELF" are quite common. You can find some of them below. Try to match each noun with its definition:**

Self-disclosure  
Select choice

Self-enhancement  
Select choice

Self-deception  
Select choice

Self-discrepancy  
Select choice

Self-reinforcement  
Select choice

Self-schema  
Select choice

Select choice

- A. an incongruity between different aspects of one's self-concept, particularly between one's actual self and either the ideal self or the ought self
- B. the act of revealing personal or private information about one's self to other people
- C. the process or result of convincing oneself of the truth of something that is false or invalid
- D. the control of one's behavior through the use of self-monitoring, self-evaluation, and self-reinforcement
- E. the evaluation of one's own behavior and attributes, with recognition of one's weaknesses, errors, and shortcomings
- F. the tendency to seek recognition for one's individuality and uniqueness, particularly in contrast to the other members of one's social group
- G. a cognitive framework comprising organized information and beliefs about the self that guides a person's perception of the world
- H. one's description and evaluation of oneself, including psychological and physical characteristics, qualities, skills, roles and so forth
- I. the rewarding of oneself for appropriate behavior or the achievement of a desired goal
- J. any strategic behavior designed to increase either self-esteem or the esteem of others

*Figure 2: Example of exercise on compound nouns.*

Furthermore, four different types of exercises on discipline-specific adjectives were included in the first and third training sessions. Focusing on specialised adjectives seemed indeed important because when they premodify some common keywords in the field, they tend to make these words take on a specialised meaning that may not be fully understood by those who are not experts in psychology. In one exercise, students were asked to match some specialised adjectives describing the keyword "behavior"<sup>2</sup> with the definition for each term, such as "proattitudinal", "adaptive", and "antisocial" (see Figure 3). In another exercise, they were asked to create some compound adjectives, such as "goal-directed" and "identity-confirming". The last two exercises consisted in finding opposite adjectives to describe the keyword "communication", such as "verbal - nonverbal" and "synchronous - asynchronous", and finding the negative form of a selection of adjectives by adding the negative prefixes "dis-", "non-", "anti-", "counter-", "in-", and "un-".

<sup>2</sup> The students were advised to use the American spelling throughout as it was observed that this was the prevalent variety in the corpus.

**"BEHAVIOR" is a keyword in your academic field. Below you can find some adjectives used to describe it. Try to match each one of them with its definition:**

Goal-directed  
Select choice

Proattitudinal  
Select choice

Innate  
Select choice

Adaptive  
Select choice

Select choice

A. behavior that reflects and is consistent with a person's attitude towards someone or something  
B. any behavior that enables an individual to adjust to the environment appropriately and effectively  
C. behavior that is odd, strange, or unexpected, particularly if it is out of the ordinary for a given person  
D. behavior that is explicit, that is, observable without instruments or expertise  
E. behavior characterized by the use or overuse of defense mechanisms in response to real or imagined threats of harm  
F. behavior that is oriented toward attaining a particular aim  
G. behavior that sharply deviates from social norms and also violates other people's rights  
H. behavior that appears to be developed and expressed with no specific training or experience and thus has a strong genetic basis

Antisocial  
Select choice

Defensive  
Select choice

*Figure 3: Example of exercise on specialised adjectives.*

### 5.3.2 Pronunciation

Although EMI students have been reported to prioritize intelligibility over accurate pronunciation, the ability to correctly articulate key words in a discipline can enable them to speak with greater clarity, authority and confidence (Gómez Lacabex & Gallardo-del-Puerto, 2021; Gómez Lacabex & Roothoof, 2023). Three different exercises focusing on pronunciation were included in the first and third training sessions. In the first exercise, the students were asked to focus on the /ð/ and /θ/ phonemes. Specifically, they were given a list of words containing the "th" digraph and were asked to distinguish between the cases in which the sound is voiced (/ð/), as in "other" and "gathering", and those in which it is unvoiced (/θ/), as in "theory" and "empathy". In the second exercise, the focus was on the letter "y", especially on how it can be pronounced as either /ɪ/ as in "physician" or /aɪ/ as in "stereotype" and "psychology". In this case, the students not only had to identify the different sounds of some selected keywords, but they also had to complete a fill-in-the-gaps exercise, in which the first four sentences needed to be completed with a word containing the /aɪ/ sound, while the last four sentences required a word with the /ɪ/ sound (see Figure 4). All the sentences in this exercise were taken from the EMI module content corpus. Finally, in the third exercise, the students were asked to analyse individual words containing the letter "i" and state in

each case whether it had to be pronounced as either /ɪ/ as in “alienation” or /aɪ/ as in “anxiety”. As with previously mentioned exercises, in these pronunciation exercises, the focus was mainly on those English words whose Italian cognates have a similar spelling, but a different pronunciation, such as the initial phoneme in the English word “identity”(/aɪ/) and the Italian word “identità” (/ɪ/).

**Use only the words with the /aɪ/ sound to complete the first four sentences and the words with the /ɪ/ sound to complete the last four sentences:  
 PHYSICIAN, LIFESTYLE, SYSTEM, ANONYMITY,  
 HYPOTHESIS, SYMBOL, STEREOTYPE,  
 PSYCHOLOGY**

Words with the /aɪ/ sound

- 1) We define social \_\_\_\_\_ as the systematic study of the nature and causes of human social behavior.
- 2) These results are consistent with the \_\_\_\_\_ that girls and boys are being socialized to believe that there is a gender difference in math performance.
- 3) A \_\_\_\_\_ is a set of characteristics attributed to all members of some specified group or social category.
- 4) Occupational status is a key component of social standing and a major determinant of income and \_\_\_\_\_.

Words with the /ɪ/ sound

- 5) Complete \_\_\_\_\_ of research participants should be preserved.
- 6) Holding certain attitudes may be seen as a \_\_\_\_\_ of loyalty to the group.
- 7) Spoken language is a socially acquired \_\_\_\_\_ of sound patterns with meanings agreed on by the members of a group.
- 8) How does patient agency affect the \_\_\_\_\_-patient dynamic within the visit?

*Figure 4: Example of exercise on pronunciation.*

### 5.3.3 Spelling

Since the students’ knowledge of the module content would be assessed via a written exam with open-ended questions, spelling exercises were designed to help students focus on accuracy in their writing. Two different types of spelling exercises were included in both the second and the third training sessions. In the first type, students were provided with two spelling alternatives for each word and were asked to choose the correct option. As with pronunciation exercises, this type of spelling exercise also intended to direct the students’ attention to those English terms whose spelling is similar to that of their Italian equivalents and which are therefore more likely to be

misspelled, such as “communication” (comunicazione) and “responsibility” (responsabilità). The second type of exercise was slightly more complex because it asked students to work with words that look alike and then tend to be easily mistaken even by advanced learners of English, such as “thorough”, “though”, “thought” (noun), “thought” (verb), “through” and “tough”. They had to match each word with its definition and then use them to complete a fill-in-the-gaps exercise (see Figure 5), where the texts were taken directly from the corpus of course materials.

**Look out for those words that look alike: match each word with its definition.**

Thorough

Select choice

Though

Select choice

Thought (noun)

Select choice

Thought (verb)

Select choice

Through

Select choice

Tough

Select choice

Select choice

- A. difficult, strong, severe
- B. from one end or side of something to the other
- C. simple past of the verb “to think”
- D. careful and covering every detail
- E. used to introduce a fact or opinion that makes the other part of the sentence seem surprising
- F. an idea or opinion

[Submit](#)

Figure 5: Example of exercise on spelling.

#### 5.3.4 Verbs and prepositions

The second training session focused on the collocation of high-frequency verbs with specific prepositions, as well as verbs that necessarily require an object before the preposition. In particular, students were asked to complete a fill-in-the-gaps exercise with the prepositions “in”, “on”, “for”,

and “with” (see Figure 6). The focus was again on those English verbs that collocate with different prepositions from those used with cognate verbs in Italian and may then be more easily mistaken, such as “depend + on”, typically translated as “depend from” (dipendere da) and “participate + in”, often mistakenly translated as “participate to” (partecipare a). In addition, they were asked to pay particular attention to the structures “allow + object + to” and “enable + object + to”, since their Italian equivalent is the verb “permettere”, which does not necessarily need an object (e.g., “Observational techniques allow researchers to study social activity in real world settings”). Students were also asked to work on finding synonyms for common reporting verbs such as “say” and “think”, which they often tend to overuse, thus making their texts and presentations sound too repetitive.

**Some English verbs are often followed by prepositions. Try to complete this fill-in-the-blank exercise with the following prepositions: in, on, for, with.**

- 1) If members of a group agree \_\_\_\_\_ the meanings of particular identities and behaviors, they can regulate their own behavior effectively.
- 2) Two people waiting to participate \_\_\_\_\_ a psychology experiment may begin talking by speculating about the purpose of the experiment.
- 3) When we notice the physiological reaction produced by an event in the environment, we tend to search \_\_\_\_\_ an appropriate explanation.
- 4) The opportunities for deviance available to a person depend \_\_\_\_\_ age, sex, kinship, ethnicity, and social class.
- 5) The widespread use of emoticons is an effort to compensate \_\_\_\_\_ the difficulty of conveying emotions.
- 6) Research indicates that individuals with family support are more likely to cope \_\_\_\_\_ stressful events by using active strategies rather than avoidance or withdrawal strategies.
- 7) Theories of attribution focus \_\_\_\_\_ the methods we use to interpret another person's behavior and to infer its sources.
- 8) Understanding the norm of reciprocity, those in need are less likely to ask \_\_\_\_\_ help when they believe they will not be able to repay the aid in some form.

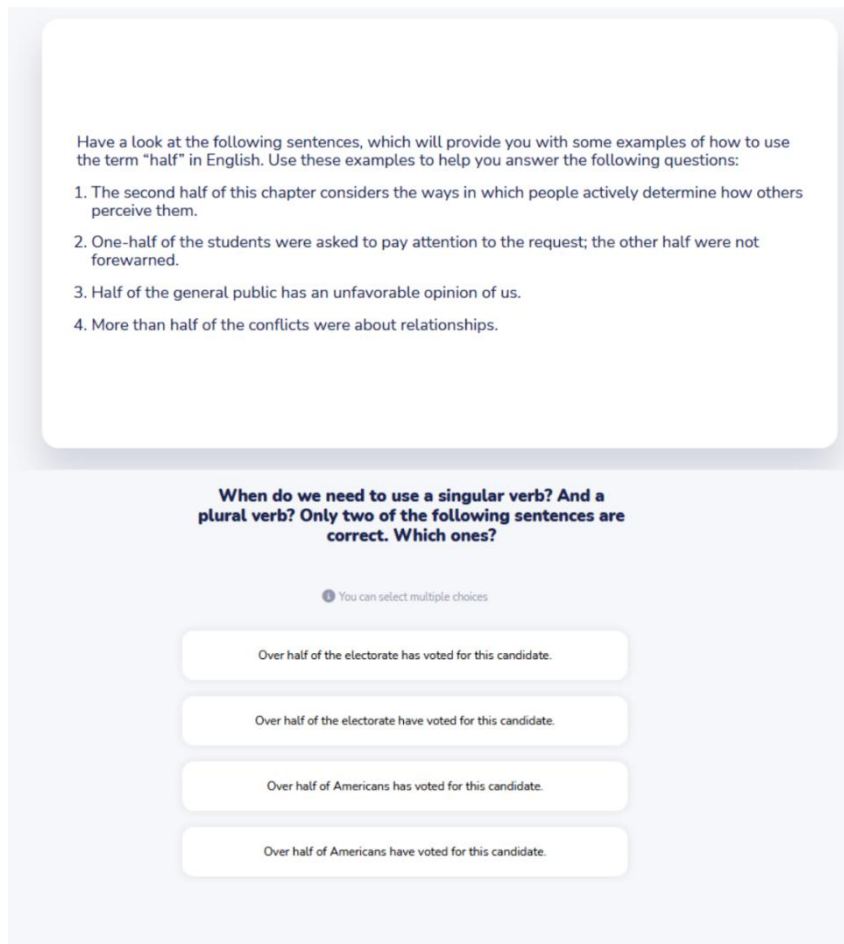
[Submit](#)

*Figure 6: Example of exercise on verbs and prepositions.*

### 5.3.5 Numbers and percentages

Some of the exercises in the third training session focused on numbers, percentages and related phraseology, which students should be able to use competently, especially for reporting the results of psychological tests and experiments. To promote a hands-off form of DDL, whereby

students explore corpus data for themselves (Boulton, 2012b), the students were provided with some pre-selected examples from the corpus to enable them to figure out how to use numbers and percentages correctly (see Figure 7). To guide them towards discovering key features, they were asked whether the definite article “the” should be put before percentages, whether a singular or a plural verb should come after percentages, whether it is a point or a comma that separates the integer part from the fractional part of a number, what happens when a number occupies the first position in a sentence, and how the term “half” can be used in a sentence.



Have a look at the following sentences, which will provide you with some examples of how to use the term “half” in English. Use these examples to help you answer the following questions:

1. The second half of this chapter considers the ways in which people actively determine how others perceive them.
2. One-half of the students were asked to pay attention to the request; the other half were not forewarned.
3. Half of the general public has an unfavorable opinion of us.
4. More than half of the conflicts were about relationships.

**When do we need to use a singular verb? And a plural verb? Only two of the following sentences are correct. Which ones?**

You can select multiple choices

- Over half of the electorate has voted for this candidate.
- Over half of the electorate have voted for this candidate.
- Over half of Americans has voted for this candidate.
- Over half of Americans have voted for this candidate.

*Figure 7: Example of hands-off DDL exercise on numbers and percentages.*

## 6. Discussion and conclusion

This study has presented a model for promoting the inclusion of a focus on specialised language learning into the EMI syllabus through the use of an EMI module content corpus. Such a corpus-informed approach can allow the identification of key terminology and linguistic features specific to a discipline of study, ensuring that the ESP training addresses the real language needs

of the students. This approach has also been chosen because specialised corpora can provide an authentic representation of the language used for constructing and transmitting knowledge within a certain disciplinary community, without hiding its complexities and irregularities (Hadley, 2002).

The model for corpus-informed materials development proposed here may be used as part of an ESP course provided as support for EMI students or as self-access materials to be used by students enrolled on an EMI module. While the intended integration of the activities into the EMI lessons was not possible because of the suspension of face-to-face classes in 2020, the exercises were designed to be used by students working autonomously, as they were guided through the materials through the use of the platform for interactive learning, Wooclap. All the activities were intended to promote self-discovery of discipline-specific vocabulary and phraseology in order to preserve the intrinsic nature of data-driven learning. This particular form of language training is expected to give EMI students the chance to work on improving their language skills and become more competent and confident in using the specialised language of their discipline of choice. Indeed, in the three sessions the students were guided through interactive tasks, leading towards a hands-off form of DDL in the third set of exercises. This approach, whereby students explore materials in an inductive approach to learning, can be seen as the gold standard in corpus-informed language learning. Future use of an EMI module content corpus in face-to-face lessons may see the integration of the so-called hands-on DDL approach (Boulton, 2012b) where, following initial step-by-step training and teacher guidance, the students will gain the competence and confidence to use the corpus with concordancing software to explore, retrieve and interpret linguistic data for themselves. Students may also learn how to create their own module content corpus, consisting of course materials and self-selected texts (see Charles, 2012). Future research should investigate how the use of corpus-informed interactive exercises and hands-on DDL, both based on an EMI module content corpus, may be of value in both ESP courses and self-study programmes for EMI students.

More research is called for into how EMI and ESP practitioners could join forces for the development of discipline-specific language support (Lasagabaster, 2018; Costa & Mastellotto, 2022; McKinley & Rose, 2022). This may address how the sharing of expertise, in terms of knowledge of content and knowledge of language learning processes, can further inform the development of ESP materials. However, it may also lead to the incorporation of a focus on form and terminology in the EMI syllabus, with language teachers helping content teachers to recognise

their key role as “discourse guide” (Airey, 2012), thus motivating them to include a focus on language in their lessons. Lasagabaster (2018) suggests experimental research to compare the outcomes of students who have used materials developed through a team-teaching approach with those of students with no team-teaching support.

While it is acknowledged that focusing on specialised terms and phraseology is only one aspect of promoting proficiency in the discourse of a discipline (Ricci Garotti, 2021), we believe that it can provide a valuable foundation. Further research into the effectiveness of corpus-informed, discipline-specific language learning activities - including longitudinal investigations - will allow ESP practitioners to better understand how curricula and materials can most effectively support EMI students in dealing with language-related challenges.).

## 7. References

- Ackerley, K. (2017). What the students can teach us about EMI and language issues. In K. Ackerley, M. Guarda, & F. Helm (Eds.), *Sharing perspectives on English-medium instruction* (pp. 257-284). Peter Lang. <http://doi.org/10.3726/978-3-0343-2538-7>
- Airey, J. (2010). The ability of students to explain science concepts in two languages. *Hermes - Journal of Language and Communication Studies*, 45, 35-50. <https://doi.org/10.7146/hjlc.v23i45.97344>
- Airey, J. (2012). I don't teach language. The linguistic attitudes of physics lecturers in Sweden. *AILA Review*. 25. 64-79. <http://doi.org/10.1075/aila.25.05air>
- Airey, J. & Linder, C. (2006). Language and the experience of learning university physics in Sweden. *European Journal of Physics*. Vol. 27(3), pp. 553-560. <https://doi.org/10.1088/0143-0807/27/3/009>
- Aizawa, I., Rose, H., Thompson, G., & McKinley, J. (2025). Content knowledge attainment in English medium instruction: Does academic English literacy matter? *Language Teaching Research*. <https://doi.org/10.1177/13621688241304051>
- Al Zumor, A. Q. (2019). Challenges of using English medium instruction (EMI) in teaching and learning university scientific disciplines: Student voice. *International Journal of Language Education*, 1(1), 74-88. <https://doi.org/10.26858/ijole.v1i1.7510>
- American Psychological Association (2020). *APA dictionary of psychology*. [Online]. [Accessed 12 January 2020]. Available from: <https://dictionary.apa.org/>
- Anthony, L. (2015). *TagAnt (Version 1.1.0) [Computer Software]*. Tokyo, Japan: Waseda University. <https://www.laurenceanthony.net/software/tagant/>
- Anthony, L. (2017). *AntFileConverter (Version 1.2.1) [Computer Software]*. Tokyo, Japan: Waseda University. <https://www.laurenceanthony.net/software/antfileconverter/>

- Anthony, L. (2019a). AntConc (Version 3.5.8). [Computer Software]. Tokyo, Japan: Waseda University. <https://www.laurenceanthony.net/software/antconc/>
- Anthony, L. (2019b). AntCorGen (Version 1.1.2). [Computer Software]. Tokyo, Japan: Waseda University. <https://www.laurenceanthony.net/software/antcorgen/>
- Arnbjörnsdóttir, B. & Prinz, P. (2017). From EFL to EMI: Developing writing skills for the humanities. *Journal of English for Specific Purposes at Tertiary Level*. 5(2), 172-195. <https://doi.org/10.18485/esptoday.2017.5.2.3>
- Bernhardt, E. (2005). Progress and procrastination in second language reading. *Annual Review of Applied Linguistics*, 25, 133-150. <http://doi.org/10.1017/S0267190505000073>
- Bowles, H. & Murphy, A. (2020). EMI and the internationalization of universities: An overview. In H. Bowles & A. Murphy (Eds.), *English-medium instruction and the internationalization of universities* (pp. 1-26). Springer International Publishing. <https://doi.org/10.1007/978-3-030-47860-5>
- Boulton, A. (2012a). Corpus consultation for ESP: A review of empirical research. In A. Boulton, S. Carter-Thomas & E. Rowley-Jolivet (Eds.), *Corpus-informed research and learning in ESP: Issues and applications* (pp.261-291). John Benjamins. <http://doi.org/10.1075/scl.52.11bou>
- Boulton, A. (2012b). Hands-on / hands-off: Alternative approaches to data-driven learning. In J. Thomas & A. Boulton (Eds.), *Input, process, and product: Developments in teaching and language corpora* (pp. 152–168). Masaryk University Press.
- Boulton, A., Carter-Thomas, S & Rowley-Jolivet, E. (2012). Issues in corpus-informed research and learning in ESP. In A. Boulton, S. Carter-Thomas & E. Rowley-Jolivet (Eds.), *Corpus-informed research and learning in ESP: Issues and applications* (pp.1-14). John Benjamins. <http://doi.org/10.1075/scl.52.01bou>
- Bowker, L., & Pearson, J. (2002). *Working with specialized language. A practical guide to using corpora*. Routledge.
- Braun, S. (2005). From pedagogically relevant corpora to authentic language learning contents. *ReCALL*, 17(1), 47–64. <http://doi.org/10.1017/S0958344005000510>
- Brian, A. (2020). A case study of corpus-informed ESP language learning materials for EMI psychology students at the University of Padova [Master's thesis, University of Padua]. Padua Thesis and Dissertation Archive. <https://thesis.unipd.it/handle/20.500.12608/22140>
- British Council and Studyportals (2024). Mapping English-taught programmes in Europe. Europe's rising significance for international education. <https://takeielts.britishcouncil.org/sites/default/files/mapping-online-english-taught-programmes-in-europe.pdf>
- Brumfit, C. (2004). Language and higher education: Two current challenges. *Arts and Humanities in Higher Education*. 3(2), 163–173. <https://doi.org/10.1177/1474022204042685>
- Buck, G. (2001). *Assessing listening*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511732959>
- Charles, M. (2012). 'Proper vocabulary and juicy collocations': EAP students evaluate do-it-yourself corpus-building. *English for Specific Purposes*. 31(2), 93-102.

- Charles, M. & Frankenberg-Garcia, A. (2021). Introduction: Dichotomies and debates in corpora in EAP/ESP writing. In M. Charles & A. Frankenberg-Garcia (Eds.), *Corpora in ESP/EAP Writing Instruction. Preparation, Exploitation, Analysis* (pp. 1-10). Routledge. <https://doi.org/10.4324/9781003001966>
- Cobb, T. M. (2020). The Compleat Lexical Tutor - KeyWords Extractor (Version 2.2). [Online]. [Accessed 28 April 2025]. <https://www.lexutor.ca/key/>
- Costa, F. & Coleman, J. (2013). A survey of English-medium instruction in Italian higher education. *International Journal of Bilingual Education and Bilingualism* 16(1), 3–19. <https://doi.org/10.1080/13670050.2012.676621>
- Costa, F. & Mastellotto, L. (2022). The Role of English for Specific Purposes (ESP) in Supporting the Linguistic Dimension in English-medium Instruction (EMI). *CLIL Journal of Innovation and Research in Plurilingual and Pluricultural Education*, 5(2), 37-52. <https://doi.org/10.5565/rev/clil.91>
- Flowerdew, Lynne. (2023). Corpora for EAP Writing. In R. Jablonkai & E. Csomay (Eds.), *The Routledge Handbook of Corpora and English Language Teaching and Learning* (pp. 234-247). Routledge. <https://doi.org/10.4324/9781003002901-19>.
- Galloway, N. & Ruegg, R. (2020). The provision of student support on English Medium Instruction programmes in Japan and China. *Journal of English for Academic Purposes*, 45, 100846. (doi: 10.1016/j.jeap.2020.100846)
- Galloway, N., Sahan, K., & McKinley, J. (2024). English for specific purposes in surging English-medium instruction contexts. *Journal of English-Medium Instruction*, 3(2), 236–259. <https://doi.org/10.1075/jemi.23011.gal>
- Guarda, M. (2022). *Student perspectives on English-medium instruction: Insights from an Italian university*. Routledge.
- Guarda, M. & Helm, F. (2016). I have discovered new teaching pathways: The link between language shift and teaching practice. *International Journal of Bilingual Education and Bilingualism*. 20(7), 897-913. <https://doi.org/10.1080/13670050.2015.1125848>
- Gómez Lacabex, E. & Gallardo-del-Puerto, F. (2021). Pronunciation in EMI: A preliminary study of Spanish university students' intelligibility and comprehensibility. In D. Lasagabaster & A. Doiz (Eds.), *Language Use in English-Medium Instruction at University. International Perspectives on Teacher Practice* (pp. 126-144). Routledge.
- Gómez Lacabex, E. & Roothoof, H. (2023). Pronunciation in EMI. *Journal of Multilingual Theories and Practices*. 4(1), 76-98. <https://doi.org/10.1558/jmtp.23508>
- Gundermann, S. (2014). *English-medium instruction: Modelling the role of the native speaker in a lingua franca context*. NIHIN Studies.
- Hadley, G. (2002). An Introduction To Data-Driven Learning. *RELC Journal*. 33(2), 99-124. <https://doi.org/10.1177/003368820203300205>
- Hellekjær, G. O. & Westergaard, M. (2002). An exploratory survey of content learning through English at Scandinavian universities. In A. M. Simensen (Ed.), *Teaching and Learning Foreign Languages* (pp.65-80). Unipub.

- Hunston, S. (2002) *Corpora in Applied Linguistics*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139524773>
- Jenkins, J. (2014). *English as a lingua franca in the international university: The politics of academic English language policy*. Routledge.
- Karakas, A. (2017). The forgotten voices in higher education: Students' satisfaction with English-medium instruction. *The Journal of English as an International Language*. 12(1), 1-14.
- Karlgren, J. & Hansen, P. (2003). Cross-language relevance assessment and task context. In C. Peters, (Ed.), *Third Workshop of the Cross-Language Evaluation Forum (CLEF 2002)*. Springer.
- Lasagabaster, D. (2018). Fostering team teaching: Mapping out a research agenda for English-medium instruction at university level. *Language Teaching*, 51(3), 400–416. <http://doi.org/10.1017/S0261444818000113>
- Lebbe, S. & Alzetta, J. (2015). *Wooclap*. [Software]. Available from: <https://www.wooclap.com/>
- Macaro, E. (2018). *English medium instruction*. Oxford University Press.
- Marginson, S. and van der Wende, M. (2007). Globalisation and Higher Education. *OECD Education Working Papers*, 8, 5-85. <https://doi.org/10.1787/173831738240>
- Meunier, F. & Gouverneur, C. (2009). New types of corpora for new educational challenges: Collecting, annotating and exploiting a corpus of textbook material. In K. Aijmer (Ed.), *Corpora and language teaching*. Benjamin. <http://doi.org/10.1075/scl.33.16meu>
- McKinley, J. & Rose, H. (2022). English language teaching and English-medium instruction: Putting research into practice. *Journal of English-Medium Instruction*, 1(1), 85-104. <http://doi.org/10.1075/jemi.21026.mck>
- Northedge, A. (2002). Organizing excursions into specialist discourse communities: A sociocultural account of university teaching. In G. Wells & G. Claxton (Eds.), *Learning for life in the 21st century. Sociocultural perspectives on the future of education* (pp.252-264). Blackwell. <https://doi.org/10.1002/9780470753545.ch19>
- Othman, J. (2024). Academic vocabulary learning in EMI classrooms: Challenges and strategies. *Arab World English Journal*, 15(2), 3-18. <https://dx.doi.org/10.24093/awej/vol15no2.1>
- Öztürk, G. & Gürbüz, N. (2014). Speaking anxiety among Turkish EFL learners: The case at a state university. *Journal of Language and Linguistic Studies*, 10(1), 1-17.
- Pecorari, D. (2020). English medium instruction: Disintegrating language and content? In D. Slobodanka & J. Kling (Eds.), *Integrating content and language in multilingual universities* (pp. 15–36). Springer. [http://doi.org/10.1007/978-3-030-46947-4\\_2](http://doi.org/10.1007/978-3-030-46947-4_2)
- Ricci Garotti, R. (2021). CLIL: Internationalisation or pedagogical innovation? In L. Mastellotto & R. Zanin (Eds.), *EMI and Beyond: Internationalising Higher Education Curricula in Italy* (pp. 241-259). bu,press.
- Rose, H., Curle, S., Aizawa, I., & Thompson, G. (2020). What drives success in English medium taught courses? The interplay between language proficiency, academic skills, and motivation. *Studies in Higher Education*, 45(11), 2149–2161. <https://doi.org/10.1080/03075079.2019.1590690>

- Thompson, G., Aizawa, I., Curle, S., & Rose, H. (2022). Exploring the role of self-efficacy beliefs and learner success in English medium instruction. *International Journal of Bilingual Education and Bilingualism*, 25(1), 196–209. <https://doi.org/10.1080/13670050.2019.1651819>
- van der Walt, C. (2013). Multilingual higher education: Beyond English medium orientations. *Multilingual Matters*.
- Wächter, B., & Maiworm, F. (Eds.) (2014). *English-Taught Programmes in European higher education. The state of play in 2014*. Lemmens.
- Wilkinson, R. (Ed.) (2004). *Integrating Content and Language: Meeting the Challenge of a Multilingual Higher Education*. Universitaire Pers Maastricht.
- Wilkinson, R. (2017). Trends and issues in English-medium instruction in Europe. In K. Ackerley, M. Guarda, & F. Helm (Eds.), *Sharing perspectives on English-medium instruction* (pp. 36-75). Peter Lang. <http://doi.org/10.3726/978-3-0343-2538-7>