EMI teacher training with a multimodal and interactive approach: A new horizon for LSP specialists

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ABSTRACT

The growing use of English as the medium of Instruction (EMI) in non-Anglophone universities has provided specialists in Languages for Specific Purposes (LSP) with a broader scope for research and teaching. ESP experts are now called upon not only to carry out research to support EMI teacher training, but also to be the teacher trainers. In this study, an ESP scholar explores what constitutes successful interactive lecturing according to academics who have taken part in her interdisciplinary EMI teacher training workshop. This was done by analyzing the engaging, verbal and non-verbal discourse of participants' video recorded exemplary mini-lessons. It was found that the mini-lectures that had been voted as successful made greater use of questions and had a higher concentration of verbal and nonverbal modes of communication in comparison to the lesser effective ones. The findings lend support to EMI training with an interactive and multimodal approach.

Keywords*: English-medium instruction (EMI); Language for Specific Purposes (LSP); teacher training; multimodality; interaction; discourse analysis*

I. INTRODUCTION

The growing global phenomenon of English-medium instruction (EMI) (Dearden 2015) in the broad range of disciplinary subjects of countless non-anglophone universities has brought numerous challenges for stakeholders - policy makers, teachers and students. Among these trials are those faced by teachers and researchers of languages for specific purposes (LSP). The increasing number of content teachers who have switched from using their mother tongue to English has had an effect on specialists of English for specific purposes (ESP). As recent research has indicated (e.g. Aguilar 2018, Ball and Lindsay 2012, Dafouz-Milne 2018, Morell 2018, Sánchez-García 2019, Sancho Guinda 2013), LSP specialists are needed to train content specialists and to do research to support 'best practice' in classrooms of the ever-increasing and diverse EMI scenarios.

In this study, an example of how LSP specialists can use their expertise to train EMI instructors and carry out research to explore effective classroom discourse will be provided. The training and the research take into account interaction and multimodality, two essential competences for improving EMI classroom communication and learning.

I.1. Interaction in EMI teacher training

Classroom interactional competence (CIC), "teachers and learners' ability to use interaction as a tool for mediating and assisting learning" (Walsh 2011:158), has been put at the forefront for effective teaching in EMI university contexts (Airey 2011, Bjorkman 2010, 2011, Hellekjaer 2010, Klaasen 2001, Morell 2018, Suvinity 2012, Tazl 2011). These studies claim that effective lecturing behavior is considered a necessity for information processing in second language instructional contexts. Klassen (2001), for example, asserted that good classroom teaching performances depend on lecture structuring and the use of interaction supported by appropriate non-verbal behavior and well-prepared visuals. In addition, she discovered that lecture quality had a much greater effect on how students experienced lectures than the language used. Similarly, Suviniitty (2012) found, in her doctoral study comparing Finnish university students' outcomes in EMI and L1 classes, that students were better able to understand lectures with a higher degree of interaction, regardless of the language of instruction.

The amount of classroom participation has much to do with the use of questions (Brock 1986, Chang 2012, Crawford Camiciottoli 2008, Fortanet-Gómez and Ruiz-Madrid 2014, Morell 2004, 2007, Sánchez-García 2019). According to these studies, classroom questioning and negotiation of meaning (i.e. comprehension checks, confirmation checks and clarification requests) are potential enhancers of students' engagement. The use of referential questions, those that ask for audience's contributions from their own experiential knowledge or perspectives, have proven to promote more and longer responses in language classrooms (Brock 1986) and in interactive lectures (Morell 2004).

In lecture discourse studies that have drawn from English L1 corpora (Chang 2012, Crawford Camiciottoli 2008, Fortanet-Gómez and Ruiz-Madrid 2014), questions have been classified as either audience-oriented, which elicit responses, or content-oriented, which are often rhetorical questions. In addition, these studies have explored lecture corpora to find out how many questions per 1000 words lecturers use in their discourse. Chang (2012) found that L1 lecturers' questions in the Humanities, Social and Technical Sciences had more similarities than differences and concluded that they are not discipline specific, but lecture genre specific. This entails that questions and

negotiation of meaning can be used to support students' understanding in lectures of any discipline. In addition, they are precisely the types of interactive features acclaimed by research on effective lecturing in English as a lingua franca (ELF) settings. In the words of Bjorkman (2011: 196):

> "ELF settings are by nature challenging settings for all speakers involved, and without opportunities to negotiate meaning, there is an increased risk of disturbance in communication. It is, therefore, highly recommended that lecturers in lingua franca settings create as many opportunities as possible for the deployment of pragmatic strategies through which they can increase interactivity in lectures".

I.2. Multimodality in EMI teacher training

Multimodality, the representation and communication of meaning through a multiplicity of modes, as defined by Gunther Kress et al. (2005, 2010) – the father of multimodal studies- also plays a crucial role in EMI contexts. This is true in light of the fact that content specialists are often not fully proficient in the language and need to rely on written words, visual materials and body language in combination with their speech to convey and elicit meaning (Morell 2018). Until recently, improving oral expression constituted developing speakers' linguistic and communicative competences, that is, their knowledge and use of the language. However, a broader view on language, and the semiotic resources we use to communicate and represent meaning, calls for the development of "multimodal competence". This competence has been defined by Royce (2002: 193) as "the ability to understand the combined potential of various modes for making meaning so as to make sense of and construct texts".

Developing students and teachers' multimodal competence has proven to be instrumental for improving comprehension and expression in language (Choi and Yi 2016, Norte Fernández-Pacheco 2018, Sueyoshi and Hardison 2005) and content (Airey and Linder 2009, Morell 2018, Morell and Pastor 2018, Tang, 2013) learning and teaching contexts. Studies based on cognitive theories of learning that have examined interactive multimodal learning environments (e.g. Moreno and Mayer 2007) claim that student understanding can be enhanced by the addition of non-verbal knowledge representations to verbal explanations. Ainsworth (2006: 185), who asserts that combinations of auditory and visual representations may complement, constrain or

construct learners' deeper understanding, states "it is not sufficient to consider each type of representation in isolation - representations interact with one another in a form of 'representational chemistry". Furthermore, Airey and Linder (2009) suggest that meaning is distributed across modes and that there is, therefore, a critical constellation of modes that needs to be mastered by students for appropriate disciplinary understanding. Thus, it follows that if lecturers are aware of the potential, or affordances, of each individual representation (mode), they will be better able not only to combine them so as to facilitate students' comprehension, but also to support students' learning.

With regard to multimodality and university academic oral discourse, studies have examined speakers' use and combination of semiotic resources in presentations and in lectures (e.g. Crawford Camiciottoli and Fortanet-Gómez 2015, Morell 2015), but with the exception of Morell (2018), very few studies if any have looked at the development of EMI lecturers' interactive and multimodal competence.

I.3. An EMI teacher training workshop with a multimodal and interactive approach

In the large public Spanish university, where this study took place, there has been a continuous growth of EMI subjects in all disciplines and for the past decade lecturers have been offered 20-hour EMI training workshops with a multimodal and interactive approach. To date, 220 academics from a wide range of university departments have voluntarily taken part in one of its 12 editions. In each of the sessions of the workshops between 15 and 20 participants of a wide-range of disciplines work in pairs and in groups to reflect on, become aware of and practice: a) verbal and non-verbal communication, b) varying interactive teaching methodologies and c) planning a multimodal and interactive mini-lecture[i]. In the final two sessions each participant puts into practice what they have learned by carrying out a 10 to 20-minute mini-lesson on a basic concept of their field of study. These mini-lessons, which are constructively co-evaluated by workshop peers, using the criteria in Morell (2015), are video-recorded and used for research purposes with the consent of the participants.

The main objective of this mixed method study was to explore what constitutes successful interactive lecturing, according to academics who have taken part in the aforementioned interdisciplinary EMI teacher training workshops. This aim was fulfilled by analyzing the video recorded interactive and multimodal discourse of participants' exemplary mini-lessons.

II. METHODOLOGY AND MATERIALS

To determine what characterizes effective interactive lecturing according to experienced academics, the participants of diverse editions of the EMI workshops, described above, were asked to vote for what they considered to be the two most effective mini lectures they had observed and participated in during their training sessions. The two most voted for mini-lectures of three EMI workshop editions, i.e. a total of 6 highly rated video recorded lessons, were the object of study.

As indicated in Table 1, the lecturers of these mini-lessons had varying degrees of English competence level (from B1-B2 to C1), teaching experience in their mother tongue (1 – 17 years), and only one had previous experience using EMI. In addition, they each taught content subjects in a different field (i.e. Chemical Engineering, Business Administration, Architecture, Sociology, Mathematics and Biology).

Table 1. Description of EMI workshop participants' background and their mini-lectures' subject, topic, duration and words per minute (wpm).

Mini-lecture	**English Competence Level (CEFR)**	**Teaching experience in higher education (yrs)**	**Experience in English as a Medium of Instruction**	**Degree teaching in**	**Mini- lecture topic**	**Duration mini lecture/ words per minute (wpm)**
1	B1-B2	7	No	Chemical engineering	Management Systems in Chemical Industry	11 min 59 sec / 90 wpm
2	B2-C1	17	No	Business Administration	What is Marketing?	17 min 08 sec / 99 wpm

3	C1	4	Yes	Architecture	Construction of domestic imaginaries	20 min 33 sec / 108 wpm
4	B2	10	No	Sociology	Survey interpretations	09 min 39 sec / 143 wpm
5	B2-C1	1	No	Mathematics	Applications of derivatives and integrals	15 min 07 sec /129 wpm
6	C1	2	No	Biology	Seafood: do we know what we are eating?	17 min 11 sec /125 wpm

These 6 samples of study, which together entail 1 hour, 31 minutes and 38 seconds of video streaming and a total of 10, 448 words, were used to carry out the audio-visual discourse analysis that was done in two phases. In the first phase, the spoken discourse was transcribed verbatim and then tagged for questions to determine the quality and quantity of interactive verbal discourse. In the second phase, the written (W), the non-verbal materials (NVMs) and the body language (B) modes together with the spoken language (S) were annotated with the support of ELAN[ii] (The European Distributed Corpora Project - EUDICO Linguistic Annotator), a professional linguistic annotation tool.

In the following results section, the verbal interactive and multimodal discourse analysis of the 6 mini lessons is presented. Then, the combined audio-visual analysis of one of the mini-lessons is illustrated. Finally, a comparison is made between the highly rated mini lessons with 6 other less effective ones.

III. RESULTS AND DISCUSSION

III.1. Results of the interactive discourse analysis

The verbal (auditory) discourse of the 6 video-recorded mini-lessons was first transcribed verbatim and tagged for content and audience-oriented questions. As in Chang (2012), the questions were categorized as content-oriented or audience-oriented. The content-oriented questions are the rhetorical questions (i.e. responded to by the teacher or used to structure the discourse), whereas the audience-oriented questions are those that elicit a response. The audience-oriented questions (defined below) include display and referential types, as well as the sub-questions for negotiation of meaning (i.e. comprehension checks, confirmation checks and clarification requests), which maintain the interaction initiated by previous questions (i.e. display or referential) and ensure that the lecturer and the students share the same assumptions and identification of referents (Morell 2000, Pica, Young and Doughty 1987).

- Display questions - check the audience's knowledge or familiarity (e.g. *Do you know what surveys are?*)

- Referential questions - ask for audience's contributions from their own experiences or perspectives (e.g. *When you go to the fish market, which do you prefer, fish from aquaculture or fishing?*)

- Sub-questions for negotiation of meaning:

    - Comprehension checks – check for receivers' understanding of message (*e.g. Do you understand?*
    - Confirmation checks – ask to confirm previous message (e.g. *Did you say…?*)
    - Clarification requests – seek understanding (e.g. *I don't understand, Could you explain?*).

It is important to highlight that display questions, those that ask for students' recall of factual information at a low cognitive level, have been found to be more often used in classrooms than referential questions, those that ask for students' evaluation, judgement or offering of new ideas at a higher cognitive level. In addition, referential questions have been proven to promote more and longer responses with more complex syntax (Brock 1986, Lendenmeyer 1990, Morell 2004). Furthermore, episodes of interaction usually initiated by either display or referential questions are often followed by

comprehension or confirmation checks and sometimes clarification requests (See section III.3).

The number of specific questions, instances of negotiation of meaning (i.e. comprehension checks, confirmation checks and clarification requests) and the total number of questions (Qs) per 1000 words of each mini lesson can be found in Table 2.

Table 2. Questions, and negotiation of meaning in mini-lessons 1-6 (T= Teacher, S= Student).

Audience-oriented questions								
	Content-oriented			**Negotiation of meaning**			**Total questions**	**Qs per 1000ws**
Mini-lesson	Rhetorical questions	Display questions	Referential questions	Comprehension checks	Confirmation checks	Clarification requests		
1	5	5	10	2	1T; 2S	0	25	23
2	3	10	10	0	2T; 2S	1T	28	16.5
3	0	6	2	0	0T; 3S	1T; 1S	13	5.8
4	1	3	4	0	4T	0	12	8.8
5	7	6	6	11	3T; 1S	2T; 1S	37	19
6	4	1	10	3	4T; 2S	5S	39	13.6
Total	20	31	42	16	14T; 10S	4T; 7S	154	Avg 14.6

In each case, the lecturers made greater use of audience-oriented than content-oriented questions. The most often used questions were the referential ones, those that elicit students' contributions based on their own experiential or logical representation of the world and that contain more features characteristic of genuine communication. Here are examples of referential questions taken from the mini-lessons that ask students to evaluate (*d*), judge (*a*, *f*) or offer new information (*b*, *c*, *e*):

a. *What is the first thing that I can do with all these belts? What do you think? (Mini-lecture 1)*

b. *Have you studied marketing before? (Mini-lecture 2)*

c. *What does this photograph communicate to you? (Mini-lecture 3)*

d. *What do you think this person would feel about it? Good? Bad? (Mini-lecture 4)*

e. *Have you ever seen a derivative in real life? (Mini-lecture 5)*

f. *When you go to the fish market, which do you prefer, fish from aquaculture or fishing? (Mini-lecture 6)*

It is also interesting to note that the negotiation of meaning or sub-questions that served to check or confirm comprehension and to clarify meaning, which occurred after the teachers' display or referential questions, was carried out by both the teachers (T) and the students (S).

Although referential questions have proven to be the most effective, in so far as promoting more and longer students' responses (Morell 2004, Brock 1986), there is no specific mention of them in other studies that have focused on questions in lectures (e.g. Crawford-Camiociottoli 2008 and Chang 2012). Chang (2012: 106) describes eliciting response questions as those that "invite students to supply a piece of information related to the course content" and gives two examples of what has been referred to as display questions (those that check what students know). The fact that no distinction is made between display and referential questions in lecture discourse studies may be an indication of the lack, or limited degree, of overt student participation found in the lecture corpora studied.

Another distinguishing characteristic of these effective mini-lectures is that they have a greater number of questions per 1000 words (14.45) than the L1 Physical Science (9.9) and Social Science (8.6) lectures analyzed in Chang (2012), which also indicates a higher degree of interactivity in the samples studied.

The degree of interactivity (Table 3) in this study was estimated by calculating the number of tokens used to engage in the questions and negotiation of meaning. Thus, the percentage of interactive discourse is the estimation of the tokens used by both the lecturer and the participants while asking and responding to or elaborating on the audience-oriented questions (i.e. display and referential questions, comprehension checks, confirmation checks and clarification requests) divided by the total number of verbal discourse tokens and multiplied by 100.

Table 3. The degree of interactivity in mini-lessons 1-6.

Mini-lecture	Interactive discourse tokens	Verbal discourse tokens	Percentage interactive discourse
1	496	1090	45%

2	762	1698	45%
3	442	2225	19%
4	171	1365	13%
5	440	1940	23%
6	804	2130	38%

The verbal discourse analysis of the mini-lessons revealed a relatively high usage of audience-oriented questions and, thus, an overall high percentage of interactive discourse. Mini-lessons 1 and 2 that made greater use of referential questions had a greater degree of interaction. In both cases, nearly half the time was spent in collaborative discourse. It is also interesting to note that these two mini-lectures had the lowest rate of words per minute. As is indicated in Table 3, mini-lecture 1 had 90 words per minute and mini-lecture 2 had 99 words per minute. These rates of words per minute in lecture discourse are considered slower than normal according to Tauroza and Allison (1990: 102). Consequently, it seems that more interactivity implies more time or pauses, which have been claimed favorable for facilitating comprehension (Griffiths 1990: 311). This raises the question on the amount of content that can be delivered and the amount that can be understood by learners during a lecture session. Apparently, the extra time spent in interaction will reduce the quantity of material covered, but will provide students with the time needed for comprehension.

III.2. Results of the multimodal discourse analysis

The multimodal discourse (auditory + visual) was analyzed with ELAN. This tool allows users to analyze the orchestration of modes in captured digitalized audiovisual data by making linguistic annotations in tiers to describe the performance of modes during specific times. A 5 tier template was designed with the transcribed spoken discourse (S) in the first tier, and the linguistic annotations of the written (W), non-verbal materials (N), body language (B) and their multimodal combinations in the subsequent tiers (see Figure 1).

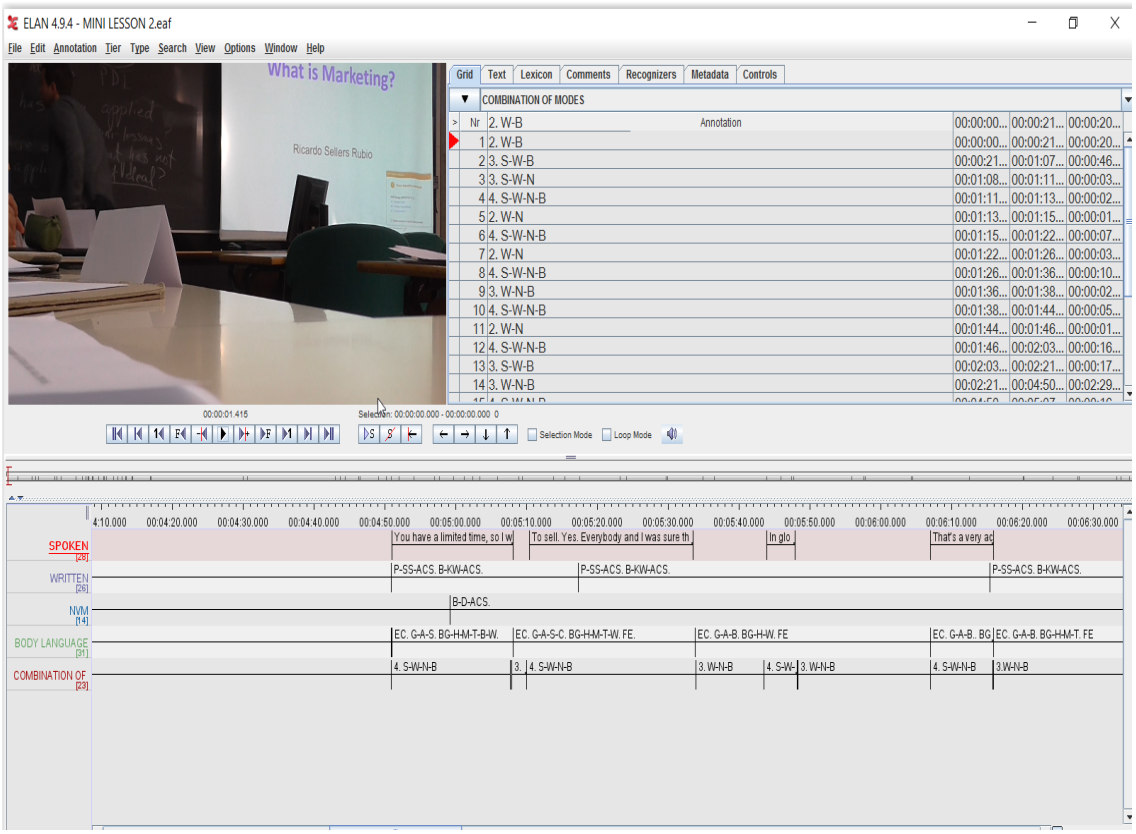


Figure 1. Sample ELAN window with 5 tiers

The main characteristics of the teachers' use of each mode and their combinations is found in Table 4. Besides the aforementioned common use of audience-oriented questions in the spoken discourse, the mini-lessons also shared the following characteristics:

- Stressed key words and simple syntactic structures through the spoken and written modes,
- Implemented illustrative non-verbal materials (realia, images, diagrams, tables, or charts) on the screen,
- Made use of eye contact, body and facial gestures to accompany speech, written and non-verbal materials (NVMs), and
- Combined 4 modes (Sp + W + NVMs + B) throughout the greater part of the lessons.

Table 4. Multimodal discourse description of mini-lessons 1-6.

Mini-lessons	**Spoken (Sp)**	**Written (W)**	**Non-verbal materials (NVMs)**	**Body language (B)**	**Multimodal combinations (percentage of time)**
1	Simple syntactic structures, stressed key words, some linguistic inaccuracies	key words and simple syntactic structures on slides and board accompanying speech	Images, diagrams, tables on slides and realia accompanying speech	Eye contact and gaze towards audience, screen and realia, Hand gestures and body movements referring to content and realia	Sp + B – 10% Sp + B + NVMs Sp + B + W – 13% **Sp + W + NVMs + B – 67%**
2	Combinations of simple and complex syntactic structures, stressed key words, accurate speech	key words and simple syntactic structures on slides and board accompanying, before and after speech	Images and diagrams accompanying and before speech	Eye contact and gaze towards audience, screen and board. Hand gestures, body movements, and shifting positions Walks around class to ensure students' participation	Sp + W + B Sp + W + NVMs W + NVMs + B -10% **Sp + W + NVMs + B - 90%**
3	Combinations of simple and complex syntactic structures, stressed key words, accurate speech	key words and simple syntactic structures on slides and board accompanying speech	Many images on slides accompanying speech at all times	Eye contact and gaze towards audience, screen and board. Hand gestures and facial expressions to emphasize ideas and express opinions.	Sp + NVMs + B- 1% **Sp + W + NVMs + B – 99%**
4	Combinations of simple and complex	key words and simple syntactic structures on	Images and tables on slides accompanying	Eye contact and gaze towards audience and	Sp + W + B Sp + W + NVMs – 25%

	syntactic structures, stressed key words, accurate speech	slides accompanying speech	speech	screen. Continuous hand and arm movements.	**Sp + W + NVMs + B – 75%**
5	Simple syntactic structures, some linguistic inaccuracies	key words and simple syntactic structures on slides and board accompanying speech	Images, graphs and tables accompanying speech	Eye contact and gaze towards audience, screen and board. Facial gestures	
6	Simple syntactic structures, stressed key words, some linguistic innacuracies	key words and simple syntactic structures on slides accompanying, before and after speech	Images, diagrams, graphs, tables and charts accompanying and before speech	Eye contact and gaze towards audience and screen. Continuous body movements.	W – 4% W + NVMs Sp + W Sp + B - 13% Sp + W + NVMs Sp + W + B - 30% **Sp + W + NVMs + B – 53%**

As is indicated in the last column of Table 4, the multimodal combinations or ensembles that included the four modes were prevalent throughout each of the mini lessons. In fact, the percentage of time in which the teachers combined the spoken, written, non-verbal materials and body language modes together to communicate, ranged from 53% in mini-lesson 6 to 99% in mini-lesson 3. Nevertheless, a closer look at how the speakers orchestrated the modes (Kress 2010: 162), moment by moment, to create the specific multimodal ensembles reveals that they were arranged either simultaneously or consecutively. For example, the lecturer in mini-lesson 2 (see Table 5) at times used the written slides or the ones with NVMs at the same time as he spoke, but at other moments he either spoke before or after having shown the written or NVMs. In other words, teachers can choose to use other modes at the same time as they are speaking or to use them before or after having spoken. Consequently, we may state that the 6 mini-

lessons coincide in so far as the tendency to use 4 mode ensembles, but not in their orchestrations or organization of modes.

Another distinguishing characteristic of the mini-lessons worth-mentioning, which is positively influenced by the use of multimodal ensembles, is the spoken linguistic inaccuracies and complexities. In mini-lessons 1, 5 and 6 a number of linguistic inaccuracies concerning pronunciation, intonation and syntactic structures were found. In contrast, some complex syntactic structures were used in mini-lessons 2, 3, and 4. Nevertheless, the spoken inaccuracies and complexities were nearly all accompanied by clarifying written or non-verbal materials. Thus, the co-occurring reiteration of meaning through visual modes allowed the audience, with varying degrees of proficiency, to understand what the speaker was trying to convey despite the inaccuracies or complexities.

III.3. A sample multimodal interactive discourse analysis of a mini-lecture

Now that the mini-lessons have been examined, we will have a closer look at the verbal and visual transcription of mini-lesson 2 (see Table 5), the most interactive and multimodal of the six lessons explored (as indicated in Tables 2, 3 and 4). The aim of this lesson was to introduce Marketing and it was given by a lecturer of the Department of Business Administration, who had between a B2 and a C1 English proficiency level and had never used EMI in his 17 years of teaching experience. In this lesson, as in most of the others analyzed, the instructor began by greeting and then attempting to attract the students' attention. This was done by projecting images of controversial marketing campaigns and asking if they were familiar with them. Then, the participants were asked to work in pairs for 2 minutes to discuss and define marketing. The instructions were given verbally and also projected on the screen. While the pairs were working, the instructor went around monitoring the discussions. Once the time was up, each pair was encouraged to contribute their definitions, whose keywords were written on the board by the teacher. The given responses led to a series of interactions, or instances of negotiation of meaning, that allowed several students to bring their experience and perspective to the class. The remaining part of the mini-lesson was dedicated to the interpretation of a published definition on marketing. The definition

was projected on the screen and visually supported by gradually highlighting key points in red, which were illustrated through images of marketing campaigns and a final mind map.

The three columns of Table 5 illustrate how this lecturer combined verbal and visual modes to carry out pedagogical interpersonal functions in the first 13 minutes of this 17 minute long mini-lesson. The first column indicates the interpersonal pedagogical function carried out during each of the timed frames. The second column contains a snapshot taken during the performance of the pedagogical function that allows us to observe the lecturer's constantly changing body language and use of slides and blackboard. The third one permits us to read the spoken discourse and to take note of the labeled questions and negotiation of meaning highlighted in boldface. A combined view of columns 2 and 3, that is of the visual and the verbal, for each of the frames (rows), where students are given opportunities to participate (see frames 1, 3, 4, 5, 7 and 9), reaffirms the multimodal and interactive characteristics of classroom interpersonal communication.

On the one hand, if we explore this mini-lecture from a visual multimodal perspective by having a close look at the lecturer's use of body language, non-verbal materials and written content, it becomes apparent that this instructor uses many more semiotic resources besides the spoken in his performance. Each of the interpersonal pedagogical functions is realized through the orchestration of facial gestures, arm-hand movements, changing body positions, writing on board and specific slides that contain concise written texts or illustrative images together with the verbal discourse. On the other hand, if we examine it from the verbal discourse perspective, we note that the mini-lecture starts with interactive discourse during the first 13 minutes and ends with expository discourse in the remaining 4 minutes. The interactive discourse consists of a number of questions, or elicitation markers, that entail a broad range of interpersonal pedagogical functions such as:

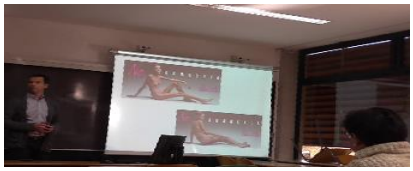
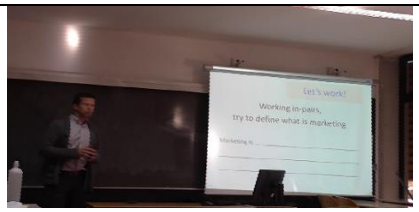
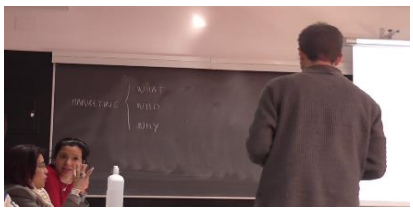
- greeting (i.e. *How are you doing today?*),
- announcing objectives (i.e. *What is exactly marketing?*),
- attracting attention (e.g. *Have you ever seen this picture before?*)

- setting up activity (e.g. *Working in pairs . . . two minutes maximum, what is marketing for you*?
- eliciting information (*When you don't know the meaning of a word, what do you do?*).

All the questions in this mini-lesson (10 referential and 10 display questions) were answered by the students. Consequently, we can claim that this instructor has been successful in engaging the students in co-creating the discourse of this multimodal interactive mini-lecture.

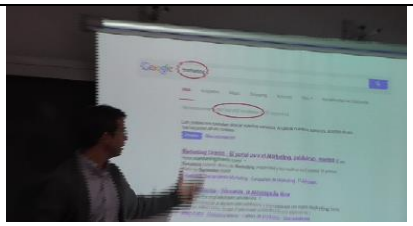
Table 5. Verbal and visual transcription of Mini-lesson 2.

Interpersonal Pedagogical Functions (Time Sequence)	**Visual representation (body language, writing on slides and board, and images)**	**Verbal representation (spoken interactive and expository discourse) question types: d=display, r=referential, rh=rhetorical negotiation of meaning: conf=confirmation check, comp=comprehension check, clar=clarification request**
1. Greets & announces topic 0-0.35"		T- Well, good morning everybody. **How are you doing today?(R)** SS- *Fine, thank you.* T- Well, today, this morning we are going to talk about **what is marketing?(D)**
2. Projects (on slide), announces & reformulates objective Announces show of images		First, the main goal of this subject, of this mini lesson is to understand **what is exactly marketing, what does marketing means? (D)** And the second objective of this mini lesson is that you are able to answer the question to: **which is the scope or what is the scope of marketing? (D)** First of all, I would like you to see some

0.35-1.06"		images that perhaps you have seen before and think about about them.
3. Motivates by showing 3 controversial images of marketing campaigns and asks students if they are familiar with them 1.06-2.02	  	**Have you ever seen this picture before?(R)** SS- *No.* T- Is a marketing campaign from *Benetton*. **You know this brand?(R)** SS- *Yes.* T- Very controversial. **Have you ever seen this picture before?(R)** SS- *Yes. No.* T- Is also a brand. It's a clothes' brand, textile brand. And the last one, another marketing campaign from *Dolce & Gabbana*. **Have you seen this picture before?(R)** SS- *Yes. No.* T- Some common marketing campaigns that arrived to the mass media because they are very controversial and many people breaks their beliefs when they see this images
4a. Gives assignment on slide. Asks to work in pairs 4b. Writes outline on board 4c. Circulates among pairs	 	Well, after that, I would like you to work in pairs and from your previous experience I would like you to, working in pairs, to try to define, one minute, one minute and a half, two minutes maximum, **what is marketing for you? (R) What do you think marketing is from your previous experience? (R)** **SS- *Inaud SS*** (Working in pairs)

2.02-5.00		
5a. Elicits information from students through questions		T- You have a limited time, so I would like to continue, please. Well, what is marketing for you? **What do you think marketing is? (R)Which is the main activity marketing does?(D)** **S1**- *The main objective is to sell*. T- To sell. Yes. Everybody and I was sure that most of you, in your definitions is to sell, money, profits, **inaud T** And I was sure that most of you, in your definitions have a word... like this. **S2**- *We defined like the process that you can sell your best image of your company or our professional project, in global.*
Negotiates meaning 5b.fills-in outline on board according to students' responses 5c. Evaluates student's response 5d. Praises student's comments		T- **In global, but to sell your image? (Clar)** **S2**- *To sell everything that you have. Your structure, your quality, for your global service, everything that you have. No, No... at the end no is for... the activity is not to sell something by money. Maybe, I don't know...* T- That's a very accurate definition of marketing, **but who does this activity?(D) Who applies marketing?(D)** **S3**- *But, I'm… I not agree with this definition. Why? And the section what? Sometimes when the government want change something or sell, not sell exactly, "sell" a project, they use*

5e. Reformulates to elicit classifying term 5f. Shows activity slide with keywords filled-in 5.00-7.49	  	*marketing.* T- Yes. **S3-** *For example, Hacienda somos todos, I think is marketing 100%.* **(laughter)** **T- Have you studied marketing before? (R) Or you have read something about marketing before? (R)** **S3-** *No, nothing.* **T-** No? *Hacienda somos todos* and the campaigns we saw before, **which is, which is the technique employed here? (D)** **S4-** *Visual? Visual impact.* **T- Visual impact, but the technique, how do we call... which is the name of this...? (D)** **S5-** *Pictures?* **T- Pictures? (Conf)** No, yes they are pictures but... **S6-** *Advertisement.* T- Advertisement. Promotion. Publicity. Promotion. Most people relate advertisement, publicity, promotion, commercial adds as an activity, as a marketing activity, no? **And who does this activity? (D) Who applies marketing? (D)** **S7-** *Companies.* T- Companies, firms. **S1-** *Institutions, public institutions, States, governments. Sometimes, individuals.* T- Individuals, you can also apply marketing. Most of people when try to think about marketing and try to define marketing, employ this words in their

		definitions: promotion, advertisement, firms, also companies, institutions, and most people think or believe that the main objective of marketing is to improve the sales, the revenue of firms to earn money. This is a very applied definition of marketing, but this is marketing as was understood in the sixties. And today, as I have realized, you have a good idea of what marketing is. The scope of marketing is larger, and this is very narrow definition of what marketing is. At the present, nowadays, marketing has two main problems. First, is that marketing has become a very popular term, and this is a problem.
6. Shows Google search of marketing 7.49-8.55		Most people when try to know what is marketing, go to the Google search engine, and write the term marketing, and marketing gives us on this search engine up to five hundred millions of web pages talking about marketing. And most of them make a bad connotation of marketing and don't employ the term marketing in a proper way.
7. Uses humor to demonstrate popularity & elicit what is done to find definitions		The second problem with marketing is that has become very popular, especially due to the digital environment, and most people when applies or try to know what marketing is, begin as Homer Simpson does, **(laughter)** with the most advanced techniques, and forget the basics, and forget the basics. They want to know the most updated techniques, and forget the basics of marketing. **When you don't know the meaning of a word, what do**

8.55-9.32		**you do? (D)** **S5**- *To go to the dictionary.*
8. Shows and reads definition of marketing 9.32-10.22		T- You go to the dictionary and this is what I did, go to the dictionary and read the definition of marketing. I did not go to any dictionary, but the dictionary of the American Marketing Academy. **(laughter)** This is a best dictionary in marketing field. And this is the definition that the American Marketing Association, which is also a definition adopted by the European Marketing Academy. This is how this association defines what marketing is. In this definition as we can read, marketing is a process, is a process, as you stated, very well, of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy individual needs, organizational objectives and society at large. This is the mostup-today definition of marketing.
9a. Highlights the keypoints in definition 9b. Elicits example of commercial and non-commercial exchange 9c. Relates present teaching activity with 'exchange' 10.22-11.25	 	From this definition, I would like to highlight three points. First, **which is the goal of marketing and who does marketing? (D)** If we carefully read this definition, the goal of marketing is to create exchange. If we think in exchange, we can have, of course, commercial exchange. **An example of commercial exchange?(R)** **S8**- *When you go to a shop.* ***inaud ST*** T- When you go to a shop and buy a mobile phone. But we can also have non-commercial exchange. **Any example of non-commercial**

		exchange? (R) You said it before. **S1**- *When you try to change the way of thinking of some person or….* T- For example, now. Teaching, the teacher and the students. There is an exchange, and I am trying to transmit my knowledge, I am trying that you learn, and you are here making an effort to hear me. So, wherever there is a exchange, marketing can be applied. Wherever there is a exchange, marketing can be applied. In this definition, we don't have the word firm, we don't have the word company, we don't have the word enterprise. We have the word exchange, and wherever there is exchange, commercial or non-commercial, we can apply the word marketing.
10. Illustrates political marketing 11.25-12.45		As Pablo said very well before, politicians can apply marketing. Most people agree that when Barack Obama won or became president of the United States of America, it employed or he employed marketing techniques very well. It is a branch of marketing which is called political marketing. There is a exchange, he is a politician, people who vote him, and they want to make an exchange. I am **inaud** T your vote, and I tell you what I say if you vote me. There is an exchange of marketing can be applied.
11. Highlights the goal of marketing		**Which is the second idea I would like to highlight from this definition? (RH) Why people or why organizations can apply and which is the goal of marketing. (Rh)** The goal of marketing

12.45-13.20		is to satisfy individual needs, organizational objectives, and society at large. Nowadays, because of the media, most people have a bad connotation of marketing, because the most controversial marketing campaigns arrive to the media, and this is what most people can see on TV related to marketing. But marketing should also take care about society, and most firms that apply marketing strategies take into account this concern.
12. Illustrates cause-related marketing 13.20-14.12		For example, we have here a marketing campaign which is a cause-related marketing campaign. In this case, one firm, *Kentucky Fried Chicken* concerns about breast cancer, and every time they make an exchange with the consumer, every time we buy a chicken bucket, they give an amount of money to research against this breast cancer. Because marketing also concerns about the society and that. Of course, they want to earn money, but they can't forget that the consumers could ever have a problem like this, and they concern about the individual needs with which they relate.
13. Highlights what marketing does 14.12-15.05		And the last point I would like to highlight from my definition, well, not my definition, from the American Marketing Academy Association definition is what marketing does. Marketing has a lot of techniques, a lot of variables, and most people think that only promotion is a variable that marketing can be applied, and, we can see, sorry, in this definition there are

		four marketing variables which are employed to define the marketing strategy of a firm, of an organization, which are: the conception of the product, the idea, good or service; the price; the promotion; and distribution.
14. Explains and illustrates 4 main points involved in marketing 15.05-16.43		When we think in a marketing strategy, when we think about marketing, we should think in the four variables all together. Maybe, the most non variable is promotion, but before to promote you need the product. You have to put the product available to the consumer, and then you have to price the product. Because in the exchange, you give the product and obtain the price. And also you have to consider this variable when you define your marketing strategy. To think that marketing is promotion, is a very narrow definition of marketing. Of course, promotion is a variable of marketing, but is not the only, and is not the most important variable.
15a. Reviews definition 15b. Ends with final message 16.43-17.08		And this is what marketing is. I hope that after this class, you have a better knowledge of what marketing is, and I hope that the next time you think about marketing you forget the bad connotations that usually marketing has for most of the consumers. And thank you very much.

III.4. A comparison of the more and less effective lessons

Besides exploring the common interactive and multimodal aspects of the 6 highly rated mini-lessons, 6 other recordings that had not been selected as effective were also reviewed to determine if they had similar characteristics. It was found that in most cases

these lecturers used a limited number of questions and that little or no negotiation of meaning occurred. Concerning their use and combination of modes, they shared some similar aspects, especially in terms of the written and non-verbal materials, with the ones that had been voted for as being effective. The written mode on their slides also made use of key words and simple syntactic structures. Similarly, their non-verbal materials consisted of illustrative images, tables and diagrams, though they were used to a lesser extent. Unlike the highly rated lessons, these less effective ones foregrounded speech throughout a greater part of the session and had much lower percentages of time in which 3 or 4 modes were combined to represent and communicate meaning. In summary, the less effective ones were not as interactive or as multimodal as the more effective ones.

IV. CONCLUSION AND IMPLICATIONS

The main objective of this study was to explore the characteristics of lessons considered to be effective according to trained EMI instructors. This was achieved by carrying out a verbal and multimodal analysis of 6 highly rated mini-lectures, then having a closer look at one of them, and finally comparing the more effective with the lesser ones. What follows is a summary of the findings and their pedagogical implications.

The verbal interactive discourse analysis revealed that the more highly evaluated lessons had a greater use of audience than of content-oriented questions. In addition, there were more referential than display questions, both of which were in many cases followed by instances of negotiation of meaning (i.e. comprehension and confirmation checks) initiated by teachers and students. These lessons had more questions per 1000 words and higher percentages of interactive discourse in comparison to those in other corpora (e.g. Chang, 2012). It was also found that these lessons had lower rates of words per minute than other less interactive lectures. Thus, in terms of training EMI instructors in the use of verbal interactive discourse, the study points to the need to a) teach the differences among types of questions, b) practice formulating referential type questions, and c) encourage and give students time to negotiate meaning.

The multimodal discourse analysis of the chosen lessons showed that the EMI instructors' spoken and written language was made up of stressed key words and simple

syntactic structures. They each made use of diverse non-verbal materials that illustrated concepts. In all cases, the speech, writing and NVMs were accompanied by eye contact and gestures. In fact, the 6 mini-lessons were highly multimodal because they made use of four modes (i.e. speech, writing, NVMs and body language) throughout most of the lessons, unlike 6 other mini-lessons that had not been selected and that foregrounded speech and accompanying body language most of the time. The findings of the multimodal analysis highlight the importance of raising awareness among EMI instructors of modal and multimodal affordances. In other words, EMI trainers should dedicate time with their trainees to make clear how modes or semiotic resources can be used and combined to facilitate students' comprehension.

The combined verbal interactive and multimodal discourse analysis of mini-lesson 2, represented in Table 5, gives further support to the benefits of instructors' conscious use of interactive and multimodal discourse. In this exemplary lesson, the instructor's use of audience-oriented questions and combinations of varied semiotic resources allowed him to carry out interpersonal pedagogical functions that engaged the audience. Detailed analysis, as this one, of other successful EMI lessons in diverse fields should not only be object of study for ESP specialists, but also a resource for their teacher training

In general terms, a number of implications emerge with regard to training lecturers who switch from teaching in their L1 to English. First, in line with Morell (2004) and (2007), audience-oriented questions, especially referential questions, will enhance interaction that will not only promote students' engagement, but also allow for negotiation of meaning. Second, in line with Morell (2015) and Norte Fernández Pacheco (2018), co-occurring reiteration of meaning through visual modes allows the audience, with varying degrees of proficiency, to understand what the speaker is trying to convey despite linguistic inaccuracies or complexities. Finally, it is important to point out, in line with Klaassen (2001), Hellekjaer, (2010) and Bjorkman, (2011), that effective lecturing skills are not directly proportional with high linguistic proficiency.

As far as research to improve EMI classroom instruction is concerned, there is much to be done to begin to determine 'best practices' and to ensure quality in EMI teaching contexts of diverse disciplines. Here I have only explored the discourse of 6 well-rated mini-lectures, albeit of distinct fields, and I have found that they all have a high degree

of interactivity and multimodality. Through this study as in others cited, it seems quite clear that effective EMI instruction involves students in the language and the content. And, in terms of the verbal mode we know that this is done through a deployment of engaging questions and negotiation of meaning. However, in terms of the visual modes and their combinations, it is not so clear. In line with Ainsworth (2006), it is not enough to consider each representation (mode) in isolation, we need to explore how representations interact to form "chemical representations". In other words, research needs to look into how EMI instructors of specific disciplines use multimodal ensembles to effectively represent and communicate the particular inherent meanings of their fields. Consequently, to start to corroborate best practices in each of the many fields that have adapted EMI, LSP specialists need to analyze characteristic multimodal ensembles found in larger lecture corpora.

In this study, I have provided an example of how LSP specialists can use their expertise to train teachers and to do research in EMI. However, and more importantly, this study provides further evidence of the many new teaching and research avenues open to the specialists of languages for specific purposes as a consequence of the ever-increasing university EMI scenarios.

Notes

[i] In this paper the term 'interactive mini-lecture' is used interchangeably with 'mini-lesson' and it refers to a short university classroom session that incorporates student overt participation by means of engaging activities such as group brainstorming, pair work or debates.

[ii] http://tla.mpi.nl/tools/tla-tools/elan

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