

II. ARTICLES

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The pedagogical potential of multimodality in EMI

ABSTRACT. The exponential growth of content subjects taught in English as an additional language has led to a surge in research on English-medium instruction (EMI), particularly within the European Higher Education Area (EHEA). Despite this growing interest, there remains an urgent need to evaluate the pedagogical approaches employed by EMI educators and their impact on teaching and learning outcomes. In terms of teacher training, harnessing the ability to integrate teaching methodology and language awareness in the EMI classroom is identified as pivotal. Within this context, the concept of multimodal competence – defined as the ability to exploit a range of semiotic resources to construct and communicate meaning – has emerged as a key component of effective EMI pedagogy. This study presents a 30-hour research-informed EMI teacher training programme implemented at a Spanish university, designed to foster multimodal awareness and competence. Through diagnostic assessment and reflective practice, the study evaluates the programme's effectiveness in enhancing 13 cross-disciplinary lecturers' ability to employ multimodal strategies for disciplinary knowledge construction and classroom interaction. Findings demonstrate the pedagogical potential of multimodality in EMI and offer practical insights for educational developers seeking to design inclusive and context-sensitive training initiatives.

KEYWORDS: English-Medium Instruction (EMI), higher education, multimodal competence, teaching and training.

1. INTRODUCTION

Undoubtedly spurred by internationalisation policies together with a need to prepare students for global academic and professional contexts, the implementation of English-medium instruction (EMI) across European Higher Education Area (EHEA) institutions has flourished significantly over the last decade

(Lasagabaster 2022). Yet this burgeoning practice does not seem to be on an equal footing with the pedagogical support EMI teachers require to teach such programmes. Many continue to face significant challenges related to language proficiency, fostering classroom interaction, and conveying disciplinary knowledge construction practices in a language that is not their L1 (Macaro 2024; Lasagabaster 2022).

To ensure that the current, and indeed unflinching, expansion of EMI programmes in EHEA organisations is buttressed by effective EMI teaching and learning, it is imperative that we design professional development programmes that address contemporary EMI educator needs in a comprehensive and context-sensitive manner. Concerning the pedagogical approaches that most impact teaching and learning outcomes and should, therefore, be developed in EMI teacher training, so far, there is consensus (e.g., Dimova et al. 2023; Lasagabaster 2022) on two points: 1) EMI teacher training must combine teaching methodology with language awareness; 2) effective EMI teacher training hinges on the development of multimodal competence (Beltrán-Palanques & Bernad-Mechó 2024).

The ability to exploit a range of semiotic resources – verbal, non-verbal, visual, spatial, and digital – to construct and communicate disciplinary knowledge is referred to as multimodal competence (Jewitt et al. 2016; Beltrán-Palanques & Bernad-Mechó 2024). In EMI contexts, where language may act as a barrier to comprehension, multimodal strategies can serve to scaffold meaning, foster interaction and enhance learner engagement (Sabaté-Dalmau & Moncada-Comas 2023; Ruiz de Zarobe & Querol-Julián 2025). Multimodal knowledge construction is particularly relevant in EMI lectures, where the integration of embodied modes (i.e., paralinguistic features such as tone of voice, pitch, volume, tempo, pauses, articulation and intonation, facial expressions, gestures, posture, eye contact, space and proxemics) and disembodied modes (i.e., presentations, visual images, digital media and realia *inter alia*) can significantly influence how students access and internalise complex disciplinary concepts and language. What is more, the fact that disciplinary conventions have been shown to shape (and limit) the use and interpretation of multimodal resources (González-Mujico & Lasagabaster 2024, 2025) means that we need to equip teachers with an array of tools to navigate multimodal communication effectively, especially in multilingual and multicultural classrooms. For this reason, it is necessary to address the pedagogical challenges faced by EMI teachers through the development of effective teaching practices that harness multimodal competence.

Against this backdrop, the present study seeks to contribute to the growing body of research on EMI teacher development by focusing on the integration of multimodal competence into professional training programmes. Drawing on the Universal Design for Learning (UDL) framework (CAST 2018) and Kurtán's

(2003) pillars of EMI teacher training – language competence, pedagogy, and multicultural awareness – this study presents a research-informed EMI training programme implemented at a Spanish university. To address the pedagogical challenges faced by EMI lecturers and to contribute to the development of effective teaching practices within the EHEA, this study sets out a primary objective: to design, implement, and evaluate a comprehensive EMI teacher training programme that fosters multimodal awareness and competence among university lecturers. In support of this overarching aim, the study also pursues the following two specific objectives:

OBJ 1. To design and implement a comprehensive EMI teacher training programme that fosters multimodal awareness and competence.

OBJ 2. To assess the programme's effectiveness in the development of teacher multimodal awareness and competence through needs analysis surveys and diagnostic assessment (i.e., course evaluations).

To follow, a brief literature review of relevant studies is included presenting a case for multimodal competence in EMI. This is followed by a description of the sample and methodology. After which, the main results of the study together with a discussion on the implications our findings have for this area of research are provided. In the final section, the main conclusions and limitations are outlined.

2. THE CASE FOR MULTIMODAL COMPETENCE IN EMI

Multimodal competence refers to the process by which meaning and disciplinary understanding are co-constructed through the integration of multiple semiotic resources – such as language, gesture, gaze, spatial positioning, visuals, and digital tools – within instructional settings (Jewitt et al. 2016; Beltrán-Palanques & Bernad-Mechó 2024). In EMI contexts, teachers are required to navigate not only linguistic challenges but also the affordances of multimodal communication to scaffold content and engage diverse learners.

The pivotal role of multimodal competence in the EMI classroom has been underscored by several scholars. It has been demonstrated that multimodality can foster dynamic EMI learning environments when meaning is negotiated through both verbal and non-verbal means (Ruiz de Zarobe & Querol-Julián 2025), and that EMI teachers can enhance clarity and inclusivity in their teaching by developing a range of communicative modes and linguistic repertoires (Sabaté-Dalmau & Moncada-Comas 2023).

Although it is not an innate competence, it can (and should) be targeted through training and reflective pedagogical design. EMI teachers can become

more aware of their embodied and visual communication strategies engaging in reflective practice within EMI education (Ruiz de Zarobe & Querol-Julián 2025). From a disciplinary perspective, however, the use and interpretation of multimodal resources appear to be shaped by disciplinary conventions and epistemologies (González-Mujico & Lasagabaster 2024). The effectiveness of non-linguistic resources – such as gesture, gaze and spatial organization – are not merely supportive but constitutive of meaning-making in disciplinary discourse (Moncada-Comas & Sabaté-Dalmau 2024). Overall, these results endorse the need to consider discipline-specific multimodal practices when designing EMI training and curricula, as what may be effective communication in one subject may differ significantly in another.

Taken together, these studies position multimodal competence as a foundational element of EMI teaching and learning. Far from being peripheral, multimodal practices are integral to how knowledge is communicated, negotiated and internalised in multilingual and multicultural higher education settings. Building on the theoretical rationale for comprehensive EMI teacher training and the identified need to enhance pedagogical practices through multimodal awareness, the following section delves into effective multimodal strategies in action and key approaches that have proved successful in real EMI settings. It explores how meaning-making in EMI classrooms is shaped by the integration of diverse semiotic resources and examines recent scholarly contributions that position multimodality as a central element in effective disciplinary knowledge construction and inclusive teaching.

2.1. Effective strategies in action and key approaches

The value of exploring the genre of EMI from a multimodal approach has gained relevance over the last years (see Querol-Julián & Beltrán-Palanques 2024). In particular, understanding how the combination of semiotic resources can serve to scaffold content and language, and, subsequently, boost students' comprehension, participation and interaction, when teaching and learning is conducted in a language different from their L1, has become a fertile area of study that offers pragmatic solutions to current challenges in the EMI classroom (e.g., González-Mujico & Lasagabaster 2024, 2025; Morell 2020).

Multimodality recognises that learners construct and communicate meaning in diverse ways using a variety of semiotic resources, including speech, gestures, written text, and images (Jewitt et al. 2016). For that reason, effective EMI pedagogy entails multimodality (e.g., Morell 2018), as the use of various semiotic modes alongside language can serve to facilitate learning, namely

through embodied and disembodied modes (Ruiz de Zarobe & Querol-Julián 2025).

In the context of this study (i.e., Spanish higher education), the literature underscores multimodal awareness and competence as beneficial to the EMI teaching-learning process. For example, Morell's (2018) exploration of an EMI instructor's choice and combination of modes when instantiating an interactive lecture pair work activity showed that the coordinated use of three to four complementary mode ensembles enabled the teacher to textually organize and interpersonally involve students to elicit conceptual meaning. The most often used multimodal pattern for meaning making was the simultaneous use of gaze, gesture, and speech, and/or written concepts on the board. The study concluded that students' comprehension did not only depend on their spoken and written competence of English, but also on the non-verbal cues derived from the teacher's combined use of gaze, gestures, and space.

That the interlinking of different modes contributes to the meaning-making process is further endorsed in Boggio-López and Costa's (2025) multimodal analysis of three engineering lectures. Their findings showed that students relied on the non-verbal cues used by the EMI instructor to increase their comprehension, particularly when faced with the potential limitations of learning content through a language that is not their first. In effect, the teacher supported meaning-making practices with a high number of semiotic modes. Gestures and gaze were used to a greater extent to provide feedback on language and content issues, while the use of iconic gestures and external materials were employed to represent and reinforce the correct meaning of language misused by students. In contrast, multimodal translanguaging and translation strategies (i.e., expressing one idea through a different semiotic resource, such as moving from a verbal explanation to a graphic or drawing) were applied to resolve issues related to the miscommunication of conceptual terminology.

In their analysis of how lecturers use different verbal and non-verbal strategies to foster interaction, Fortanet-Gómez and Ruiz-Madrid (2014) found that most questions in lectures had an interactive function that afforded a more fluent negotiation of understanding and meaning of the content delivered. In this respect, paying attention to gestures when lecturers asked questions helped in their understanding and thus facilitated learners' knowledge construction. For example, comprehension checks were accompanied by gestures such as looking at the audience, pointing at them, and creating silence in order to invite their response. EMI teachers also made their speech more understandable by slowing down the pace, including frequent pauses and the use of external visual support.

The combination of semiotic modes from a digital viewpoint has also garnered recent attention. Looking at the combination of semiotic resources in the

construction of disciplinary knowledge in lectures, González-Mujico and Lasagabaster (2024, 2025) examined how PowerPoint slide content and questioning practices supported educators' spoken discourse. Results showed that limiting slide content to the combination of text and graphics constrained scaffolding strategies as it did not serve to unpack the more difficult and abstract concepts or to facilitate students' understanding. By comparison, including video content enabled students to build on previous understandings and transfer what they learnt into future contexts, supporting the cumulative construction of knowledge. Their findings also revealed significant disciplinary differences. Lecturers in the soft sciences combined semiotic modes in slide content and spoken discourse in a way that scaffolded and unpacked the understanding of conceptual knowledge to a greater extent than lecturers in the hard sciences. In the same way, lecturers in the soft sciences supported slide content with more questioning practices that fostered interaction and cognitive learning. Hence, and as Fortanet-Gómez (2020) argues, the characteristics of multimodality within disciplinary discourse also need to be taken into account.

Further afield in Italy, Costa and Mair (2022) explored the way an increased awareness of multimodal resources and the ability to deploy them effectively during EMI lectures could offset language deficits of lecturers and enhance overall communicative competence and pedagogy. By coordinating spoken language with other semiotic resources, namely, using text and graphics on lecture slides, gesture and posture to scaffold both content and spoken language, educators improved their overall communicative competence. In particular, EMI instructors were dynamic in the use of space and gestures, especially for content words that represented the keywords of their lecture. Their slides were mostly uncluttered, allowing the written and graphic modes to be used as a guide for the spoken language mode. Gesture and posture were mostly deployed for pragmatic ends and the former also used to scaffold both content and spoken language.

Undoubtedly, these findings corroborate that the ability to understand the combined potential of various modes for making and eliciting meaning is explicitly linked to effective pedagogy in EMI. Therefore, making use of a wider range of multimodal resources becomes a highly valuable skill that needs to be developed in EMI teacher training. As to how this should be done, however, remains unclear. Recommendations on the design and implementation of future EMI teacher training proposals advocate that multimodal practices complement Kurtán's (2003) three main pillars of teacher training for EMI (i.e., language competence, adequate pedagogy and multicultural and multilingual awareness), in addition to integrating technology, jointly with peer learning and mentoring. In other words, multimodality should be integrated within the provision of pedagogical (e.g., techniques for the delivery of content) and language support (e.g., classroom discourse), along with

peer collaboration and feedback on practice (Beaumont 2020; Beltrán-Palanques 2021; Fortanet-Gómez 2020; Kurtán 2003; Morell et al. 2022).

In this sense, it is also worth considering the Universal Design for Learning (UDL) guidelines (CAST, 2018) on how to improve and optimize teaching and learning based on a multimodal approach. Specifically, the fact that successful teaching and learning requires: (i) multiple modes of engagement that provide learners with various ways of activating their pre-existing knowledge, providing appropriate levels of challenge and thereby increasing motivation; (ii) multiple modes of representation that provide learners with various ways of developing and negotiating meaning; and (iii) multiple modes of action and expression that provide learners with various ways of demonstrating what they have learned.

Two recent research-informed comprehensive teacher training programmes for EMI that aim to raise multimodal awareness and competence drawing on Kurtán's framework are those proposed by Fortanet-Gómez (2020) and Morell et al. (2022). The first focusses on classroom discourse (e.g., subject-specific language and multimodality), pedagogy and didactics (e.g., combining EMI teaching methods rather than merely translating content, team teaching and assessment), and multilingualism and multiculturalism (e.g., internationalisation of the curriculum and attending to diversity in multicultural spaces). The second comprises a three-module programme with a digital, linguistic, and pedagogical focus. While the introductory module aims to provide lecturers with multimodal language strategies and resources for the EMI class, the second and third modules develop pedagogical training through reflection, awareness, practice, and observation. Although the data indicate that the programmes seem to fulfil the needs of EMI lecturers, there is scarce information available on how comprehensive teacher training programmes such as these develop multimodal awareness or competence. What is more, the need to raise EMI educators' awareness of multimodal practices in teacher training in Spain continues to be an area of concern. By way of illustration, the majority of EMI lecturers surveyed in Beltrán-Palanques' (2021) study thought training courses should deal mainly with communication and language use and pedagogy, but did not seem to regard multimodal communication as an important aspect of EMI teacher training.

Following this line of enquiry and driven by the two specific objectives presented in the introduction, the following section provides actionable, step-by-step guidance on implementing the strategies and advice presented thus far. Firstly, to design and implement a comprehensive EMI teacher training programme that fosters multimodal awareness and competence (OBJ 1). Secondly, to assess the programme's effectiveness in the development of teacher multimodal awareness and competence through needs analysis surveys and diagnostic assessment (i.e., course evaluations) (OBJ 2).

3. METHOD

To examine the two specific objectives presented in the introduction, this study employed a qualitatively driven approach with descriptive quantification. Qualitative inquiry is common in multimodal analysis as it furnishes a nuanced account of the semiotic features observed, including precisely how varied semiotic resources contribute to meaning-making practices (Hafner 2023). To begin with, the design of the programme is outlined, followed by the design of the course evaluations carried out to assess its effectiveness in the development of multimodal competence (i.e., data collection).

3.1. EMI course design

Based on Kurtán's (2003) three main pillars of teacher training for EMI and the recommendations presented in the previous section on the effective development of EMI teacher training, a research-informed two-part face-to-face programme entitled "An Interactive and Active Learning Approach to Teaching EMI" was designed to meet the needs of teachers using or intending to use EMI at the University of Coruña. All modules in the course were underpinned by a multimodal approach according to the UDL guidelines (CAST, 2018) in that the teaching and learning strategies fostered multimodality in the following ways:

- **Multiple modes of engagement:** through empirical research, case studies and focussed discussions based on the principles and praxis of EMI teaching and learning, participants could draw upon their previous experiences and be encouraged to integrate different elements of multimodality to an existing course or module of learning.
- **Multiple modes of representation:** realia, videos, quizzes, discussions and readings were present in each module to enable the participants to develop and negotiate meaning in different ways and reflect on how the multimodal material presented affects EMI teaching practices, and how they would apply these principles to their EMI contexts.
- **Multiple modes of action and expression:** online written interactions, face-to-face discussions, small group/pair activities and peer reviewing were used throughout the course to allow participants ways to demonstrate what EMI means for their own teaching practices and their own contexts.

Part 1 of the course entitled "Knowledge" aimed to provide participants with teaching techniques and strategies for the EMI class. This part, which consisted of five three-hour (face to face) sessions, was organized into the following five modules (Table 1): Introduction and needs analysis; Teaching methods and ap-

proach; Classroom discourse and diction; Multimodality; and Assessment of EMI outcomes.

During the first module, a needs analysis, adapted from the work previously validated by Beltrán-Palanques (2021), was conducted to obtain a general overview of the EMI training needs of the participants taking part in the course. Items included were those considered important for EMI educators to effectively orchestrate their lecturing and, therefore, directly linked to the modular content of the course. As modules were implemented on a weekly basis, the needs identified in participants' responses that were not originally included in the course were integrated into the content imparted in subsequent modules. To raise further awareness in terms of EMI teaching needs, this introductory module got participants to reflect upon, review and evaluate the latest EMI research findings in relation to their own teaching and learning contexts.

The second module aimed to make EMI educators more aware of the relevance of a student-centred learning (SCL) approach in EMI teaching and how this can be achieved applying a range of active, cooperative, and inductive teaching and learning techniques. Specifically, how active learning activities, peer learning and the partially flipped classroom can serve to harness students' understanding of content and language through greater participation and interaction were the main focus of the session.

The third module dealt with communication and language issues in the EMI classroom from a disciplinary perspective. In particular, the need to modify input (diction and discourse, i.e., teacher talk and texts) and to check students' comprehension on a regular basis was brought to the fore. A range of strategies that facilitate language comprehension and conceptual understanding across disciplines were presented, including knowledge-building practices, use of questions and translanguaging.

The fourth module explicitly addressed multimodal competence and promoted intercultural awareness in the EMI classroom. In essence, to help teachers better understand that effective EMI teaching resides in the combined effects of the orchestration of the modes, in the interaction between what is said, what is shown, the posture adopted, the movements made, and the position of the speaker and the audience, taking into account the cultural setting of the EMI classroom. Multimodal strategies, resources and guidelines were reviewed in relation to the combination of verbal, non-verbal and multichannel technology-based communication to convey and elicit meaning to EMI students across cultures, from different cultural backgrounds and with different learning styles.

The fifth and final module in Part 1 aimed to provide teachers with support on how to establish compatible language and content learning objectives in EMI subjects. Different modes and types of formative and summative assessment were

reviewed and applied from a student-centred approach, paying heed to the fact that EMI teachers need to be able to evaluate students' outputs considering the role of the language. The relevance of feedback and how this should be tackled was also developed during this session.

Part 2 of the course entitled "Practice, Reflection and Engagement" consisted of five three-hour sessions. The main focus of these modules was for participants to practice planning, performing and evaluating EMI lessons (see Table 1). During these sessions, teachers were required to implement and self-evaluate a 30–35-minute student-centred microteaching session on a key theoretical concept from their subject-discipline using a multimodal approach (i.e., using the techniques, strategies and approaches reviewed in Part 1). Mini-lessons were video-recorded for teachers to self-evaluate their teaching afterwards and constructively co-evaluated by workshop peers and the course tutor *in situ* who observed the microteaching sessions and provided feedback on the same. Part 2 could only be done once the previous part had been completed.

Table 1. An interactive and active learning approach to teaching EMI course programme

Part 1 (15 face to face hours)	Knowledge
Module 1 (3 hours)	Introduction and needs analysis
	Individual needs analysis Review and evaluation of latest EMI empirical data
Module 2 (3 hours)	Teaching methods and approach
	Student-centred learning Active learning techniques Cooperative learning techniques Inductive teaching and learning
Module 3 (3 hours)	Classroom discourse and diction
	Conceptual and linguistic understanding: challenges Knowledge-building practices Use of questions Translanguaging
Module 4 (3 hours)	Multimodal and intercultural competence
	Multimodal classroom communication Embodied and disembodied modes Multimodal resources and guidelines Multimodal and intercultural meaning-making practices
Module 5 (3 hours)	Assessment of EMI outcomes
	Compatible language and content learning assessment Formative and summative assessment Student-centred assessment Giving Feedback

Part 2 (15 face to face hours)	Practice, reflection and engagement
	Microteaching sessions Self-evaluation and reflection Peer evaluation and feedback Feed forward

Source: own elaboration.

3.2. Data collection

The study was conducted in accordance with institutional review board privacy, security and informed consent parameters. A consent form was provided informing participants that results would be anonymised. A total of 13 participants took part in the teacher training programme implemented and gave their consent for the data collected to be used in research. Table 2 summarises the description and distribution of the sample.

Table 2. Sample description and distribution

Gender	Female: 8 Male: 3 Non-binary: 2
Age	Under 30: 3 Between 30–39: 6 Between 40–49: 2 Between 50–59: 2
Discipline	Arts & Humanities: 1 Social & Legal Sciences: 2 Sciences: 3 Health Sciences: 6 Architecture & Engineering: 1
Years' teaching EMI	Under 1 year: 11 Between 1–4 years: 1 Between 5–10 years: 1 Over 10 years: 0
Years' teaching in HE	Under 5 years: 8 Between 5–10 years: 2 Over 10 years: 3
CEFR level of English	B1: 3 B2: 5 C1: 4 C2: 1

Source: own elaboration.

The development of effective teacher training proposals hinges on diagnostic assessment based on teachers' reflections and task performance (i.e., research-informed). For this reason, microteaching sessions were externally evaluated by the course tutor (i.e., the first author of the study) and participants had to self-reflect on their teaching. Two guiding questions were included in the self-assessment and tutor evaluation surveys to identify the aspects that worked well and those that required further development in terms of multimodality to convey and elicit meaning on the key theoretical concept from their subject-discipline presented. These questions were the following:

1. Which verbal and non-verbal modes supported spoken discourse well to convey and elicit meaning of content and language effectively? Which need further development?
2. Which modes of engagement, representation, action and expression worked well to convey and elicit meaning of content and language effectively? Which need further development?

With this in mind, participant self-reflection and tutor observation data were analysed via thematic content analysis and constant comparison, which focused on searching for patterns that ordered the data into categories related to the two guiding questions. To confirm consistency and reliability the data was checked again after a two-week period. Self-reflection and tutor observation data comprised a corpus of 12,646 and 14,532 words, respectively.

4. RESULTS AND DISCUSSION

4.1. Participants' self-reflections

In relation to verbal and non-verbal modes (Figure 1), reflections were eclectic. Over half of teachers (i.e., 54%) thought the embodied mode of maintaining eye contact with students proved effective to convey and elicit meaning, while a third (i.e., 39%) felt that the disembodied mode of multimodal slide content that included audiovisual material, visuals and images had been employed effectively to unpack content and language. In contrast, the embodied mode of English language fluency, proficiency, and delivery generated the most concerns. Nearly all participants (i.e., 85%) felt they needed to develop their English skills in terms of confidence, clarity of diction and pronunciation. In particular, over a third of teachers (i.e., 46%) felt the pace of their spoken delivery was too fast. Albeit to a lesser extent, the disembodied mode of slide content was also identified as an area of weakness, 31% of teachers considered their slide content needed to be more multimodal.

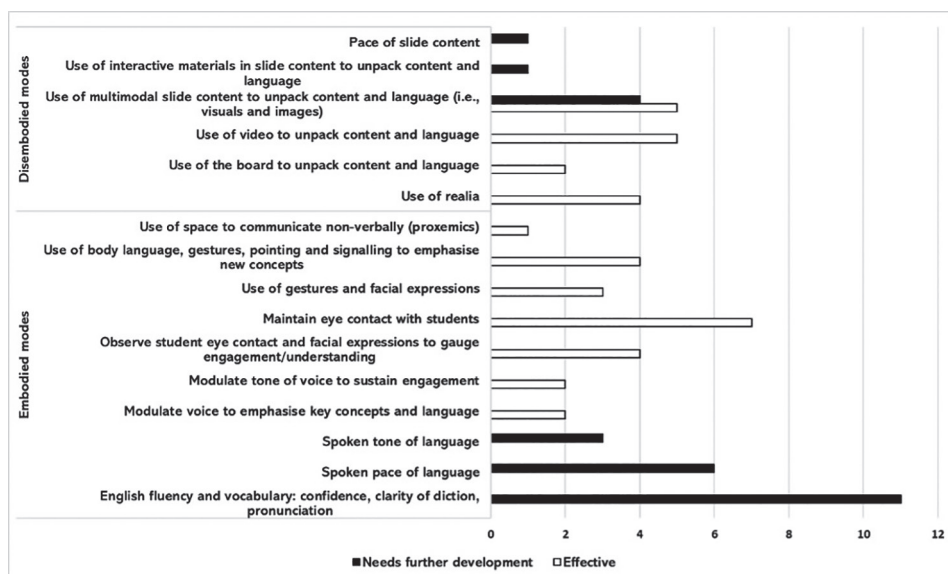


Figure 1. Verbal and non-verbal modes: what worked well and what needed further development based on participants' self-reflections

Source: own elaboration.

With regard to modes of engagement, representation, action and expression that worked effectively to convey and elicit meaning (Figure 2), there was unanimous agreement on the effectivity of the use of real-life examples and group discussions as modes of representation. This was closely followed by the use of questions as an effective mode of engagement (85%) and the use of pair/group activities as mode of action and expression in the consolidation of meaning (62%). By comparison, the use of questions to consolidate knowledge and check understanding was noted most often (i.e., 46%) as an area that needs to be strengthened. This was followed by (i.e., 39%) the use of engagement modes that consolidated knowledge and comprehension through student-centred learning and interaction.

4.2. Tutor observations

In terms of verbal and non-verbal modes (see Figure 3), most participants combined the embodied modes of body language and posture (92%), use of gaze (85%), proxemics (85%) (i.e., use of space to communicate non-verbally), adequate articulation and intonation (69%), adequate tempo of voice and pauses (69%), and adequate voice projection (i.e., tone of voice, pitch, and volume) (61%) to

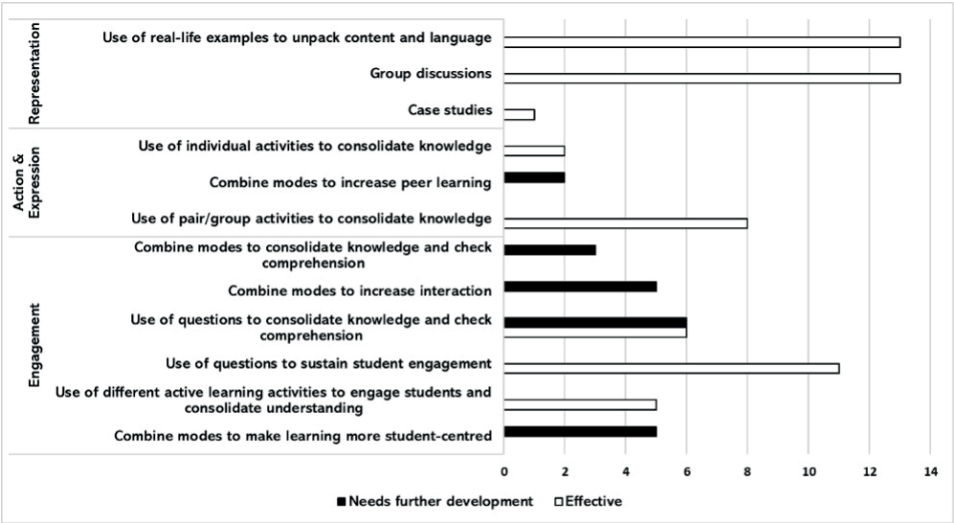


Figure 2. Modes of engagement, representation, and action and expression: what worked well and what needed further development based on participants' self-reflections

Source: own elaboration.

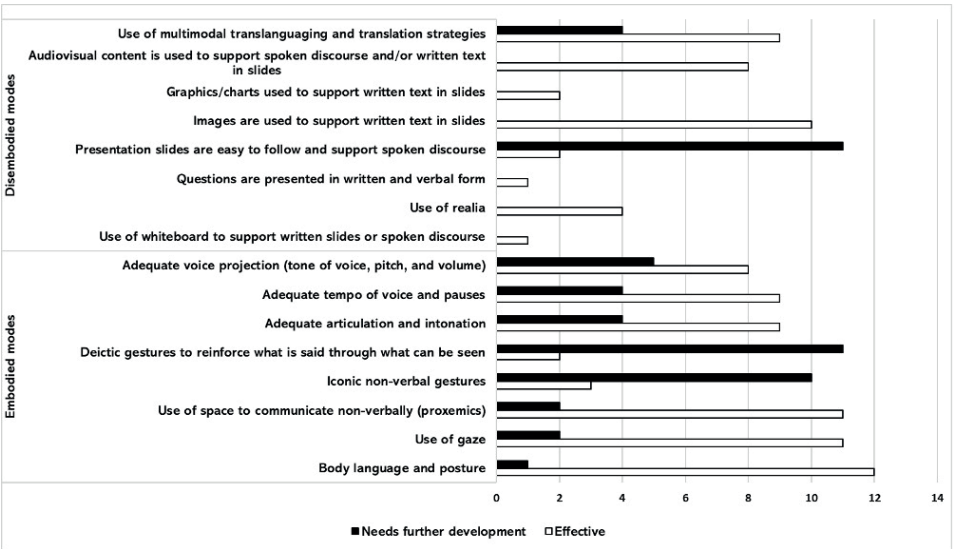


Figure 3. Verbal and non-verbal modes combined to convey and elicit meaning effectively: tutor observations

Source: own elaboration.

convey and elicit meaning effectively throughout their microteaching session. In contrast, iconic non-verbal gestures and deictic gestures to reinforce what was said through what could be seen were areas noted as in need of further development, with only 23% and 15% of teachers using them effectively throughout, respectively. As for disembodied modes, the majority used images to support written text in slides (77%), multimodal translanguaging and translation strategies (69%), and audiovisual content to support spoken discourse and/or written text in slides (62%) throughout. Despite that, only 15% of slide content was easy to follow and supported spoken discourse effectively. Slides were quite text-heavy and included few graphics or charts to support knowledge construction. The use of realia, however, was included by a number of teachers (30%) to convey and elicit meaning throughout effectively.

As for modes of engagement, representation, action and expression (Figure 4), teachers combined modes of representation and engagement effectively to convey and elicit meaning. All sessions included real-life examples, and the majority of lessons (i.e., 92%) included active learning activities and group discussions effectively. This was followed by (i.e., 62%) student-centred learning and the inclusion of quizzes/problem-solving activities. Fifty-four percent of teachers used interactive questions to convey and elicit meaning and included group/pair activities as a mode of action and expression. In comparison, most teachers (i.e., 69%) did not optimise the use of questions to consolidate knowledge and check comprehension effectively, less than half (i.e., 46%) included individual activities, and only one teacher included the use of case studies to convey and elicit meaning.

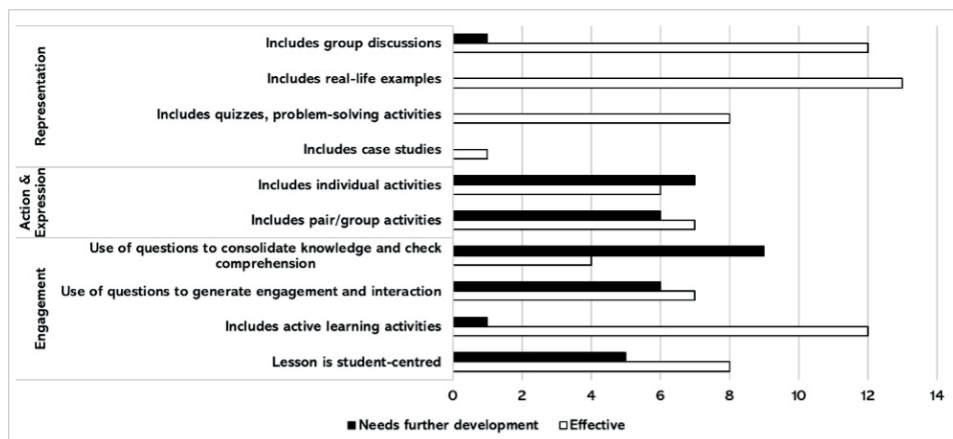


Figure 4. Modes of engagement, representation, and action and expression combined to convey and elicit meaning effectively: tutor observations

Source: own elaboration.

4.3. Similarities and differences

Broadly speaking, there is some consensus between teacher reflection and tutor observation on the subject of verbal and non-verbal modes. Both agree that the use of gaze, audiovisual content and realia supported spoken discourse effectively to convey and elicit meaning. Consequently, the need to improve how slide content is developed and exploited in teaching is identified by most as an area that requires further attention. That said, tutor observations do not seem to corroborate participants' concerns regarding English fluency and vocabulary, which may infer underlying issues related to self-efficacy. In this respect, the need to employ strategies that boost teacher self-efficacy and confidence in the development of language competence is fundamental. Similarly, how deictic and iconic gestures can support oral discourse should be further strengthened.

In the case of modes of engagement, representation, action and expression employed, reflections and observations concur in that although the use of questions to foster engagement and interaction was conducive to conveying and eliciting meaning effectively, there is room for improvement. Parallely, the need to increase questions to consolidate learning and check comprehension effectively is identified by both (i.e., questions that went beyond "OK?", "Do you understand?", "Everything clear"?). Concerning the effectivity of certain modes of engagement and action and expression (i.e., student-centred learning and individual activities), however, observations made by the tutor were slightly more positive than participants' self-reflections. This again highlights the need to continue raising pedagogical awareness and self-efficacy in EMI teacher training.

5. FINAL CONCLUSIONS AND IMPLICATIONS

This study was set out with the overarching aim of designing, implementing and evaluating a comprehensive EMI teacher training programme that fosters multimodal awareness and competence among university teachers. In line with this objective, two specific goals guided the study: first, to identify the multimodal training needs of EMI educators through diagnostic assessment and reflective practice; and second, to assess the effectiveness of the training programme in enhancing teachers' ability to employ multimodal strategies for disciplinary knowledge construction and classroom interaction. Although the teacher training programme designed and implemented was primarily aimed at EMI teachers in higher education it is worth mentioning that the course could be adapted for pre-school, primary, and secondary educators who teach CLIL. The findings confirm, in line with previous literature (e.g., Morell 2018), that the coordinated

use of complementary semiotic modes enables EMI teachers to more effectively convey and elicit both conceptual and linguistic meaning. Although the limited sample size precludes broad generalisations, the results offer valuable insights into key areas that should be addressed in EMI teacher training programmes. Specifically, the results of the teacher training programme designed and implemented revealed that:

- The embodied mode of English language fluency and vocabulary is the biggest concern for EMI teachers.
- The embodied modes of gaze, body language and proxemics are used to a greater extent than deictic and iconic gestures by EMI teachers.
- The disembodied mode of how slide content supports spoken and written discourse in the EMI classroom requires further development.
- Modes of engagement and action and expression used to consolidate understanding of content and language need further development.
- Teacher training programmes need to address EMI teacher self-efficacy.

As to future lines of research, the fact that teachers felt their English competence was weaker than the tutor considered requires further analysis. Although studies have confirmed the notable impact of self-efficacy, self-competence and affectivity on EMI teaching and learning (e.g., Lasagabaster et al. 2025), few proposals have been published on how these aspects should be addressed and harnessed in EMI teacher training programmes in practice. An additional question that needs to be considered is whether the combination of these modes facilitates content and language comprehension from the student's perspective. In like manner, we need to ascertain the impact of language competence from their viewpoint.

One final aspect that requires reflection is time management. Although it may be clear how the combination of embodied and disembodied modes and modes of engagement, representation, action and expression can serve to convey and elicit meaning effectively in EMI, how this can be realistically achieved in the same amount of time as is required for an L1-instruction lesson generates considerable debate. Based on the findings of the study, the following lines of enquiry ought to be considered: Which modes do teachers combine to teach an EMI class and how much time do they spend on modes of engagement, representation, action and expression included? How would these modes and timing differ in an L1-instruction class and why?

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Potencjał dydaktyczny multimodalności w EMI

ABSTRAKT. Dynamiczny wzrost liczby przedmiotów kierunkowych nauczanych w języku angielskim jako języku dodatkowym doprowadził do intensyfikacji badań nad kształceniem prowadzonym w języku angielskim (English-Medium Instruction, EMI), szczególnie w Europejskim Obszarze Szkolnictwa Wyższego (EHEA). Pomimo rosnącego zainteresowania tym tematem, nadal istnieje pilna potrzeba oceny podejść pedagogicznych stosowanych przez nauczycieli prowadzących zajęcia EMI oraz ich wpływu na efekty nauczania i uczenia się. W kontekście kształcenia nauczycieli za kluczowe uznaje się nabywanie umiejętności połączenia odpowiedniej metodyki nauczania ze świadomością językową w klasie EMI. W tym kontekście pojęcie kompetencji multimodalnej

– rozumianej jako zdolność wykorzystywania różnorodnych zasobów semiotycznych do konstruowania i komunikowania znaczeń – wyłania się jako istotny komponent skutecznej pedagogiki EMI. W artykule przedstawiono 30-godzinny program szkolenia nauczycieli EMI, oparty na wynikach badań i wdrożony na hiszpańskim uniwersytecie. Celem programu było rozwijanie świadomości i kompetencji multimodalnej. Na podstawie diagnozy oraz praktyki refleksyjnej oceniono skuteczność programu w zakresie doskonalenia umiejętności 13 nauczycieli akademickich reprezentujących różne dyscypliny w stosowaniu strategii multimodalnych w konstruowaniu wiedzy specjalistycznej oraz interakcji w klasie. Wyniki wskazują na potencjał dydaktyczny multimodalności w EMI oraz dostarczają praktycznych wskazówek dla osób projektujących szkolenia edukacyjne, dążących do tworzenia inicjatyw włączających i uwzględniających kontekst.

SŁOWA KLUCZOWE: English-Medium Instruction (EMI), szkolnictwo wyższe, kompetencja multimodalna, nauczanie i kształcenie.

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