Rosabel Roig-Vila (Ed.)

La docencia en la Enseñanza Superior

Nuevas aportaciones desde la investigación e innovación educativas

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31. How do trained English-medium instruction (EMI) lecturers combine multimodal ensembles to engage their students?

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ABSTRACT

The growing global phenomenon of English-medium instruction (EMI) has led to the need for teacher training in higher education. Engagement and multimodality should lie at the heart of this EMI training. For the purpose of this study, we analyse the multimodal and interactive discourse in episodes of classroom engagement found within 8 mini-lessons given by participants of the University of Alicante EMI workshops. These video-recorded mini-lessons, extracted from the "AcqUA EMI microteaching corpus", are used first to examine the verbal discourse, and then the multimodal discourse of the episodes of engagement. Findings from the verbal analysis reveal that the EMI trained lecturers make use of elicitations, questions and negotiation of meaning to engage their audiences. On the other hand, the multimodal analysis provides evidence of the varied use of semiotic resources (e.g. gaze, gesture, and written language). This orchestration of communicative modes constitutes multimodal ensembles that serve to foster engagement in the classroom. Consequently, these outcomes contribute to understanding how interaction is shaped in EMI discourse, and how this can be beneficial for both EMI teacher training courses and research.

KEY WORDS: English-medium instruction (EMI), teacher training, engagement, multimodal competence, interactional competence.

1. INTRODUCTION

English has become the medium of instruction (EMI) for countless academic subjects worldwide as a consequence of the drive to internationalize higher education (Dafouz & Smit, 2019). Each academic year more and more lecturers are faced with having to change their language of instruction from their first language to English. To adapt to their new teaching scenarios and to improve their students' learning experience, academics need support not only in English but also in developing their pedagogical competences. In most cases, lecturers erroneously believe that language proficiency is key to construct EMI discourse and they are unaware of the potential of the broad range of semiotic resources (e.g. gesture and gaze) besides speech, that will support not only classroom communication but also interaction. Nevertheless, becoming aware of how to orchestrate different verbal and non-verbal resources may allow EMI lecturers to effectively construct discourse and engage with their audiences. Consequently, engagement and multimodality (i.e. the combination of semiotic resources or communicative modes to represent meaning) should lie at the heart of EMI teacher training.

A recent review on EMI in higher education conducted by Macaro et al. (2018) indicates a lack of studies on the professional development of EMI teachers and research data that reports on the types of teacher preparation programmes available. Nevertheless, in the 70 European universities surveyed by O'Dowd (2018), almost 68% of the institutions were offering EMI training courses and these were mainly focused on teachers' language skills, while pedagogical skills remained in some cases overlooked. Furthermore, research on EMI teaching praxis suggests that lecturers without training tend to be "less flexible in conveying the contents of the lecture material, resulting in long monologues,

a lack of rapport with students, humour and interaction" (Klaassen & De Graaff, 2001, p. 282). This is why specific teacher training is required so as to support the incorporation of methodologies that promote the reduction of teacher fronted lecturing (Cots, 2013), thereby giving students more protagonism and triggering interaction.

As far as we know, EMI teacher training courses are generally scarce and they rarely address interactional and multimodal competences. We consider that effective EMI pedagogy has much to do with lecturers' multimodal competence, the ability to make use of and combine verbal and non-verbal modes of communication to construct and communicate meaning. In addition, studies have demonstrated that academics' interactive competence, or their ability to use interaction as a tool for mediating and assisting learning (Walsh, 2011), also plays a crucial role in improving teaching and learning in classrooms (Suviniity, 2012; Beltrán-Palanques & Querol-Julian, 2018; Morell, 2018, 2020; Norte, 2018, Querol-Julián & Arteaga, 2019; Querol-Julián, in press). Furthermore, Suviniitty (2012) suggests that interaction helps students' comprehension regardless of the language of instruction, which makes it even more relevant to focus on interaction and engagement in EMI training courses.

In this study, as in Morell (2018), we are interested in exploring what characterises the episodes of engagement carried out by trained EMI teachers. For this reason, it is necessary to define what episodes of engagement are and what constitutes them. For the purposes of this study, episodes of engagement are understood as the instances within the interactive lecture in which students are involved in pairwork, group work, debates, games or web-based activities (e.g. Kahoot and Mentimeter). From a linguistic perspective, these episodes may consist of elicitations, questions and negotiation of meaning. Elicitations allow teachers to give instructions, encourage, or give clues that may be directed to the class, groups, pairs or individuals. Questions permit teachers to elicit either known information from students (i.e. display questions) or unknown information (i.e. referential questions) (Lindenmeyer, 1990). The latter type has been attributed to promote more and longer responses from students (Brock, 1986). Drawing on Bloom's revised taxonomy (Krathwohl, 2002), in this study we have categorised referential questions as low and high order thinking skills. Specifically, while referential low questions refer to remembering, knowing, understanding, and applying; referential high questions involve more cognitive demanding actions such as analyzing, synthesizing, and evaluating. Negotiation of meaning, which is used to assure mutual understanding between the teacher and the students, encompasses comprehension and confirmation checks and clarification requests.

At the UA the growing number of EMI subjects in a broad range of disciplines of it's 7 faculties and Polytechnic School has led the *Instituto de Ciencias de la Educación (ICE)* to establish the Prof-Teaching programme (*Programa de Formación para la Enseñanza en Inglés*). This EMI training syllabus, which was first launched in 2018, consists of 3 modules of over 60 hours that provide UA academic staff with linguistic and pedagogical support and training. However, the university was already offering its academic staff twenty-hour EMI training workshops (i.e. Academic English for teaching and presenting (AETP); English for content teaching at university (ETC); and English as a Medium of Instruction at university (EMI) a decade before. These courses, much like the second module of Prof-Teaching (English-medium instruction: Reflections, Awareness and Practice - EMI-RAP), aimed to make teachers more aware of the importance of multimodality and interaction to engage their students. Taking advantage of these workshops, the main objective of this study is to explore how trained EMI lecturers of diverse disciplines use and combine modes of communication (spoken language, teacher's function, spatial position, gaze direction, gestures, and written language) to engage with learners. Specifically, we analyse the multimodal and interactive discourse in episodes of classroom engagement found within mini-lessons given by academics of EMI workshops at the UA.

The guiding research questions of the study are:

RQ1: What characterises the episodes of engagement in EMI lectures?

RQ2: How do EMI lecturers use and combine semiotic resources to engage with their audience?

2. METHOD

2.1. Description of the context and participants

As a final project of the above mentioned workshops, and of the second module of the Prof-Teaching program, EMI trainees were asked to prepare a subject specific mini-lesson that took into account the pedagogical strategies they had learned. Over a hundred of these mini-lessons that last between 10 and 20 minutes have been recorded with the consent of the academics, and they now form part of the "AcqUA EMI microteaching corpus". This corpus currently includes a total of 119 video recordings of workshop participants' interactive mini-lessons performed for their workshop colleagues and trainer. These videos have been classified according to the major disciplinary fields or faculties found at the UA, namely Economics & Business (n=24), Education (n=8), Humanities & Arts (n=21), Law (n=9), Science (n=18), Health Science (n=4), the Polytechnic School (n=35).

For the purpose of this study, we have carried out a macroanalysis of 8 mini-lessons and a microanalysis of 5 of them. Table 1 describes the lecturers of the mini-lessons in terms of English competence level (Common European Framework of Reference for Languages-CEFR), teaching experience in higher education, previous experience in EMI, and academic field. Furthermore, it includes the topic and the duration of the mini-lesson they delivered for the EMI training workshop.

Table 1. Description of EMI workshop participants' background and their mini-lesson subject, topic and duration.

Mini-lesson	English competence level (CEFR)	Teaching experience in Higher Education (yrs.)	Experience in EMI	Academic field	Mini- lesson topic	Duration mini-lesson (min=' sec=")
1	C1	10-20	No	Economics	What's marketing?	17'08"
2	B1	>20	Yes	Communication and Social Psychology	Introducing Public Relations	10'28"
3	B2	>20	No	Spanish Studies	Academic Spanish	15'36"
4	C1	10-20	Yes	Human Geography	Sustainability and Tourism	15'19"
5	C1	3-10	No	Graphical Expression Design and Projects	Perceptions in Architecture	18'52"
6	B2	10-20	No	Physics Systems Engineering and Sign Theory	The Principles of Dynamics	14'52"
7	C1	0-1	No	Environmental Sciences	Urban Sprawl	13'02"
8	C1	3-10	Yes	Inorganic Chemistry	Organic versus Inorganic Chemistry	11'45"

2.2. Instruments for data analysis

As indicated above, this study reports on a macroanalysis (verbal discourse analysis) and a microanalysis (multimodal discourse analysis). On the one hand, the dataset of the macroanalysis is made up of the verbatim transcription of the 8 mini-lessons and their episodes of engagement, which entail elicitations (i.e. encourage, instruction, clues, pair and individual), questions (i.e. referential-low, referential-high and display) and negotiation of meaning (i.e. comprehension checks, confirmation checks and clarification requests). On the other hand, the microanalysis draws on the 5 most interactive of the 8 mini-lessons examined in the previous analysis to determine how lecturers make use of verbal and non-verbal modes to engage their students. The microanalysis explored lecturers' verbal and non-verbal communication while carrying out the episodes of engagement. This was done with ELAN (Wittenburg, et al. 2006, Max Planck Institute for Psycholinguistics, The Language Archive, Nijmegen, The Netherlands. Available at: https://archive.mpi.nl/tla/elan), an annotation software for multimodal analysis. More specifically, the analysis focused on the teachers' function, spatial positions, gaze, gestures and written materials during the elicitations, questions and negotiation of meaning. For the purposes of the present study, an ELAN template containing 9 tiers was created (Figure 1).
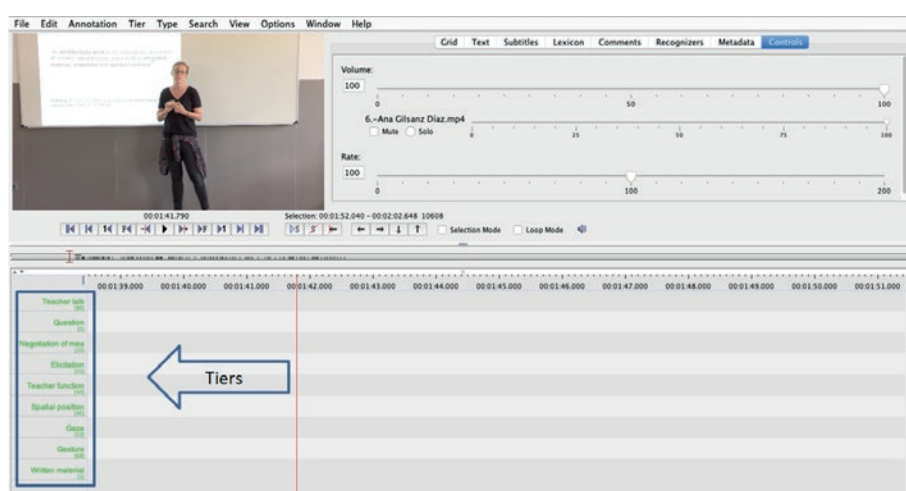
Figure 1. ELAN template.

The tiers teachers' talk, questions, negotiation of meaning, elicitation corresponded to the results obtained from the macroanalysis. For the remaining tiers - teacher function, spatial position, gaze, gesture, and written material - specific controlled-vocabulary was developed to annotate the corresponding instances (Table 2).

Table 2. Controlled-vocabulary in specific tiers.

Teacher function	Spatial position	Gaze	Gesture	Written material
Authoritative	Dynamic	Audience	Action	Board
Interactional	Static	Board	Beats	Board-screen
Personal		Computer	Deictic	Screen
		Screen	Iconic	
		Specific audience	Metaphoric	
			Rest	

2.3. Procedure

As previously mentioned, the dataset for this study stems from a selection of highly interactive mini-lessons extracted from the "AcqUA EMI micro teaching corpus" that were used for both the macroanalysis and microanalysis. The macroanalysis was carried out to determine what characterises the episodes of engagement in EMI lectures (RQ1), and the microanalysis was conducted to explore how lecturers use and combine semiotic resources to engage their audience (RQ2). To guarantee data analysis consistency, both analyses were peer reviewed and then given feedback by a group of researchers. What follows is the procedure of data analysis, first for the macroanalysis (1-6) and then for the microanalysis (7-10):

1. Video recordings of mini-lessons performed by academics in EMI workshops at the UA.
2. Compilation of the "AcqUA EMI micro teaching corpus".
3. Selection of interactive mini-lessons from the audiovisual corpus.
4. Verbatim transcription of the dataset.
5. Identification of episodes of engagement.
6. Tagging of the elicitations, questions and negotiation of meaning.
7. Configuration of an ELAN template containing 9 different tiers and specific controlled-vocabulary.
8. Multimodal annotation of the selected semiotic resources (i.e. teachers' function, spatial position, gaze, gesture and written material) within the episodes.
9. Analysis of the multimodal ensembles found in the episodes of engagement.
10. Gathering and interpretation of results.

3. RESULTS

The results related to the macroanalysis (verbal discourse analysis) and the microanalysis (multimodal discourse analysis) of the episodes of engagement are presented below.

3.1. Macroanalysis

This section presents the results obtained from the verbal discourse analysis which consisted of identifying the episodes of engagement and exploring the elicitations, questions and negotiation of meaning. More specifically, we analysed the types of elicitations (i.e. instruction, encouragement, clue, pair or individual); types of questions (i.e. referential low, referential high, and display); and negotiation of meaning (i.e. comprehension checks, confirmation checks, and clarification requests). Furthermore, we took into account the length of time of each episode of engagement in relation to the total time of the mini-lesson to determine the importance given to audience engagement. The results derived from this analysis corroborated with the previous training lecturers had received in the EMI workshop in which interaction and engagement played a paramount role. Table 3 summarises the results obtained in the macroanalysis.

As shown in Table 3, the episodes of engagement in each of the mini-lessons took up a large portion of the total time. While most of the episodes constituted more than a third of the time, in mini-lessons 5 and 6 they lasted half of the session. These two, as compared to the others, dedicated even less time on delivering content and more on eliciting from the audience. As expected, instructional elicitations (n=35) were used in almost all the episodes (11 out of 12) since lecturers asked the participants to carry out either a pair or group activity. For this reason, they also made use of various types of elicitations, specifically, encouragement (n=28), clue (n=4), pair (n=13) and individual (n=9). Figure 2 illustrates the type and number of elicitations used in the episodes of engagement.

Table 3. Macroanalysis of Episodes of Engagement in Mini-lessons

Mini-lesson / duration (min' sec")	Faculty / Topic	Episodes of Engagement / start-end	Nº Types of Elicitations	Nº Types of Questions	Nº Types of Negotiation of Meaning
Mini-lesson 1 17'08"	Economics What is marketing?	1 2'02"-8'00"	1 E-Inst	4 R-High 6 R-Low 7-D	2 Conf
	Total	5'58"	1	17	2
Mini-lesson 2 10'28"	Economics Introducing Public Relations	1 0'38-4'20"	2 E-Inst 4 E-Enc 4 E-Pair	2 R-High 2 R-Low	0
	Total	3'42"	10	4	0
Mini-lesson 3 15'36"	Humanities & Arts Academic Spanish	1 0'40"-2'08"	3 E-Enc 1E-Ind	3 R-Low	1 Conf 1 Clar
	Total	1'28"	4	3	2
		2 6'11-11'32"	2 E-Inst 2 E-Enc 5 E-Pair 2 E-Clue	2 R-High	3 Comp 2 Conf 1 Clar
	Total	5'21"	11	2	6
Mini-lesson 4 15' 19"	Humanities & Arts Sustainability & Tourism	1 1'53"-3'22"	1 E-Inst 2 E-Enc	3 R-High 5 R-Low 2 D	6 Comp 5 Conf
	Total	1'29"	3	10	11
		2 7'49-13'23"	3 E-Inst 3 E-Enc 1 E-Ind	1 R-High 2 R-Low	7 Comp 2 Conf
	Total	5'34"	7	3	9
Mini-lesson 5 **18'52"**	Polytechnic School Perceptions in Architecture	1 1'52"-9'39"	8 E-Inst 8 E-Enc 5 E-Ind 1 E-Clue	5 R-Low	7 Comp 9 Conf 2 Clar
	Total	7'47"	22	5	18
Mini-lesson 6 14' 52"	Polytechnic School Principles of Dynamics	1 0'08"-3'20"	2 E-Inst 1 E-Pair	1 R-Low 2	1 Conf 1 Clar
	Total	3'12"	3	3	2
		2 3'25"- 14'51"	5 E-Inst 3 E-Pair	4 R-Low 16 D	2 Comp 2 Conf 3 Clar
	Total	6'26"	8	18	7
Mini-lesson 7 13'02"	Science Urban Sprawl	1 0'43"- 3'25	1 E-Inst 2 E-Enc	5 R-Low 1 D	2 Comp 1 Conf
	Total	2'42"	3	6	3

Mini-lesson / duration (min' sec")	Faculty / Topic	Episodes of Engagement / start-end	Nº Types of Elicitations	Nº Types of Questions	Nº Types of Negotiation of Meaning
		2 3'40"- 13'02	5 E-Inst	1 R-Low 1 D	9 Comp
	Total	10'22"	5	2	9
Mini-lesson 8 11'45"	Science Organic vs Inorganic Chemistry	1 0'26"-2'55"	5 E-Inst 4 E-Enc 2 E-Ind 1 E-Clue	3 R-Low 1 D	2 Comp 4 Conf
	Total	2'29"	12	4	6

(Key: E-= Elicitation of, Inst= Instruction, Enc= Encouragement, Ind= Individual, R= Referential question, D= Display question, Comp= Comprehension check, Conf= Confirmation check, Clar= Clarification request)

As shown in Table 3, the episodes of engagement in each of the mini-lessons took up a large portion of the total time. While most of the episodes constituted more than a third of the time, in mini-lessons 5 and 6 they lasted half of the session. These two, as compared to the others, dedicated even less time on delivering content and more on eliciting from the audience. As expected, instructional elicitations (n=35) were used in almost all the episodes (11 out of 12) since lecturers asked the participants to carry out either a pair or group activity. For this reason, they also made use of various types of elicitations, specifically, encouragement (n=28), clue (n=4), pair (n=13) and individual (n=9). Figure 2 illustrates the type and number of elicitations used in the episodes of engagement.
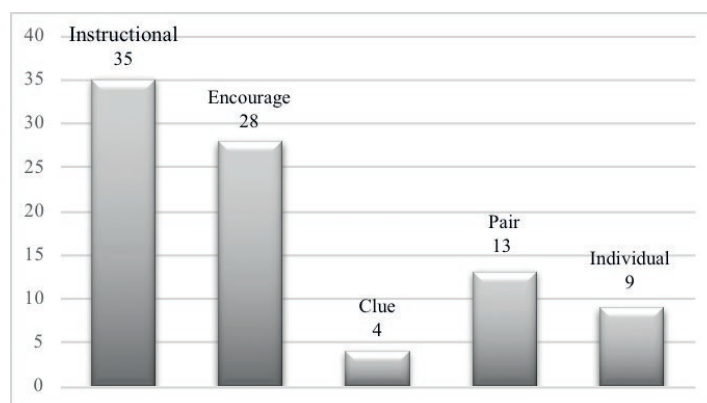

Figure 2. Types and number of elicitations in the episodes of engagement.

In so far as questions are concerned, two different types were identified, namely display and referential, which were classified as low (remember, know, understand, apply) or high (analyse, synthesize, evaluate) following Bloom's revised taxonomy (Krathwohl, 2002). Display questions, the most common classroom questions, were only found in some mini-lessons (i.e. 1, 4, 6, 7 and 8). Interestingly, a large number of instances (n=18) was identified in mini-lesson 6, this may be due the lecturer's usage of visual prompts to elicit known information from the participants. Referential questions, claimed to encourage more students' participation (Brock, 1986), were found in all the mini-lessons. In particular, results revealed that referential low questions (n=37) were used across all the different mini-lessons, whereas referential high questions (n=12) were only identified in half of them (i.e. 1, 2, 3, and 4). Figure 3 summarises the types and number of questions in the episodes of engagement.
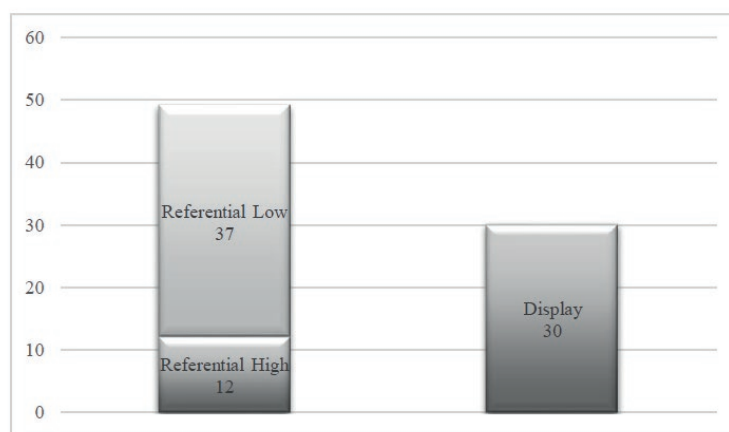
Figure 3. Types and number of questions in the episodes of engagement.

Negotiation of meaning refers to lecturers' need or desire to be understood (i.e. comprehension check), to ensure that students' contributions have been successfully interpreted (i.e. confirmation check), and to seek for clarifications (i.e. clarification request). In most of the mini-lessons, lecturers made use of comprehension (n=38) and confirmation (n=27) checks while clarifications (n=8) were used less. Figure 4 shows a summary of the types and numbers of negotiations of meaning.
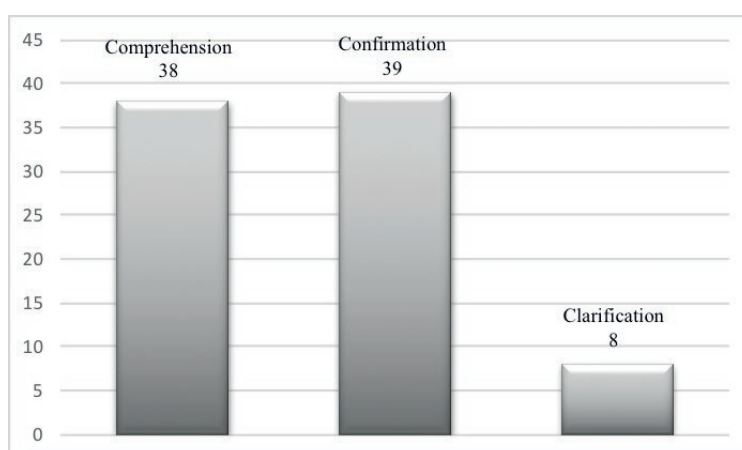

Figure 4. Types and number of negotiations of meaning in the episodes of engagement.

3.2. Microanalysis

In this section, we extrapolate the verbal data from the macroanalysis to conduct a more detailed study of the EMI lecturers' use and combination of modes of communication to engage with their audience (RQ2). For this purpose, a holistic multimodal analysis was conducted of the 5 most interactive mini-lessons (i.e. 1, 3, 5, 6, and 8). The microanalysis added more information to the initial analysis on the elicitations, questions and negotiation of meaning by examining the teachers' functions (i.e. authoritative, interactional or personal), spatial positions (i.e. dynamic or static), gaze direction (i.e. towards audience, board, computer, screen or specific audience), gestures (i.e. action, beats, deictic, iconic, metaphoric or rest) and written materials (i.e. on board, board & screen or screen). The results of the microanalysis indicated that lecturers orchestrated each and every mode of communication mentioned above while carrying out their episodes of engagement. This outcome was expected, as during the EMI workshop special attention had been given to the potential of multimodal affordances

to construct meaning. Nevertheless, we aimed to determine how lecturers constructed episodes of engagement drawing on different multimodal ensembles.

Although we found that there was a great variety of ensembles (i.e. patterns of combinations of modes) in the elicitations, questions and negotiations of meaning, some general tendencies were observed. This was possible because ELAN allowed us not only to identify the broad range of ensembles used for each of the episodes, but also to determine their frequency. The following description corresponds to the amount and most prominent ensembles for the types of a) elicitations, b) questions and c) negotiations of meaning.

   a) Elicitation- a total of 86 ensembles were found in the case of elicitations: 43 of which were instructional, 17 were for encouraging, 6 were for giving clues, 9 were directed towards pairs and 11 towards individuals.

Table 4 presents the most prominent ensembles for each type of elicitation.

Table 4. Types of elicitations and the most prominent ensembles.

	Gesture	Gaze	Spatial position	Teacher function	Written material
Instruction	Beats	Audience	Dynamic	Interactional	Screen
Encourage	Rest	Specific audience	Dynamic	Interactional	Board-Screen
Clue	Beats	Specific audience	Dynamic	Interactional	Screen
Pair	Deictic	Specific audience	Dynamic	Interactional	Screen
Individual	Rest	Specific audience	Dynamic	Authoritative	Board-Screen

Although there were in some cases many diverse ensembles, here we only present the most frequent combinations. In general, in the elicitations, the teachers' functions were nearly always interactional, gaze was mainly addressed towards a specific audience, and the spatial position was always dynamic. Furthermore, the written mode was always displayed on the screen, albeit in a few on both, the screen and the board. As may have been expected, results showed that lecturers used a variety of gesture types while engaging with their audience. By way of example, in the case of instruction the most prominent combination involved the lecturers' use of beats, gaze oriented towards the audience, a dynamic position, an interactional function, and written material displayed on the screen.

   b) Questions- a total of 79 ensembles were found in the case of questions: 36 were referential low, 17 were referential high, and 26 were display.

Table 5 presents the most prominent ensembles for each type of question.

Table 5. Types of questions and the most prominent ensembles

	Gesture	Gaze	Spatial position	Teacher function	Written material
Referential-Low	Deictic	Screen	Dynamic	Interactional	Screen
Referential-High	Beats	Specific audience	Dynamic	Interactional	Screen
Display	Beats	Audience	Dynamic	Interactional	Board-Screen

In the question ensembles, much like in those of the elicitations, there were a broad range of patterns. As shown in the table above, the most prominent multimodal orchestration in referential low questions consisted of deictics, gaze direction oriented towards the screen, a dynamic spatial position, an interactional function and written material displayed on the screen. A similar combination of modes was found for referential high and display questions, except for beats and gaze direction that addressed to either a specific or a general audience.

    c) Negotiation of meaning- a total of 46 ensembles were found in the case of negotiation of meaning: 16 were comprehension checks, 21 were confirmation checks, and 9 were clarification requests.

Table 6 shows the most prominent ensembles for each type of negotiation of meaning.

Table 6. Types of negotiation of meaning and the most prominent ensembles

	Gesture	Gaze	Spatial position	Teacher function	Written material
Comprehension checks	Rest	Specific audience	Dynamic	|Interactional	Board-Screen
Confirmation checks	Beats	Specific audience	Dynamic	Interactional	Board-Screen
Clarification requests	Beats	Specific audience	Static	Interactional	Screen

In the case of the ensembles of negotiation of meaning, as was found in those of the elicitations and questions, multiple combinations of modes were identified. Among the most prominent ensembles, results showed that comprehension checks, confirmation checks and clarification requests contained nearly the same components referring to gaze, teacher's function, and written material. Gesture types for confirmation checks and clarification requests were mostly beats, whereas for comprehension checks was rest position. Differences were also observed in the spatial position of clarification requests, which was static as opposed to dynamic in the other two.

4. DISCUSSION AND CONCLUSIONS

Having carried out the macroanalysis and microanalysis of the interactive mini-lessons and their episodes of engagement, we can now proceed to respond to the research questions. In terms of what characterises the episodes of engagement in EMI lectures, our findings indicate that the trained lecturers who set out to involve their audience in pair/group activities made use of elicitations, questions and negotiation of meaning. As expected, teachers will incorporate polite requests in their EMI discourse to engage their students in activities. For example, in the following elicitation the lecturer (mini-lesson 5) wants students to become more aware of the role of perceptions in architecture.

Example 1(Mini-lesson 5):

"I would like you to work in pairs and to give us an example about a building or place you've visited that had an impact on you".

As can be inferred from the example, she gives instructions to make them reflect on their own experiences to collaborate in the knowledge-construction that takes place in the EMI classroom. In this way, they are not only dealing with the content, but also discussing it in English.

In the same manner in which lecturers made use of elicitations, they also posed questions within the episodes of engagement. These questions were either referential (low or high) or display, and commonly identified while setting up the pairwork activities, once the time was up (Author, 2018) and during the monitoring phase. The greater number of referential as compared to display questions in these mini-lessons lent to more authentic and natural contexts where the participants provided

longer and more complex answers (Brock, 1986; Dalton-Puffer, 2007). In the following extract, the lecturer activates participants' prior knowledge and fosters critical thinking in relation to their experience with foreign students in Spanish academic contexts.

Example 2 (Mini-lesson 3):

Lecture: "What is your experience with Erasmus students, with foreign students?"

Student: "I remember in my case with foreign students in English I find that many times they don't know how things work at the University of Alicante and so I tell them okay work in groups, and they stay with no groups because they have no friends and sometimes teachers have to orient them".

In question-response interactions like these, it was often the case that lecturers resorted to negotiation of meaning, specially to comprehension checks to make sure students were following (Lindenmeyer, 1990). In the subsequent extract taken from mini-lesson 3, the lecturer, who was probably aware of the complexity of her question, uttered a comprehension check.

Example 3 (Mini-lesson 3):

Lecturer: "What do you think they need to know about academic subjects, academic matters before the beginning of the course?" (Referential high)

Lecturer: "Do you understand the question?"(Comprehension check)

Our findings reveal that trained lecturers' episodes of engagement are characterised by an ample use of elicitations to give instructions, questions to activate their cognitive skills (both low and high), and negotiation strategies to assure mutual understanding. Thus, the increasing use of these linguistic and pedagogical strategies may serve to promote interactive discourse in EMI classrooms.

Concerning how EMI lecturers use and combine semiotic resources to engage with their audience, the overall findings suggest that trained teachers tend to orchestrate their EMI discourse by means of a broad range of diverse multimodal ensembles. As discussed and exemplified in what follows, this is true for elicitations, questions and negotiation of meaning. If we have a look at the elicitation from mini-lesson 5 (Figure 5), the questions and negotiations of meaning from mini-lesson 3 (Figure 6 and Figure 7) with a multimodal perspective, we observe how meaning is represented not only by the spoken mode but also by other modes of communication such as teacher's function, spatial position, gaze, gesture, and written material. This combination of modes constitutes the multimodal ensembles that are used for constructing engagement. The broad range of varied ensembles makes multimodal discourse more comprehensible (Campoy-Cubillo & Querol-Julián, 2015; Norte, 2018) for audiences in general, but especially for students in EMI classes whose first language is not English.
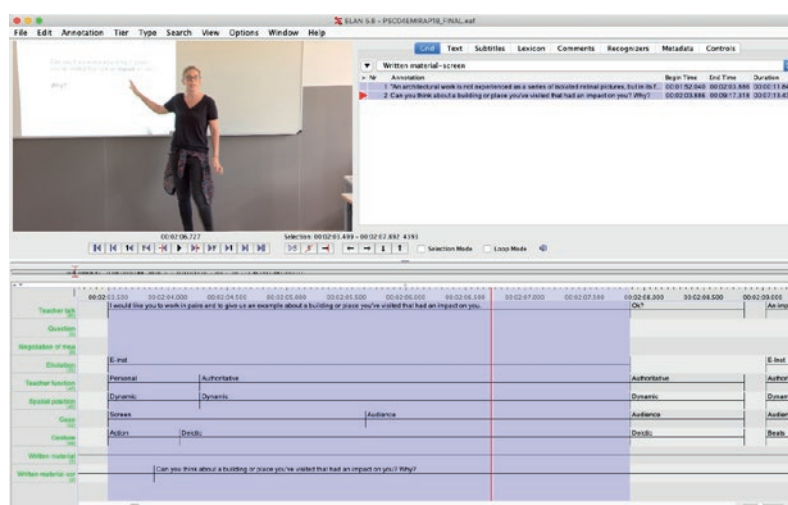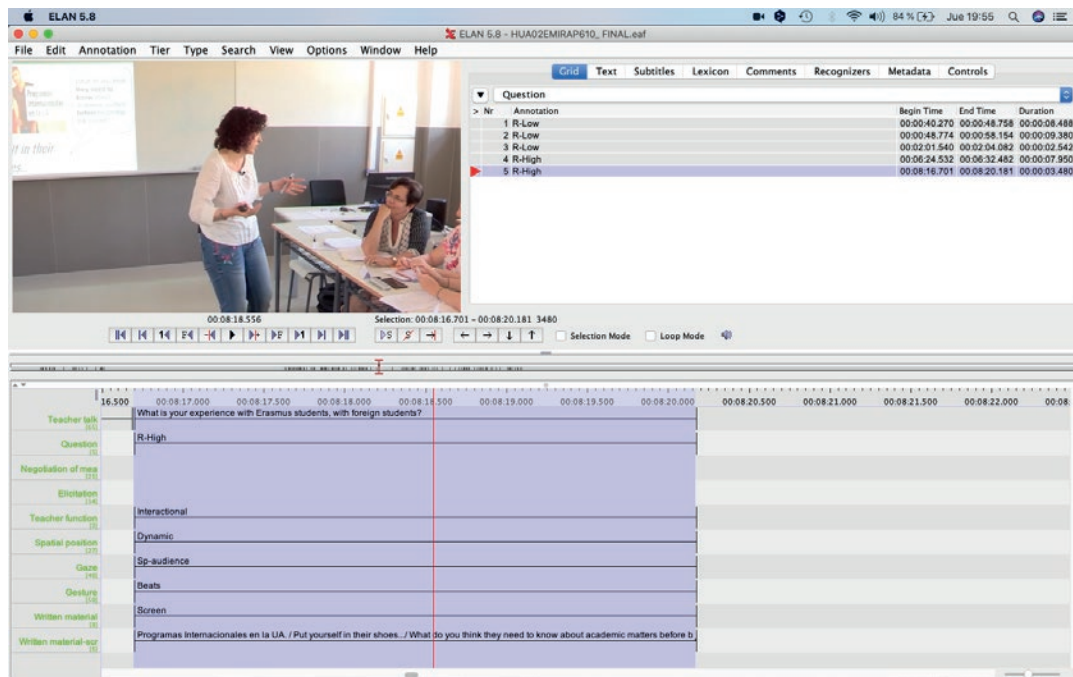

Figure 5. Multimodal ensemble of an elicitation.

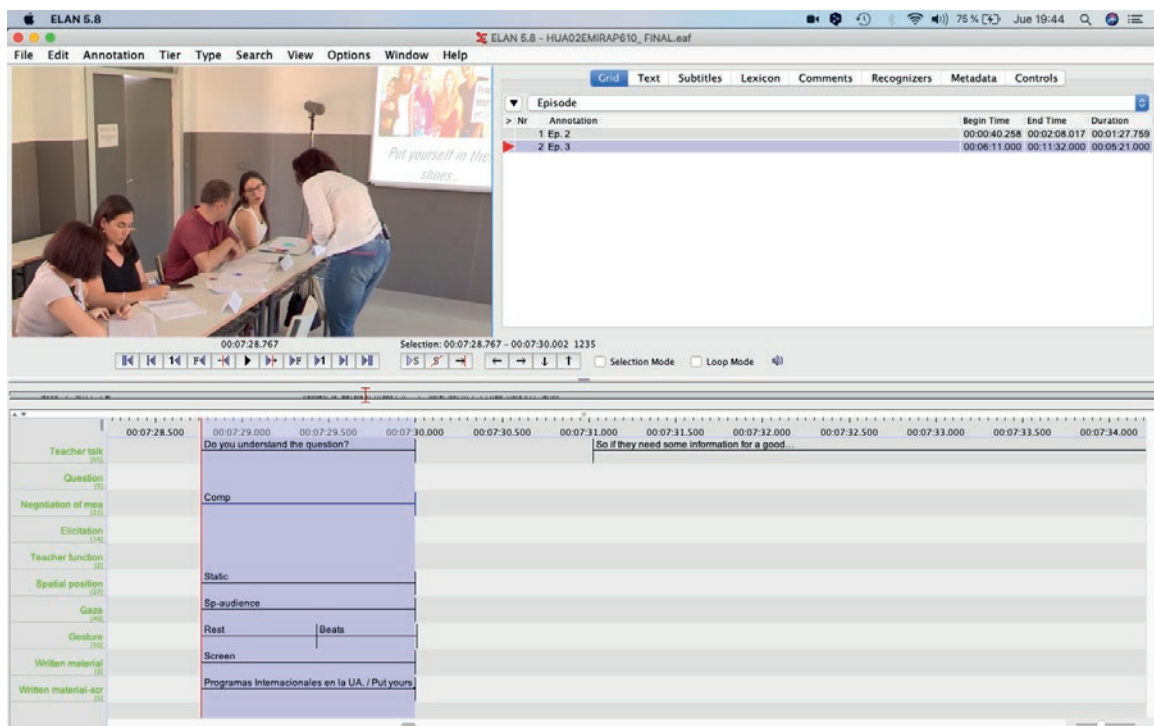**Figure 6.** Multimodal ensemble of a question.

Figure 7. Multimodal ensemble of negotiation of meaning.

Broadly speaking, these results point to specific habitual actions in which EMI lecturers tend to unfold engagement by making use of a great variety of multimodal ensembles. Furthermore, this serves to enhance comprehension and to encourage participants' contributions to the EMI discourse.

As has been proven, the EMI trainees were able to use and combine a broad variety of ensembles to construct their interactive discourse. This was made possible because they had become aware of

the importance of engagement and the affordances of verbal and non-verbal modes of communication. Consequently, we may confirm that engagement and multimodality should lie at the core of EMI teacher training (Morell, 2018).

This study is not without limitations. Initially, we intended to examine whether there were differences in how lecturers from Social and Technical Sciences combined modes to promote engagement. However, we realised a larger dataset was needed for this purpose. Moreover, having a larger dataset, in turn, would have permitted the analysis of visual images, for example, to explore how visuals may enhance engagement in the EMI classroom.

To conclude, some implications can be drawn from this study for EMI teacher training and research in this under explored field. On the one hand, the design of teacher training courses should include activities to develop interactional and multimodal competences. On the other hand, further research should focus on the EMI multimodal discourse of specific disciplines to determine if there are differences as regards the construction of engagement.

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