Language learning in a partially English-taught teacher education programme: language gains and student perceptions

Journal:	*International Journal of Multilingualism*
Manuscript ID	IJM-1011.R2
Manuscript Type:	Paper
Keywords:	English Medium Instruction (EMI), higher education, bilingual programme, English proficiency, student perceptions, foreign language acquisition

Abstract:	This paper reports on a study aimed to investigate students' development in English proficiency over a four-year partially English-taught programme that did not integrate any explicit language learning goals. Additionally, the study investigated their perceptions concerning language gains and experiences in the programme. Both quantitative and qualitative research methods were employed. Paired-sampled t-tests indicated statistically significant differences from pretest to posttest for listening but not for grammar. Repeated measures ANOVA determined that the least proficient (B1) students obtained the highest language gains over the 4-year period, particularly in listening. In contrast, advanced (C1) students performed worse in the listening and grammar posttests than in the pretests. Further findings indicated that the students perceived a positive impact on their English competence. No significant differences were found across self-rated proficiency groups regarding their perceptions of language improvement as a result of participating in the programme. The study also found that the higher the students' proficiency in the language, the less satisfied they were with the programme. In the focus group interviews, the students attributed their language improvement to being exposed to English and having to produce output, mainly in oral presentations and written tasks, and demanded English language instruction within the curriculum.

Language learning in a partially English-taught teacher education programme: language gains and student perceptions

This paper reports on a study aimed to investigate students' development in English proficiency over a four-year partially English-taught programme that did not integrate any explicit language learning goals. Additionally, the study investigated their perceptions concerning language gains and experiences in the programme. Both quantitative and qualitative research methods were employed. Paired-sampled t-tests indicated statistically significant differences from pretest to posttest for listening but not for grammar. Repeated measures ANOVA determined that the least proficient (B1) students obtained the highest language gains over the 4-year period, particularly in listening. In contrast, advanced (C1) students performed worse in the listening and grammar posttests than in the pretests. Further findings indicated that the students perceived a positive impact on their English competence. No significant differences were found across self-rated proficiency groups regarding their perceptions of language improvement as a result of participating in the programme. The study also found that the higher the students' proficiency in the language, the less satisfied they were with the programme. In the focus group interviews, the students attributed their language improvement to being exposed to English and having to produce output, mainly in oral presentations and written tasks, and demanded English language instruction within the curriculum.

Keywords: English Medium Instruction (EMI); higher education; bilingual programme; English proficiency; student perceptions

Introduction

English Medium Instruction (EMI) in Higher Education (HE) has been attracting intense research interest for decades. This surge of attention is associated with a strong increase of fully or partially English-taught programmes, throughout not only European countries but also worldwide, in the last decades (Dearden, 2014; Macaro et al., 2018;

Wächter & Mainworm, 2014). To illustrate, a survey of 70 European universities from 11 different countries that took place in 2014-2015 found that 39% of them reported that they offered both individual subjects and fully English-taught under- and post-graduate degrees; only 7% were not holding any EMI courses at all. Similarly, national policy initiatives have been introduced to boost EMI in the Asia-Pacific tertiary education sector, where an exponential increase in EMI has been reported (Fenton-Smith et al,, 2017; Macaro et al., 2018).

The most commonly alleged advantage of EMI is "the double benefit of subject knowledge and improved target language proficiency" (Coleman, 2006, pp. 4-5). This analysis proceeds from the assumption that the mere exposure to English will facilitate language learning and yet the students will simultaneously learn the specialised academic subject. However, as Jiménez-Munoz (2014, p. 30) argues, unless conclusive evidence is found, the controversy surrounding EMI as a strategy that promotes excellence in both academic subject matter and language learning will not disappear. There is, therefore, an urgent need to provide proof that EMI does not negatively impact on students' academic achievement while, at the same time, their English language competence is enhanced. Particularly in contexts where the EMI initiative does not acknowledge any language goals and no specific language instruction is provided, the questions remain as to whether students actually make any significant progress in their language proficiency and to whether they actually acquire the purported benefit of the added value of EMI in terms of English language learning.

As Macaro et al. (2018, p. 57) note in their systematic review study of EMI instruction in HE, there is a considerable dearth of research that objectively measures the effect of EMI on English proficiency through language tests. This was precisely one of the aims of this study: to assess the impact on the students' English language skills of

a four-year partial EMI Education programme that does not include any explicitly formulated language learning objectives. English learning is widely recognised as a by-product of EMI and hence, "no assessment of students' English competence is made because no language learning outcomes are acknowledged" (Aguilar, 2017, p. 725). Additionally, the study investigates student perceptions concerning their English language gains and experiences as a result of participating in the programme. As Dalton-Puffer and Smit (2013) argue, educational innovations are inextricably linked to how they are interpreted, and educationalist and practitioners "should find out how their target groupings perceive their educational activities and how they view their success – or lack of it" (p. 549).

Literature review

Impact of EMI on language learning

As mentioned above, one key finding from Macaro et al.'s (2018) systematic review of EMI highlighted the paucity of research "using objective tests rather than self-report, on the impact of EMI on improving students' English proficiency" (p. 64). This could be explained by the fact that language learning "is not a primary intended outcome" (Pecorari, 2020, p. 19) and that there are no explicit language learning goals in EMI provisions (e.g., Aguilar, 2017). Additionally, as will become evident below, the majority of the available studies use measures of general language or skill-specific proficiency tests that may not be appropriate to capture the impact of EMI on language learning, since EMI students are exposed to academic and discipline-specific rather than to general English (Macaro et al., 2018).

.

So far, only one study aimed to identify language gains in EMI has assessed language improvement by analysing the students' performance in authentic academic-related language use situations. Hernandez-Nanclares and Jimenez-Munoz (2017) conducted a study on two first-year, six ECTS, compulsory modules in a BA programme in Business Administration at a university in northern Spain. Both modules amounted to 53 contact and 97 independent, out-of-class EMI learning hours. They collected participants' written assignments and video-recordings of tutorial groups throughout the academic year and contrasted their language performance against the Common European Framework of Reference (CEFR) (Council of Europe, 2001) descriptors for the 25 skills or sub-skills required to accomplish content-related assignments. On average, students progressed slightly less than half a CEFR level in one academic year. This may be regarded a considerable gain as the two modules only represented 12 out of the 60 ECTS credits in one academic year. However, it is unlikely that this progress can be attributable to the EMI modules alone as the study does not control for other factors such as attendance to English classes outside the programme or out-of-class language learning activities. The CEFR estimates approximately 200 guided learning hours for a language learner to progress from one level to the next). The study did not include a non-EMI comparison group in terms of English language learning.

In all other studies, measures of specific skills or general language proficiency have been used to detect language gains in EMI. In a study with female Emirati undergraduates, Rogier (2012) measured language skills improvement over a four-year programme. Her findings indicated statistically significant gains in all areas tested by the IELTS exam. Speaking was the area with the highest gain, followed by reading, writing and, finally, listening. Rogier did not have a non-EMI comparison group but she compared these gains with those reported in studies of general English programmes that

have shown that, for learners to move up .05 of a level (the average gain in her study), between 200 and 240 hours of general English tuition are needed (Elder & O'Loughlin, 2003). As Macaro et al. (2018) pointed out, it is questionable that an average one half band score gain like the one Rogier (2012) obtained in her study can be regarded as enough validation of the positive impact of the programme on language learning.

Another study that employed an international standardised language test is that conducted by Aguilar and Muñoz (2014). Language gains after a semester in an EMI engineering postgraduate programme were measured through the same instrument as in the present study, the Oxford Placement Test (OPT) 1 and 2 (Allan, 2005a, 2005b). Results indicated that only differences between the pre- and post-listening tests were significant. The study also found that less proficient students (elementary level, OPT Band 3) improved significantly more in listening and grammar skills than more proficient ones. They were also the only group that obtained significant gains in both listening and grammar skills. In contrast, higher proficiency students (advanced level, OPT Band 6) obtained no language gains in any of the subtests; surprisingly, they scored significantly worse in the grammar post-test than in the pre-test. As for the students in the intermediate group (upper intermediate level, OPT Band 5), although a positive development in listening skills was found, it did not reach statistical significance and their improvement in grammar was extremely small. There was no non-EMI comparison group and the significant differences were exclusively observed within-group.

Two further studies conducted in China (Lei & Hu, 2014) and Taiwan (Yang, 2015) also employed general-ability language tests. Results in Lei and Hu's (2014) study indicated that EMI students did not outperform their Chinese-medium counterparts on a proficiency test after one year (i.e., 32 weeks) of EMI instruction in

Business Administration courses when biographic (gender and year of study), perception variables (perceived necessity and perceived study burden) and prior differences in English proficiency had been partialed out ($\Delta R2 = .01$, $\Delta F\ (1,98) = 3.03$, $p > .05$). In the study conducted by Yang (2015), EMI students made significant improvements in receptive skills ($t = -9.097$, $p = .001$) between the beginning and the end of a four-year bachelor degree in an international tourism programme. They also outperformed non-EMI students from other comprehensive or polytechnic universities in receptive skills (EMI students' average score in listening = 100.63 and reading = 92.18; non-EMI polytechnic university students' average score in listening = 69.91 and reading = 64.82; non-CLIL comprehensive university students' average score in listening = 74.46 and reading = 75.97). No significant differences compared to other test-takers were identified in productive skills.

Another study set in an elective course on international communication at a university in Taiwan conducted by Tai (2015) aimed to assess the progress in writing syntactic complexity, accuracy and fluency over a one-semester period. Gains were found in accuracy and fluency but not in syntactic complexity. Only within-group comparisons were made, thus rendering the study unable to identify differences between EMI and non-EMI instruction.

To summarise, considering the expansion of fully or partially English-taught programmes throughout Europe and indeed worldwide, there are only just a few studies that assess the effect of EMI instruction on language proficiency as determined by language tests and measures. Additionally, comparability across studies is problematic due to variability in data collection instruments (Macaro et al., 2018) as well as contextual (instructional, organisational, institutional, language policy-related and support, etc.) factors. Furthermore, most studies do not have a non-EMI comparison

group so as to ensure that potential language gains can be exclusively attributed to EMI. What is more, the available studies that found a beneficial effect of EMI on language learning only confirm modest gains, which does not fulfill the expectations for language learning that EMI may arouse. It is true, though, that, although limited, research that tries to capture language progress by focusing on students' performance in authentic academic tasks does provide a more favourable picture of the impact of EMI on language development.

Students' perceptions of language learning

A review of the literature on students' perceptions in fully or partially English-taught university programmes reveals that the expectation of language improvement ranks high among the reasons to enrol in an EMI programme (Fernández-Costales, 2017; Salaberri-Ramiro & Sánchez-Pérez, 2018; Yeh, 2014). Additionally, students seem to recognise this potential language gain as one of the advantages of EMI, despite the challenges it poses for understanding and learning subject matter (Bozdoğan & Karlıdağ, 2013; Byun et al., 2011).

Most of the studies conclude that students actually perceive an overall progress in their language ability (Fernández-Costales, 2017; Hernandez-Nanclares & Jimenez Munoz, 2017; Rogier, 2012; Toledo et al., 2012). However, conflicting evidence also exists. Although the study conducted by Sert (2008) with fourth-year Turkish undergraduate students concluded that EMI was significantly more effective than formal language instruction, it was still not perceived sufficiently effective for the acquisition of language learning skills except for speaking. After a semester of EMI instruction at an engineering school in a Spanish university, 59% of the students reported that they had not learnt any English (Aguilar & Rodríguez, 2012). Similarly,

students interviewed by Lei and Hu (2014) in China expressed their dissatisfaction with the programme as it failed to improve their English proficiency.

In terms of improvement of language knowledge since entering the EMI programme, studies unanimously highlight technical, specialised vocabulary as the area in which students perceive they improve the most (Aguilar & Rodríguez, 2012; Fernández-Costales, 2017; Toledo et al., 2012). As regards the communicative skills, findings from different studies are sometimes contradictory, except for listening, which seems to be recognised as the skill or one of the skills most highly developed. Students in the studies conducted by Aguilar and Rodríguez (2012), Hernandez-Nanclares and Jimenez-Munoz (2017), and van der Worp (2017) identified listening and speaking as the abilities they thought that they had improved the most since the start of the EMI programme. In three other studies (Bozdoğan & Karlıdağ, 2013; Rogier, 2012; Toledo et al. 2012) students reported that they had made the most gains in their receptive skills. Students interviewed by Bozdoğan & Karlıdağ (2013) reported a regression in their productive skills while those surveyed by Sert (2008) claimed that EMI was effective only for the development of speaking skills. Unlike our study, none of these studies differentiated between speaking and oral interaction when exploring perceptions, even though, as the CEFR (Council of Europe, 2001, 2018) acknowledges, production and interaction constitute two distinct language activities. Production (referred to as 'speaking' in this study) involves sustained monologue and long turns whereas interaction involves conversational dialogue and short turns.

Several factors may be behind these dissimilar results concerning student perceptions on language learning in EMI initiatives. The specific conditions in which these programmes were implemented and, as research by Fernández-Costales (2017) and Muñoz (2001) suggest, the students' competence at the beginning of the programme

are bound to impact students' perceptions of their language progress.

The study

Objectives and research questions

As mentioned above, this study set to assess the impact of a four-year partial EMI programme on the students' English language proficiency and to investigate their perceptions concerning their language learning as a result of participating in the programme. More specifically, the study addressed the following research questions (RQs):

RQ1. Are there statistically significant differences in education students' English listening and grammar skills between the beginning and the end of the partial EMI programme?

RQ2. Can differences in English skills between the beginning and the end of the programme be associated to the students' starting proficiency level?

RQ3. What are students' perceptions regarding English learning in a partial EMI programme?

RQ4. Are there any statistically significant differences in student perceptions concerning language improvement and satisfaction with the programme related to self-perceived English proficiency?

Methodology

The study adopted an exploratory sequential mixed methods design (Creswell & Clark 2011, p. 81), where the qualitative data gathered from the focus group interviews were meant to help explain the quantitative results obtained by a perceptions questionnaire. Furthermore, a quantitative approach was used to investigate language proficiency test data.

Context

The University of Málaga (UMA) started offering a partially English-taught programme at the Faculty of Education in 2014. This course, leading to a Degree in Primary Education, can be characterised as a partial EMI programme in that non-language subjects are taught in English without explicit language learning aims. Additionally, students do not have any formal language provision. Throughout the four-year duration of the degree, around 35% of the 240 ECTS credit points were delivered in English by non-native lecturers. Although some English-taught modules have changed over the years, the following are some of the ones included in the EMI programme: Music Education, Arts Education, History of Education, General Didactics, Social Sciences Education, Physical Education and Science Education.

Participants

Seventy-one students (58 female and 13 male) from the first two groups of the partial EMI Degree in Primary Education (starting years: 2014-2015 and 2015-2016) were tested in English through the Oxford Placement Test 1 (Allan, 2005a) at the beginning and the Oxford Placement Test 2 (Allan, 2005b) at the end of the programme four years later. This number of students represents 61.74 % of the total population of the students from those groups who completed the degree. The students volunteered to take the test.

Additionally, 157 students between the ages of 18 and 40 (M = 20.66, SD = 3.22; Mo = 20) participated voluntarily in the survey study. In the academic year in which data were obtained (2018-2019), 250 students were enrolled in this partially English-taught degree course. Hence, the study sample that completed the study questionnaire represents 62.8% of the total students enrolled in the partial EMI programme that academic year, which is representative of the population. A hundred and twenty-four (79%) were female, 29 (18.5%) were male, one was non-binary and the

remaining three preferred not to say what gender they identified as. All four course years were represented in the sample (Table 1).

Table 1
Distribution of the Sample by Course Year

Course year	Frequency	Percentage
1st	56	35.67
2nd	41	26.11
3rd	18	11.46
4th	42	26.75

Only 20 students (12.7%) declared not to hold any officially certified English proficiency level at the time of the data collection. Of the remaining 137 students, 48 (35.0%) held a B1 level or below, 67 (48.91%), a B2 and the remaining 22 (16.06%), a certified C1 level. When asked to self-rate their proficiency level, 24 (15.3%) considered that they had a B1 level, 85 (54.1%) a B2, and 48 (30.6%), a C1. Three quarters of the sample (n = 118) declared that they were studying English outside the programme. Of these 118 students, almost 70% self-rated their proficiency as B1 or B2. When asked about their motivation to join a bilingual Spanish-English course, improving the level of English was the second most frequently indicated reason behind the prospect of better job opportunities, indicated by 132 students (84.08%). A total of 99 students (63.06%) selected improving their competence in English, either as the only reason to enroll in the course (n = 9) or, more commonly, as one of the main reasons alongside others, mainly the perception of obtaining better opportunities in the job market.

Finally, 24 (19 [79.16%] female and 5 [20.83%] male) of the students who completed the survey participated in focus group interviews. This distribution is close to the male-female ratio in the informant pool and degree enrolment.

Instruments

Three data collection instruments were used in the study: a language test, a questionnaire and a focus group interview.

The Oxford Placement Test. The *Oxford Placement Test (OPT) 1* (Allan, 2005a) and *2* (Allan, 2005b) were used as measures of English ability. Each test consists of two subtests (a listening section and a grammar section) and has 100 items. According to the information provided by the author, the OPT results are calibrated against the CEFR levels (A1-C2), Cambridge ESOL exam levels and IELTS band scores. This test is practical to administer and score, and was used in a study on the effects of EMI on postgraduate Engineering students' listening proficiency and grammatical knowledge carried out by Aguilar and Muñoz (2014). Using the same language testing instrument facilitated comparability across the two studies.

English Language Learning Perceptions Questionnaire. An online questionnaire was designed to tap into the participants' perceptions about their experiences in the partially English-taught programme (Appendix I). The questionnaire consisted of a demographics section and two different scales. The 6-item 'Perception of language improvement scale' (Cronbach's alpha = .893) aimed to obtain the students' views on progress in English. This scale included statements regarding perceived improvement on overall English level, on listening, speaking, oral interaction, reading and writing. The second scale, 'Satisfaction with the bilingual course scale' (Cronbach's alpha = .892) was meant to obtain a measure of programme satisfaction in which the following dimensions were represented: overall satisfaction, methodology and quality of lessons. A pool of items based on the content areas was generated by the research team, consisting of three language teaching specialists. These items were then discussed in the research team and, finally, a selection of items was conducted by the three specialists to

ensure face and content validity. A draft questionnaire was piloted on 10 students from the programme who volunteered to complete it and then participate in a group interview. This was meant to ensure ease of completion, identify ambiguities in wording and determine the length of time to complete the questionnaire.

Focus group interviews: Focus group interviews were conducted with three different groups of volunteer students from the last three years following a semi-structured interview format (Appendix II). Permission was obtained to record the interviews. Students were asked questions linked to the questionnaire items so as to validate and enrich the quantitative results with more in-depth insights. These interviews were conducted in Spanish, the mother tongue of all the interviewees.

Data analysis

A quanti-qualitative approach to student perception data was chosen to obtain evidence of patterns among the study sample, to compare self-reported proficiency groups, and to gain detailed insights on participant attitudes and interpretations.

Two summative scales were obtained from items in the questionnaire, each participant's score being calculated by adding up the points for the corresponding items: the 'Perceptions of language improvement scale' (6 items, range: 6-24) and the 'Satisfaction with the programme scale' (6 items, range: 6-24). Data from the OPT tests and the perceptions questionnaire were analysed using quantitative methods. Descriptive statistics were used to summarise aspects of the data to provide information about the sample and the groups of the study. A paired-samples t-test was conducted to compare students' performance in the listening and grammar subsets of the OPT between the beginning and the end of the programme. Repeated measures ANOVA were used to compare the development in listening and grammar skills of the

participants with different proficiency levels (up to B1, B2 and C1). Kruskal-Wallis tests were performed to compare perceptions held by the different self-rated proficiency groups as represented by the scales of 'Perceptions of language improvement' and 'Satisfaction with the programme'. The quantitative data were analysed using the IBM SPSS software package (SPSS version 26.0). A qualitative thematic analysis was used to identify salient themes in the interview data (Guest et al., 2011). Initially, the interviews were transcribed and data were entered in ATLAS.ti version 8. A first analysis resulted in an initial coding scheme. The authors then met to discuss the preliminary codes. After deliberation, a definite coding scheme was constructed and codes were then collapsed into the following themes: learning of general vs. academic/professional English, perceptions of improvement in language activities (listening, speaking, oral interaction, reading, and writing), attributions of success and failure in learning English in the programme, and language provision in the programme. These themes generated by the qualitative analysis will be discussed in the third subsection of the following section.

Findings and discussion

Findings are now presented and discussed. The section is divided into four subsections, with each subsection addressing one of the research questions listed above.

Differences in students' English skills between the beginning and the end of the partial EMI programme

As mentioned above, 71 students from the first two groups of the partial EMI Degree in Primary Education were tested in English through the two subtests (Listening and Grammar tests) of the Oxford Placement Test at the beginning and at the end of the programme. Descriptive results are shown in Table 2.

Table 2		
Descriptive Statistics for the OPT subtests		
	Listening (*M*, *SD*)	Grammar (*M*, *SD*)
Pretest (OPT1)	68.20 (7.59)	65.39 (10.84)
Posttest (OPT2)	72.70 (5.68)	63.21 (10.31)

As Table 3 shows, our study found a significant language improvement in listening over the four-year programme with a medium effect size but not in grammar. Aguilar and Muñoz (2014) found strikingly similar results after a six-month EMI postgraduate course in that a significant gain was only observed in listening, although the effect size in their study was substantially smaller (0.30).

Table 3				
Results for the T-test				
	t	*df*	Sig. (2-tailed)	Effect size *d*
Listening	-4.57	70	**< .001**	0.67
Grammar	1.79	70	.078	0.21

Our study is in line with previous research that has also identified gains in listening after a period of EMI instruction (e.g., Aguilar & Muñoz, 2014; Aguilar & Rodríguez, 2012; Muñoz, 2001; Yang, 2015).

Differences in students' English skills between the beginning and the end of the programme associated with the students' starting proficiency level

The study also aimed at identifying if the students' language development over the four-year course was affected by their English competence at the start of the programme. In order to identify how different proficiency groups performed in terms of language development over the four-year programme, students were classified according to their

performance in the OPT1 test in three groups: Up to B1, B2 and C1, as it is claimed that OPT test scores are matched to the CEFR levels (Allan, 2005a, 2005b). Table 4 shows the descriptive statistics for the Listening and the Grammar subtests according to competence.

Table 4
Descriptive Statistics by Proficiency Level

	Groups					
	Up to B1 (n = 40)		B2 (n = 22)		C1 (n = 9)	
	Pretest (M, SD)	Posttest (M, SD)	Pretest (M, SD)	Posttest (M, SD)	Pretest (M, SD)	Posttest (M, SD)
Listening	64.35 (6.38)	71.58 (5.60)	70.86 (4.55)	73.95 (5.01)	78.78 (5.65)	74.67 (6.78)
Grammar	58.38 (6.79)	59.60 (9.90)	70.50 (4.96)	66.95 (7.64)	84.11 (5.11)	70.11 (11.88)

The results of the repeated measures ANOVA revealed that there was a marginally significant main effect of time (between the pre- and the posttest) on participants' performance in the listening subtest ($F_{(1,68)} = 3.76$, $p = .057$, $\eta p^2 = 0.052$). In contrast, there was a significant interaction between the variable time and the variable proficiency level with a large effect size ($F_{(2,68)} = 8.94$, $p > .001$, $\eta p^2 = 0.210$). This result indicates that the development in listening of the participants with different proficiency levels was not the same. Pairwise comparisons between the estimated marginal means show that the effect of time is significant for the 'up to B1' proficiency group with a large effect size ($F_{(1,39)} = 32.59$, $p > .001$, $\eta p^2 = 0.46$), marginally significant for the 'B2' group ($F_{(1,21)} = 4.12$, $p = .062$, $\eta p^2 = 0.063$) and non significant for the C1 group ($F_{(1,21)} = 4.63$, $p = .06$, $\eta p^2 = 0.043$). Results in Table 4 indicate that, while B1 and B2 students improved their listening skills in the posttest, the mean scores obtained in the posttests by the C1 students were lower than in the pretest.

A significant main effect of time on participants' performance in the grammar subtest was revealed by the repeated measures ANOVA results ($F_{(1,68)} = 17.63$, $p > .001$, $\eta p^2 = 0.21$). The interaction between the variable time and the variable

competence level was also significant with a large effect size ($F_{(2,68)} = 10.59$, $p > .001$, $\eta p^2 = 0.235$). This result indicates that the development in English grammar of the participants with different proficiency levels was also not the same. Pairwise comparisons between the estimated marginal means show that the effect of time is not significant for the 'up to B1' competence level group ($F_{(1,39)} = 0.62$, $p = .436$, $\eta p^2 = 0.46$), and significant for the B2 group ($F_{(1,21)} = 5.62$, $p = .027$, $\eta p^2 = 0.210$) and for the C1 group ($F_{(1,8)} = 16.56$, $p = .004$, $\eta p^2 = 0.671$). As Table 4 shows, the mean scores for the higher-proficiency groups (B2 and C1) decreased in the posttest, and the decrease is particularly pronounced in the case of the C1 group.

The least proficient students make the greatest gains in listening over the four-year programme while the upper intermediates ones make a more modest progress. Surprisingly, advanced students performed worse in the listening test at the end of the programme, although the difference is not significant. In the case of grammar, the lower intermediate group makes only a slight progress over the four-year duration of the programme while the upper intermediate and advanced students performed worse at the end of the programme.

Several explanations may have interacted to produce these results. Students with a lower level of competence undoubtedly have more room for language progress and the higher exposure to English may have contributed to improve their comparatively less developed grammar knowledge and, particularly, their listening skills in a greater degree. Furthermore, as mentioned above, three quarters of the sample that completed the perceptions questionnaire declared that they were studying English outside the programme and almost 70% of those self-rated their proficiency as B1 or B2. As a C1 CEFR level will soon become a requirement to teach in the bilingual schools from the

region where UMA is located, the students with a lower level of English are the ones that, in a higher proportion, were studying English in parallel to the programme.

The decline in grammar test scores may be due to the fact that, particularly in FL contexts, if no formal study of the language takes place, knowledge about the language may consequently deteriorate. Although this speculation needs to be confirmed by further studies, research has claimed that the gradual attrition of FL competence resulting from the discontinuity in language teaching provision at universities (Yoshitomi, 1992; Ecke, 2004) is most apparent in the decline of grammatical competence and writing skills (Čepon, 2012; Klapper, 2006). Furthermore, an EMI programme *per se*, with no specific language-learning objectives of its own, may have differential effects depending on the language skills being assessed. Finally, the incongruence between perceptions of gains and actual language progress as a function of proficiency level may be explained because, as discussed above, general or skill-specific ability tests may not capture the effect of EMI on language learning that is acknowledged by the students themselves. Most probably, the language development caused by EMI is more specifically associated with academic or field-specific discourse or language tasks.

In terms of the trend of the evolution in language performance of students of different language ability, our study results are strikingly similar to those obtained by Aguilar and Muñoz (2014), also using the same assessment instrument. Similarities are even more remarkable if we consider that their study aimed to ascertain the language gains after just a one-semester course, which leads to contemplate the possibility of an instrument effect. Although this hypothesis would need further investigation, it needs to be highlighted that the OPT is a reliable test used in a number of previous investigations. Additionally, it is calibrated against the level system provided by the

CEFR and against other standardised proficiency measures such as the IELTS band scores and Cambridge ESOL exam levels, as mentioned above. Furthermore, it was based on data obtained from multilingual populations of test takers (Allan, 2005a, 2005b). It could therefore be the case that the comparable similarities between the results obtained by Aguilar and Muñoz (2014) and our study could have also been identified if a different general proficiency test had been used.

Student perceptions regarding English learning in a partial EMI programme

Table 5 shows the results for items aimed to obtain information about the students' perceptions of language improvement as a consequence of enrolment in this partially English-taught programme.

Table 5

Perceptions of Language Improvement

Taking part in this programme has improved…	Mean (SD)	St.D (*n*, *%*)	D (*n*, *%*)	A (*n*, *%*)	St.A (*n*, *%*)
my level of English.	2.90 (0.81)	11 (7.0)	26 (16.6)	87 (55.4)	33 (21.0)
my speaking skills in English (oral presentations and similar activities).	3.06 (0.63)	0 (0.0)	26 (16.6)	95 (60.5)	36 (22.9)
my oral interaction skills in English (in dialogues, debates and similar activities).	2.92 (0.73)	7 (4.5)	27 (17.2)	94 (59.9)	29 (18.5)
my listening skills in English.	2.85 (0.89)	15 (9.6)	32 (20.4)	72 (45.9)	38 (24.2)
my reading skills in English (academic documents, online information and similar activities).	3.06 (0.76)	7 (4.5)	19 (12.1)	88 (56.1)	43 (27.4)
my written skills in English (essays, exam questions, written portfolios and similar activities).	3.13 (0.70)	4 (2.5)	17 (10.8)	91 (58.0)	45 (28.7)

Note: St.D: Strongly Disagree; D: Disagree; A: Agree; St.A: Strongly Agree

Results indicate that the students hold the view that the programme has exerted a positive impact on their English competence. Curiously enough, students seemed to perceive that their overall language improvement was smaller than in specific language activities such as speaking or writing. Our findings seem to contradict previous studies that concur that students in EMI programmes perceive higher improvement in receptive

skills -and, particularly, in listening- than in productive skills (Aguilar & Rodríguez, 2012; Muñoz, 2001; Yang, 2015) since speaking and writing were among the three skills in which the participants in our study felt they had improved the most.

This perception of enhanced linguistic ability occurs despite the fact that the programme included neither an English learning module nor specific English-language objectives, which runs contrary to expert opinion that insists on the need for an English-taught programme to have clear language development instructional goals in place (Airey et al., 2017; Rogier, 2012) and provide some kind of language support (Rogier, 2012), either as a supplement to the programme (Yang, 2015) or as an integral part of it (Kirkpatrick, 2019).

In the focus group interviews students were almost evenly divided as to their perspectives on English improvement. While some of them interpreted that the programme had provided them with the opportunity to improve their command of English, others seemed rather disappointed as it had not fulfilled their expectations concerning English learning, even though they were all aware that the course was not specifically aimed at language learning. The following students' statements illustrate these conflicting perceptions:

> *I think there are aspects to be improved, but I am sure that I have learned quite a lot of English.*
>
> *Although I don't have a very positive overall opinion of the programme, I have improved my English language skills to some extent.*
>
> *If I have a good level of English, it is not precisely because of my enrollment in the bilingual group.*

Some students in the interview voiced their opinion in favour of English modules as compulsory components of the bilingual programme:

I consider that we should have English courses in order to improve our English from the beginning of the programme.

English modules should be part of the curriculum.

In accordance with the data obtained from the questionnaire, the students in the focus groups agreed that writing was the language skill they had developed the most as they were asked to produce a number of written assignments in English, while listening was the skill in which they observed the least development. Some students attributed it to some of the lecturers' incorrect pronunciation. As illustrated by the following comment, some students also expressed the view that they were learning the specific discourse of the teaching profession and subject-related language in English rather than general, functional English language:

My expectations of English learning have not been fulfilled. I am learning the language of teaching, but I don't think I can communicate better in English.

Additionally, the students attributed their language improvement to the facts that they were exposed to English and they had to produce output, mainly in oral presentations and written tasks. However, they complained that they never received any feedback on their use of English that could have contributed to further improve their English. This is reflected in the following statement:

You got your assignment grade – it was a holistic, numerical score, but we did not get any feedback on language use or on how the text was organised and structured.

Several other studies have documented EMI lecturers' reluctance to provide feedback to the students' use of English and to apply assessment criteria for English, and, in general, to assume responsibility for their students' language improvement (Airey, 2011, 2012; Aguilar, 2017; Aguilar & Rodríguez, 2012; AUTHORS, 2019; Dearden & Macaro, 2016; Yang, 2016).

Students' perceptions concerning English learning and satisfaction with the programme: associations with self-perceived English proficiency

The respondents were divided into three groups according to their self-rated proficiency: B1 (n = 24), B2 (n = 85) and C1 (n = 48). Statistically significant differences were only found between groups concerning their satisfaction with the programme ($H(_2)$ = 6.995; p = .030, d = 0.37). As Table 6 shows, the higher the self-rated competence, the lower the satisfaction with the programme. *Post hoc* comparisons with the Mann-Whitney test using a Bonferroni-adjusted alpha level of .017 (0.05/3) were used to compare all three pairs of groups. A significant difference was found between the group that self-rated its competence in English as B1 and the group that self-rated it as C1, with an intermediate effect size (U = 350.500, Z = -2.619, p = .009, d = 0.65). An explanation for this result may be that the expectation of learning English that acted as a motivation to enroll in the programme in 63.06% of the sample may have been met in a higher degree in the case of the lower English proficiency students. The lower satisfaction with the programme manifested by the advanced students, that is also the group that perceived the lowest improvement in English (Table 6), may have been associated to the recognition of modest language gains. As already mentioned, previous research (Fernández-Costales, 2017; Muñoz, 2001) concluded that the higher the students' competence in the language, the less satisfied they were with their language improvement from participation in EMI.

Curiously enough, no statistically significant differences were found across self-rated proficiency groups regarding their perceptions of language improvement as a result of participating in the programme.

Table 6
Descriptive Statistics for the Scales by Competence Group

Scale	Self-rated competence group	*M*	*SD*	*Mean ranks*
Perceptions of language improvement (range: 4-24)	B1	18.38	2.37	84.33
	B2	18.22	3.80	83.84
	C1	17.19	3.91	67.77
	Total	17.93	3.67	
Satisfaction with the programme' (range: 4-24)	B1	17.67	2.88	92.58
	B2	16.44	4.03	82.77
	C1	14.96	3.71	65.53
	Total	16.17	3.87	

Conclusions

The present study investigated the students' evolution in English proficiency over a four-year partial EMI programme that did not include any language-specific learning objectives. Additionally, the study set to explore their perceptions concerning language gains and language learning experiences in the programme.

These results may be indicative of the questionable effects of EMI initiatives that do not assume any predefined language learning goals. They suggest that less proficient students may certainly obtain some benefit whereas language learning in more proficient students may become stagnant, unresponsive to exposure or even regress. However, although a certain effect of the programme on these results may be undeniable, it would be simplistic and misleading to attribute these results exclusively to it and also to conclude that the language skills in some students are either unaffected or even negatively affected by the EMI programme. Firstly, three quarters of the participants declared that they were studying English outside the programme and those with a lower competence did so in a greater proportion than more proficient students. Secondly, it may be hypothesised that the language exposure and practice in the programme may be more conducive to language learning for less proficient students and that, for language skills to be maintained in an FL context, some communicative and also form-focused activity is needed. And thirdly, as previously discussed, the tests used

may not capture the English learning that survey and interview data indicated that had taken place across proficiency groups and skills. Only tests and assessment instruments oriented to assess discipline-specific language learning can probably provide realistic results concerning the linguistic development promoted by EMI courses. The study also identified a demand for language instruction as part of the EMI curriculum and the perception in some participants that their expectations of English learning had not been fully satisfied, which reinforces the argument for these initiatives to incorporate language learning goals. Some experts (e.g., Pecorari et al., 2011) have argued that, for language learning to take place in EMI, the necessary conditions must be ensured. Additionally, as Dearden and Macaro (2016) highlighted, no conclusive evidence exists to suggest that the students' command of English improves as a consequence of participating in EMI initiatives. They also added that the language gains found in some studies "merely tell us that in four years of exposure to English students improved their language proficiency, not that learning through EMI is better than, say, a programme of L1 content instruction plus English as a foreign language (EFL) support" (p. 459). It must be acknowledged, though, that many potential methodological approaches fall under the umbrella of EMI and that, as Jiménez Muñoz (2016) points out, research into academic and, arguably, also linguistic achievement "needs to take methodological aspects into consideration" (p. 114). EMI provisions may substantially differ in terms of adopted pedagogical approach. Therefore, the language gains reported in this study need to be interpreted within an instructional context with no specific language targets and no explicit, systematic, instructional design and practices aimed at supporting students in acquiring the academic linguistic skills required for EMI modules. Bearing this in mind, further research is still needed on the impact of EMI on language learning, on the

conditions that could facilitate efficient language learning and on how students interpret their language learning in EMI experiences.

When interpreting the study findings, two main limitations should be acknowledged. First, the study did not have an equivalent non-EMI comparison group; this, together with a study design that considers individual, social and contextual factors would certainly provide more conclusive results concerning the impact of EMI on language proficiency. And secondly, research was conducted in only one university and, therefore, no claims are made about the generalisability of the findings to the wider EMI student population. Regardless of these limitations, the present investigation is a further contribution to the existing limited literature on language learning in EMI contexts that confirms the need for language instruction within EMI curricula.

Declaration of interest: None

References

Aguilar, M. (2017). Engineering lecturers' views on CLIL and EMI. *International Journal of Bilingual Education and Bilingualism*, *20*(6), 722–735. https://doi.org/10.1080/13670050.2015.1073664

Aguilar, M., & Muñoz, C. (2014). The effect of proficiency on CLIL benefits in Engineering students in Spain. *International Journal of Applied Linguistics*, *24*(1), 1–18. https://doi.org/10.1111/ijal.12006

Aguilar, M., & Rodríguez, R. (2012). Implementing CLIL at a Spanish university: Lecturer and student perceptions. *The International Journal of Bilingual Education and Bilingualism, 15*(2)*,* 183–197.

Airey, J. (2011). Talking about teaching in English: Swedish university lecturers' experiences of changing teaching language. *Ibérica*, 22, 35–54.

Airey, J. (2012). "I don't teach language." The linguistic attitudes of physics lecturers in Sweden. *AILA Review*, 25(25), 64–79.

Airey, J., Lauridsen, K. M., Räsänen, A., Salö, L., & Schwach, V. (2017). The expansion of English-medium instruction in the Nordic countries: Can top-down university language policies encourage bottom-up disciplinary literacy goals? *Higher Education*, *73*(4), 561–576.

Allan, D. (2005a) *Oxford Placement test 1*. Oxford University Press.

Allan, D. (2005b) *Oxford Placement test 2*. Oxford University Press.

Bozdoğan, D., & Karlıdağ, B. (2013). A case of CLIL practice in the Turkish context: Lending an ear to students. *Asian EFL Journal*, *15*(4), 89–110.

Byun, K., Chu, H., Kim, M., Park, I., Kim, S., & Jung, J. (2011). English-medium teaching in Korean higher education: Policy debates and reality. *Higher Education, 62*(4), 431–449.

Čepon, S. (2012). Higher education institutions without foreign language continuity. *English Language Teaching*, *5*(8), 31–41. http://dx.doi.org/10.5539/elt.v5n8p31

Coleman, J. A. (2006). English-medium teaching in European Higher Education. *Language Teaching*, *39*(1), 1–14. https://doi.org/10.1017/S026144480600320X

Council of Europe. (2001). *Common European Framework of Reference for languages: Learning, teaching, assessment*. Cambridge University Press.

Creswell, J. W., & Clark, V. L. P. (2011). *Designing and conducting mixed methods research*. Sage.

Dearden, J. (2014). *English as a medium of instruction - a growing global phenomenon*. British Council. Retrieved from https://www.britishcouncil.es/sites/default/files/british_council_english_as_a_medium_of_instruction.pdf

Dearden, J., & Macaro, E. (2016). Higher education teachers' attitudes towards English Medium Instruction: A three-country comparison. *Studies in Second Language Learning and Teaching*, *6(*3), 455–486. https://doi.org/10.14746/ssllt.2016.6.3.5 http://www.ssllt.amu.edu.pl

Ecke, P. (2004). Language attrition and theories of forgetting. *International Journal of Bilingualism*, *8*(3), 321–354. http://dx. doi.org/!0.1177/13670069040080030901

Elder, C., & O'Loughlin, K. (2003). Investigating the relationship between intensive English language study and band score gain on IELTS. *IELTS Research Reports* 4. Retrieved from https://www.ielts.org/research/research-reports/volume-04-report-6

Fenton-Smith, B., P. Humphries, & I. Walkinshaw (2017). *English medium instruction in higher education in Asia Pacific: From policy to pedagogy*. Springer.

Fernández-Costales, A. (2017). Assessing students' perceptions regarding English Medium Instruction in Higher Education. *Didáctica: Lengua y Literatura*, *29*, 43–63. https://doi.org/10.5209/DIDA.57129

Guest G., McQueen, K.M., & Namey, E.E. (2011). *Applied thematic analysis*. Sage.

Hernandez-Nanclares, N., & Jimenez-Munoz, A. (2017). English as a medium of instruction: Evidence for language and content targets in bilingual education in economics. *International Journal of Bilingual Education and Bilingualism*, *20*(7), 883–896. https://doi.org/10.1080/13670050.2015.1125847

Jiménez-Muñoz, A. (2014). Measuring the impact of CLIL on language skills: a CEFR-based approach for higher education. *Language Value*, *6*(1), 28–50.

Jiménez Muñoz, A. (2016). Content and language: The impact of pedagogical designs on academic performance within tertiary English as a medium of instruction. *Porta Linguarum*, Monográfico I, pp. 112–125.

Klapper, J. (2006). *Understanding and developing good practice*. CILT.

Kirkpatrick, A. (2019). The rise of EMI: Challenges for Asia. In E. Macaro, A. K. Hultgren, A. Kirkpatrick and D. Lasagabaster, *English medium instruction: Global views and countries in focus. Introduction to the symposium held at the Department of Education, University of Oxford on Wednesday 4 November 2015* (pp. 237-240). *Language Teaching*, *52*(2), 231–248. https://doi.org/10.1017/S0261444816000380

Lei, J., & Hu, G. W. (2014). Is English-medium instruction effective in improving Chinese undergraduate students' English competence? *International Review of Applied Linguistics in Language Teaching*, *52*(2), 99–126. https://doi.org/10.1515/iral-2014-0005

Macaro, E., Curle, S., Pun, J., An, J., & Dearden, J. (2018). A systematic review of English medium instruction in higher education. *Language Teaching*, *51*(1), 36–76. https://doi.org/10.1017/S0261444817000350

Muñoz, C. (2001). The use of the target language as the medium of instruction. University students' perceptions. *Anuari de Filologia*, *23*(1), 71–82.

O'Dowd, R. (2018). The training and accreditation of teachers for English medium instruction: an overview of practice in European universities. *International*

Journal of Bilingual Education and Bilingualism, 21(5), 553–563. https://doi.org/10.1080/13670050.2018.1491945

Pecorari, D. (2020). English Medium Instruction: Disintegrating language and content? In S. Dimova and J. (Eds.), *Integrating Content and Language in Multilingual Universities* (pp. 15–36). Springer.

Pecorari, D., Shaw, P., Irvine, A., & Malmström, H. (2011). English for Academic Purposes at Swedish universities: Teachers' objectives and practices. *Ibérica*, *22*, 55–77.

Rogier, D. (2012). *The effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE* (Doctoral dissertation). University of Exeter, United Kingdom. Retrieved from https://ore.exeter.ac.uk/repository/bitstream/handle/10036/4482/RogierD.pdf?sequence=2

Salaberri-Ramiro, M. S., & Sánchez-Pérez, M. M. (2018). Motivations of higher education students to enrol in bilingual courses. *Porta Linguarum*, *Monográfico III*, 61–74.

Sert, N. (2008). The language of instruction dilemma in the Turkish context. *System*, *36*(2), 156–171. https://doi.org/10.1016/j.system.2007.11.006

Tai, H.-Y. (2015). Writing development in syntactic complexity, accuracy and fluency in a content and language integrated learning class. *International Journal of Language and Linguistics*, *2*(3), 149–156.

Toledo, I., Rubio, F., & Hermosín, M. (2012). Creencias, rendimiento académico y actitudes de alumnos universitarios principiantes en un programa plurilingüe. *Porta Linguarum*, *18*, 213–228.

van der Worp, K. (2017) English Medium Instruction: a way towards linguistically better prepared professionals in the Basque Autonomous Community? *International Journal of Multilingualism, 14*(1), 53–68. https://doi.org/10.1080/14790718.2017.1258994

Wächter, B., & Maiworm, F. (Eds.) (2014). *English-taught programmes in European Higher Education*. Lemmens.

Yang, W. (2015). Content and language integrated learning next in Asia: Evidence of learners' achievement in CLIL education from a Taiwan tertiary degree

programme. *International Journal of Bilingual Education and Bilingualism*, *18*(4), 361–382. https://doi.org/10.1080/13670050.2014.904840

Yang, W. (2016). An investigation of learning efficacy, management difficulties and improvements in tertiary CLIL (Content and Language Integrated Learning) programmes in Taiwan: A survey of stakeholder perspectives. *Latin American Journal of Content & Language Integrated Learning*, 9(1), 64–109. https://doi:10.5294/laclil.2016.9.1.4

Yeh, C.-C. (2014). Taiwanese students' experiences and attitudes towards English-medium courses in tertiary education. *RELC Journal*, *45*(3), 305–319. https://doi.org/10.1177/0033688214555358

Yoshitomi, A. (1992). Towards a model of language attrition. *Issues in Applied Linguistics*, *3*(2), 293–318.

Appendix I: Questionnaire of Perceptions on EMI

1. Gender: Female Male Non-binary I prefer not to say
2. Age: ___
3. Course year: First Second Third Fourth
4. What are the main reasons why you enrolled in the bilingual programme?

To have better professional opportunities.

To improve your level of English.

To have more opportunities regarding international mobility (study or work abroad)

Other (Please, specify):

5. Have you been studying English alongside with your course? Yes No
6. Have you got a certified English level? If "yes", please indicate what level:

No

A1

A2

B1

B2

C1

C2

7. How would you rate your current level of English?

A1

A2

B1

B2

C1

C2

Please indicate your personal agreement with the following statements according to the following scale: 1 (Strongly Disagree), 2 (Disagree), 3 (Agree) and 4 (Strongly Agree.

Perceptions of Language Improvement in EMI

- I think taking part in this programme has improved my level of English.
- Taking part in this programme has improved my listening skills in English.
- Taking part in the bilingual programme has improved my speaking skills in English (oral presentations and similar activities).
- Taking part in the bilingual programme has improved my oral interaction skills in English (in dialogues, debates and similar activities).
- Taking part in the bilingual programme has improved my reading skills in English (academic documents, online information and similar activities).
- Taking part in the bilingual programme has improved my writing skills in English (essays, exam questions, written portfolios and similar activities).

Satisfaction with the EMI programme

- Being part of the bilingual group has been a satisfactory experience.
- I am generally satisfied with the delivery of the contents of the subjects taught in English.
- I am generally satisfied with the methodology used in the English-taught subjects.
- Learning through the medium of English has been a positive experience.
- I would recommend other students to join the bilingual programme.

- In general, the quality of lessons is, at least, as good as the quality of the ones taught in Spanish.

Appendix II: Focus group interview questions

- What are your impressions about and personal experiences about learning English in the context of the bilingual programme?
- Was the learning of English one of the reasons to enroll in the bilingual programme? Was it the main reason, or one of the main reasons?
- If this was a reason, to what extent did the programme meet your expectations?
- Which skills (speaking, oral interaction, etc.) have you developed to a greater extent as a consequence of participating in the bilingual programme? And to a lesser extent?
- What factors or circumstances have contributed to your English learning in the bilingual programme?
- What are the causes that played a part for not learning more English?
- Do you want to add any other remarks on the topic of the interview?

Language learning in a partially English-taught teacher education programme: language gains and student perceptions

This paper reports on a study aimed to investigate students' development in English proficiency over a four-year partially English-taught programme that did not integrate any language learning goals. Additionally, the study investigated their perceptions concerning language gains and experiences in the programme. Both quantitative and qualitative research methods were employed. Paired-sampled t-tests indicated statistically significant differences from pretest to posttest for listening but not for grammar. Repeated measures ANOVA determined that the least proficiency (B1) students obtained the highest language gain over the 4-year period, particularly in listening. In contrast, advanced (C1) students performed worse in the listening and grammar posttests than in the pretests. Further findings indicated that the students perceived a positive impact of the programme on their English competence. No significant differences were found across self-rated proficiency groups regarding their perceptions of language improvement as a result of participating in the programme. The study also found that the higher the students' proficiency in the language, the less satisfied they were. In the focus group interviews, the students attributed their language improvement to being exposed to English and having to produce output, mainly in oral presentations and written tasks, and demanded English language instruction within the curriculum.

Keywords: English Medium Instruction (EMI); higher education; bilingual programme; English proficiency; student perceptions

Introduction

English Medium Instruction (EMI) in Higher Education (HE) has been attracting intense research interest for decades. This surge of attention is associated with a strong increase of fully or partially English-taught programmes, throughout not only European countries but also worldwide, in the last decades (Dearden, 2014; Macaro et al., 2018;

Wächter & Mainworm, 2014). To illustrate, a survey of 70 European universities from 11 different countries that took place in 2014-2015 found that 39% of them reported that they offered both individual subjects and fully English-taught under- and post-graduate degrees; only 7% were not holding any EMI courses at all.

The most commonly alleged advantage of EMI is "the double benefit of subject knowledge and improved target language proficiency" (Coleman, 2006, pp. 4-5). This analysis proceeds from the assumption that the mere exposure to English will facilitate language learning and yet the students will simultaneously learn the specialised academic subject. However, as Jiménez-Muñoz (2014, p. 30) argues, unless conclusive evidence is found, the controversy surrounding EMI as a strategy that promotes excellence in both academic subject matter and language learning will not disappear. There is, therefore, an urgent need to provide proof that EMI does not negatively impact on students' academic achievement while, at the same time, their English language competence is enhanced. Particularly in contexts where the EMI initiative does not acknowledge any language goals and no specific language instruction is provided, the questions remain as to whether students actually make any significant progress in their language proficiency and to whether they actually acquire the purported benefit of the added value of EMI in terms of English language learning.

As Macaro et al. (2018, p. 57) note in their systematic review study of EMI instruction in HE, there is a surprising dearth of research that objectively measures the effect of EMI on English proficiency through language tests. This was precisely one of the aims of our study: to assess the impact on the students' English language skills of a four-year partial EMI programme that does not include any language learning objectives. Additionally, the study investigated the student perceptions concerning their English language gains and experiences as a result of participating in the programme.

Literature review

Impact of EMI on language learning

As mentioned above, the impact of EMI instruction on language proficiency has not been thoroughly researched yet, presumably explained by the fact that language learning "is not a primary intended outcome" (Pecorari, 2020, p. 19) and that there are no explicit language learning goals (e.g., Aguilar, 2017). Additionally, as will become evident below, the majority of the available studies use measures of general language or skill-specific proficiency tests that may not be appropriate to capture the impact of EMI on language learning (Macaro et al., 2018, p. 57).

So far, only one study aimed to identify language gains in EMI has assessed language improvement by analysing the students' performance in authentic academic-related language use situations. Hernandez-Nanclares and Jimenez-Munoz (2017) conducted a study on two first-year, six ECTS, compulsory modules in a BA in Business Administration at a university in northern Spain. They collected participants' written assignments and video-recordings of tutorial groups throughout the academic year and contrasted their language performance against the Common European Framework of Reference (CEFR) (Council of Europe, 2001) descriptors for the 25 skills or sub-skills required to accomplish content-related assignments. On average, students progressed slightly less than half a CEFR level in one academic year. The CEFR estimates approximately 200 guided learning hours for a language learner to progress from one level to the next).

In all other studies, measures of specific skills or general language proficiency have been used to detect language gains in EMI. In a study with female Emirati undergraduates, Rogier (2012) measured language skills improvement over a four-year programme. Her findings indicated statistically significant gains in all areas tested by

the IELTS exam. Speaking was the area with the highest gain, followed by reading, writing and, finally, listening. Rogier did not have a non-EMI comparison group but she compared these gains with those reported in studies of general English programmes that have shown that, for learners to move up .05 of a level (the average gain in her study), between 200 and 240 hours of general English tuition are needed (Elder & O'Loughlin, 2003). As Macaro et al. (2018) pointed out, it is questionable that an average one half band score gain like the one Rogier (2012) obtained in her study can be regarded as enough validation of the positive impact of the programme on language learning.

Another study that employs an international standardised language test is that conducted by Aguilar and Muñoz (2014). Language gains after a semester in an EMI engineering postgraduate programme were measured through the same instrument as in the present study, the Oxford Placement Test (OPT) 1 and 2 (Allan, 2005a, 2005b). Results indicated that only differences between the pre- and post-listening tests were significant. The study also found that less proficient students (elementary level, OPT Band 3) improved significantly more in listening and grammar skills than more proficient ones. They were also the only group that obtained significant gains in both listening and grammar skills. In contrast, higher proficiency students (advanced level, OPT Band 6) obtained no language gains in any of the subtests; surprisingly, they scored significantly worse in the grammar post-test than in the pre-test. As for the students in the intermediate group (upper intermediate level, OPT Band 5), although a positive development in listening skills was found, it did not reach statistical significance and their improvement in grammar was extremely small. There was no non-EMI comparison group and the significant differences were exclusively observed within-group.

Two studies, one conducted in China (Lei & Hu, 2014) and, the other, in Taiwan (Yang, 2015), also employed general ability language tests. Results in Lei and Hu's (2014) study indicated that EMI students did not outperform their Chinese-medium counterparts on a proficiency test after one year (i.e., 32 weeks) of EMI instruction in Business Administration courses when biographic (gender and year of study), perception variables (perceived necessity and perceived study burden) and prior differences in English proficiency had been partialed out ($\Delta R2 = .01$, $\Delta F\ (1,98) = 3.03$, $p > .05$). In the study conducted by Yang (2015), EMI students made significant improvements in receptive skills ($t = -9.097$, $p = .001$) between the beginning and the end of a four-year bachelor degree in an international tourism programme. They also outperformed non-EMI students from other comprehensive or polytechnic universities in receptive skills (EMI students' average score in listening = 100.63 and reading = 92.18; non-EMI polytechnic university students' average score in listening = 69.91 and reading = 64.82; non-CLIL comprehensive university students' average score in listening = 74.46 and reading = 75.97). No significant differences compared to other test-takers were identified in productive skills.

Another study set in an elective course on international communication at a university in Taiwan conducted by Tai (2015) aimed to assess the progress in writing syntactic complexity, accuracy and fluency over a one-semester period. Gains were found in accuracy and fluency but not in syntactic complexity. Only within-group comparisons were made, thus rendering the study unable to identify differences between EMI and non-EMI instruction.

To summarise, considering the expansion of fully or partially English-taught programmes throughout Europe and indeed worldwide, there are only just a few studies that assess the effect of EMI instruction on language proficiency as determined by

language tests and measures. Additionally, comparability across studies is problematic due to variability in data collection instruments (Macaro et al., 2018, p. 57) as well as contextual (instructional, organisational, institutional, language policy-related and support, etc.) factors. Furthermore, most of the studies do not have a non-EMI comparison group. What is more, the available studies that found a beneficial effect of EMI on language learning only confirm modest gains, which does not fulfill the expectations for language learning that EMI may arouse. It is true, though, that, although limited, research that tries to capture language progress by focusing on students' performance in authentic academic tasks does provide a more favourable picture of the impact of EMI on language development.

Students' perceptions of language learning

A review of the literature on students' perceptions in fully or partially English-taught university programmes reveals that the expectation of language improvement ranks high among the reasons to enrol in an EMI programme (Fernández-Costales, 2017; Salaberri-Ramiro & Sánchez-Pérez, 2018; Yeh, 2014). Additionally, students seem to recognise this potential language gain as one of the advantages of EMI, despite the challenges it poses for understanding and learning subject matter (Bozdoğan & Karlıdağ, 2013; Byun et al., 2011).

Most of the studies conclude that students actually perceive an overall progress in their language ability (Fernández-Costales, 2017; Hernandez-Nanclares & Jimenez Muñoz, 2017; Rogier, 2012; Toledo et al., 2012). However, conflicting evidence also exists. Although the study conducted by Sert (2008) with fourth-year Turkish undergraduate students concluded that EMI was significantly more effective than formal language instruction, it was still not perceived sufficiently effective for the

acquisition of language learning skills except for speaking. After a semester of EMI instruction at an engineering school in a Spanish university, 59% of the students reported that they had not learnt any English (Aguilar & Rodríguez, 2012). Similarly, students interviewed by Lei and Hu (2014) in China expressed their dissatisfaction with the programme as it failed to improve their English proficiency.

In terms of improvement of language knowledge since entering the EMI programme, studies unanimously highlight technical, specialised vocabulary as the area in which students perceive they improve the most (Aguilar & Rodríguez, 2012; Fernández-Costales, 2017; Toledo et al., 2012). As regards the communicative skills, findings from different studies are sometimes contradictory, except for listening, which seems to be recognised as the skill or one of the skills most highly developed. Students in the studies conducted by Aguilar and Rodríguez (2012), Hernandez-Nanclares and Jimenez-Munoz (2017) and van der Worp (2017) identified listening and speaking as the abilities they thought that they had improved the most since the start of the EMI programme. In three other studies (Bozdoğan & Karlıdağ, 2013; Rogier, 2012; Toledo et al. 2012) students reported that they had made the most gains in their receptive skills. Students interviewed by Bozdoğan & Karlıdağ (2013) reported a regression in their productive skills while those surveyed by Sert (2008) claimed that EMI was effective only for the development of speaking skills. Unlike our study, none of these studies differentiated between speaking in monologue and oral interaction when exploring perceptions.

Several factors may be behind these dissimilar results concerning student perceptions on language learning in EMI initiatives. The specific conditions in which these programmes were realised and, as research by Fernández-Costales (2017) and Muñoz (2001) suggest, the students' competence at the beginning of the programme

are bound to impact students' perceptions of their language progress.

The study

Objectives and research questions

As mentioned above, this study set to assess the impact of a four-year partial EMI programme on the students' English language proficiency and to investigate their perceptions concerning their language learning as a result of participating in the programme. More specifically, the study addressed the following research questions (RQs):

RQ1. Are there statistically significant differences in education students' English listening and grammar skills between the beginning and the end of the partial EMI programme?

RQ2. Are the differences in English skills between the beginning and the end of the programme associated with the students' starting proficiency level?

RQ3. What are the students' perceptions regarding English learning in a partial EMI programme?

RQ4. Are there any statistically significant differences in student perceptions concerning language improvement and satisfaction with the programme according to self-perceived English proficiency?

Methodology

The study adopted an exploratory sequential mixed methods design (Creswell & Clark 2011, p. 81), where the qualitative data gathered from the focus group interviews was meant to help explain the quantitative results obtained by a perceptions questionnaire. Furthermore, a quantitative approach was used to investigate language proficiency test data.

Context

The university of Málaga (UMA) started offering a partially English-taught programme at the Faculty of Education in 2014. This course, leading to a Degree in Primary Education, can be characterised as a partial EMI programme in that "content is the priority and […] no assessment of student's English competence is made because no language learning outcomes are acknowledged" (Aguilar, 2017, p. 725). Throughout the four-year duration of the degree, around 35% of the 240 ECTS credit points were delivered in English by non-native lecturers. Although some English-taught modules have changed over the years, the following are some of the ones included in the EMI programme: Music Education, Arts Education, History of Education, General Didactics, Social Sciences Education, Physical Education and Science Education.

Participants

Seventy-one students (58 female and 13 male) from the first two groups of the partial EMI Degree in Primary Education (starting years: 2014-2015 and 2015-2016) were tested in English through the Oxford Placement Test 1 (Allan, 2005a) at the beginning and the Oxford Placement Test 2 (Allan, 2005b) at the end of the programme four years later. This number of students represents 61.74 % of the total population of the students from those groups who completed the degree. The students volunteered to take the test.

Additionally, 157 students between the ages of 18 and 40 (M = 20.66, SD = 3.22; Mo = 20) participated voluntarily in the survey study. In the academic year in which data were obtained (2018-2019), 250 students were enrolled in this partially English-taught degree course. Hence, the study sample that completed the study questionnaire represents 62.8% of the total students enrolled in the partial EMI programme that academic year. A hundred and twenty-four (79%) were female, 29 (18.5%) were male, one was non-binary and the remaining three preferred not to say

what gender they identified as. All four course years were represented in the sample (Table 1).

Table 1		
Distribution of the Sample by Course Year		
Course year	Frequency	Percentage
1st	56	35.67
2nd	41	26.11
3rd	18	11.46
4th	42	26.75

Only 20 students (12.7%) declared not to hold any officially certified English proficiency level at the time of the survey. Of the remaining 137 students, 48 (35.0%) held a B1 level or below, 67 (48.91%), a B2 and the remaining 22 (16.06%), a certified C1 level. When asked to self-rate their proficiency level, 24 (15.3%) considered that they had a B1 level, 85 (54.1%) a B2, and 48 (30.6%), a C1. Three quarters of the sample (n = 118) declared that they studied English outside the programme. Of these 118 students, almost 70% self-rated their proficiency as B1 or B2. When asked about their motivation to join a bilingual Spanish-English course, improving the level of English was the second most frequently indicated reason behind the prospect of better job opportunities, indicated by 132 students (84.08%). A total of 99 students (63.06%) selected improving their competence in English, either as the only reason to enroll in the course (n = 9) or, more commonly, as one of the main reasons alongside others, mainly the perception of obtaining better opportunities in the job market.

Finally, 24 (19 female and 5 male) of the students who completed the survey participated in focus group interviews.

Instruments

The Oxford Placement Test. The *Oxford Placement Test (OPT) 1* (Allan, 2005a) and *2* (Allan, 2005b) were used as measures of English ability. Each test consists of two

subtests (a listening section and a grammar section) and has 100 items. According to the information provided by the author, the OPT results are calibrated against the CEFR levels (A1-C2), Cambridge ESOL exam levels and IELTS band scores.

English Language Learning Perceptions Questionnaire. An online questionnaire was designed to tap into the participants' perceptions about their experiences in the partially English-taught programme (Appendix I). The questionnaire consisted of a demographics section and two different scales. The 6-item 'Perception of language improvement scale' (Cronbach's alpha = .893) aimed to obtain the students' views on progress in English. This scale included statements regarding perceived improvement on overall English level, on listening, speaking, oral interaction, reading and writing. The second scale, 'Satisfaction with the bilingual course scale' (Cronbach's alpha = .892) was meant to obtain a measure of programme satisfaction. Items were selected so that the following areas were represented: overall satisfaction, methodology and quality of lessons. The content of both scales was discussed by three language teaching experts to ensure face and content validity as well as consensus.

Focus group interviews: Focus group interviews were conducted with three different groups of volunteer students from the last three years following a semi-structured interview format (Appendix II). Permission was obtained to record the interviews. Students were asked questions linked to the questionnaire items so as to validate and enrich the quantitative results with more in-depth insights. These interviews were conducted in Spanish, the mother tongue of all the interviewees.

Data analysis

Two summative scales were obtained from items in the questionnaire, each participant's score being calculated by adding up the points for the corresponding items: the

'Perceptions of language improvement scale' (6 items, range: 6-24) and the 'Satisfaction with the programme scale' (6 items, range: 6-24).

Descriptive statistics were used to summarise aspects of the data to provide information about the sample and the groups of the study. A paired-samples t-test was conducted to compare students' performance in the listening and grammar subsets of the OPT between the beginning and the end of the programme. Repeated measures ANOVA were used for three-group comparisons. Kruskal-Wallis tests were performed to compare perceptions held by the different self-rated proficiency groups as represented by the scales of 'Perceptions of language improvement' and 'Satisfaction with the programme'. A qualitative thematic analysis was used to identify salient themes in the interview data (Guest et al., 2011). Initially, the interviews were transcribed and data was entered in ATLAS.ti version 8. A first analysis resulted in an initial coding scheme. The authors then met to discuss the preliminary codes. After deliberation, a definite coding scheme was constructed and codes were then collapsed into the themes presented in this paper.

Findings and discussion

Differences in students' English skills between the beginning and the end of the partial EMI programme

As mentioned above, 71 students from the first two groups of the partial EMI Degree in Primary Education were tested in English through the two subtests (Listening and Grammar tests) of the Oxford Placement Test at the beginning and at the end of the programme. Descriptive results are shown in Table 2.

Table 2		
Descriptive Statistics for the OPT subtests		
	Listening (*M*, *SD*)	Grammar (*M*, *SD*)
Pretest (OPT1)	68.20 (7.59)	65.39 (10.84)
Posttest (OPT2)	72.70 (5.68)	63.21 (10.31)

As Table 3 shows, our study found a significant language improvement in listening over the four-year programme with a medium effect size but not in grammar. Aguilar and Muñoz (2014) found strikingly similar results after a six-month EMI postgraduate course although the effect size for listening in their study was substantially smaller (0.30).

Table 3				
Results for the T-test				
	t	*df*	Sig. (2-tailed)	Effect size *d*
Listening	-4.57	70	**< .001**	0.67
Grammar	1.79	70	.078	0.21

Our study is in line with previous research that has also identified gains in listening after a period of EMI instruction (e.g., Aguilar & Muñoz, 2014; Aguilar & Rodríguez, 2012; Muñoz, 2001; Yang, 2015).

Differences in students' English skills between the beginning and the end of the programme associated with the students' starting proficiency level

The study also aimed at identifying if the students' language development over the four-year course was affected by their English competence at the start of the programme. In order to identify how different proficiency groups performed in terms of language development over the four-year programme, students were classified according to their

performance in the OPT1 test in three groups: Up to B1, B2 and C1, as it is claimed that OPT test scores are calibrated onto the CEFR levels (Allan, 2005a, 2005b). Table 4 shows the descriptive statistics for the Listening and the Grammar subtests according to competence.

Table 4
Descriptive Statistics by Proficiency Level

	Groups					
	Up to B1 (n = 40)		B2 (n = 22)		C1 (n = 9)	
	Pretest (M, SD)	Posttest (M, SD)	Pretest (M, SD)	Posttest (M, SD)	Pretest (M, SD)	Posttest (M, SD)
Listening	64.35 (6.38)	71.58 (5.60)	70.86 (4.55)	73.95 (5.01)	78.78 (5.65)	74.67 (6.78)
Grammar	58.38 (6.79)	59.60 (9.90)	70.50 (4.96)	66.95 (7.64)	84.11 (5.11)	70.11 (11.88)

The results of the repeated measures ANOVA revealed that there was a marginally significant main effect of time (between the pre- and the posttest) on participants' performance in the listening subtest ($F_{(1,68)} = 3.76$, $p = .057$, $\eta p^2 = 0.052$). In contrast, there was a significant interaction between the variable time and the variable proficiency level with a large effect size ($F_{(2,68)} = 8.94$, $p > .001$, $\eta p^2 = 0.210$). This result indicates that the development in listening of the participants with different proficiency levels was not the same. Pairwise comparisons between the estimated marginal means show that the effect of time is significant for the 'up to B1' proficiency group with a large effect size ($F_{(1,39)} = 32.59$, $p > .001$, $\eta p^2 = 0.46$), marginally significant for the 'B2' group ($F_{(1,21)} = 4.12$, $p = .062$, $\eta p^2 = 0.063$) and non significant for the C1 group ($F_{(1,21)} = 4.63$, $p = .06$, $\eta p^2 = 0.043$). Results in Table 4 indicate that, while B1 and B2 students improved their listening skills in the posttest, the mean scores obtained in the posttests by the C1 students were lower than in the pretest.

A significant main effect of time on participants' performance in the grammar subtest was revealed by the repeated measures ANOVA results ($F_{(1,68)} = 17.63$, $p > .001$, $\eta p^2 = 0.21$). The interaction between the variable time and the variable

competence level was also significant with a large effect size ($F(_{2,68}) = 10.59$, $p > .001$, $\eta p^2 = 0.235$). This result indicates that the development in English grammar of the participants with different proficiency levels was also not the same. Pairwise comparisons between the estimated marginal means show that the effect of time is not significant for the 'up to B1' competence level group ($F(_{1,39}) = 0.62$, $p = .436$, $\eta p^2 = 0.46$), and significant for the B2 group ($F(_{1,21}) = 5.62$, $p = .027$, $\eta p^2 = 0.210$) and for the C1 group ($F(_{1,8}) = 16.56$, $p = .004$, $\eta p^2 = 0.671$). As Table 4 shows, the mean scores for the higher-proficiency groups (B2 and C1) decreased in the posttest, and the decrease is particularly pronounced in the case of the C1 group.

The least proficient students make the greatest gains in listening over the four-year programme while the upper intermediates ones make a more modest progress. Surprisingly, advanced students performed worse in the listening test at the end of the programme, although the difference is not significant. In the case of grammar, the lower intermediate group makes only a slight progress over the four-year duration of the programme while the upper intermediate and advanced students performed worse at the end of the programme.

Several explanations may have interacted to produce these results. Students with a lower level of competence undoubtedly have more room for language progress and the higher exposure to English may have contributed to improve their comparatively less developed grammar knowledge and, particularly, their listening skills in a greater degree. Furthermore, as mentioned above, three quarters of the sample that completed the perceptions questionnaire declared that they were studying English outside the programme. Probably, those with a lower level of English were the ones that, in a higher proportion, were doing that, as a C1 CEFR level will soon become a requirement to teach in the bilingual schools in our context. The decline in grammar test scores may

be due to the fact that, particularly in FL contexts, if no formal study of the language takes place, knowledge about the language may consequently deteriorate. This speculation needs to be confirmed by further studies. Furthermore, an EMI programme *per se*, with no specific language-learning objectives of its own, may have differential effects depending on the language skills being assessed. Finally, the incongruence between perceptions of gains and actual language progress as a function of proficiency level may be explained because, as discussed above, general or skill-specific ability tests may not capture the effect of EMI on language learning that is acknowledged by the students themselves. Most probably, the language development caused by EMI is more specifically associated with academic or field-specific discourse or language tasks.

In terms of the trend of the evolution in language performance of students of different language ability, our study results are strikingly similar to those obtained by Aguilar and Muñoz (2014), also using the same assessment instrument. Similarities are even more remarkable if we consider that their study aimed to ascertain the language gains after just a one-semester course, which leads to contemplate the possibility of an instrument effect. Although this hypothesis would need further investigation, it needs to be highlighted that the OPT is a reliable test used in a number of previous investigations. Additionally, it is calibrated against the level system provided by the CEFR and against other standardised proficiency measures such as the IELTS band scores and Cambridge ESOL exam levels, as mentioned above. Furthermore, it was based on data obtained from multilingual populations of test takers (Allan, 2005a, 2005b). It could therefore be the case that the comparable similarities between the results obtained by Aguilar and Muñoz (2014) and our study could have also been identified if a different general proficiency test had been used.

Student perceptions regarding English learning in a partial EMI programme

Table 5 shows the results for items aimed to obtain information about the students' perceptions of language improvement as a consequence of enrolment in this partially English-taught programme.

Table 5

Perceptions of Language Improvement

Taking part in this programme has improved…	Mean (SD)	St.D (*n*, *%*)	D (*n*, *%*)	A (*n*, *%*)	St.A (*n*, *%*)
my level of English.	2.90 (0.81)	11 (7.0)	26 (16.6)	87 (55.4)	33 (21.0)
my speaking skills in English (oral presentations and similar activities).	3.06 (0.63)	0 (0.0)	26 (16.6)	95 (60.5)	36 (22.9)
my oral interaction skills in English (in dialogues, debates and similar activities).	2.92 (0.73)	7 (4.5)	27 (17.2)	94 (59.9)	29 (18.5)
my listening skills in English.	2.85 (0.89)	15 (9.6)	32 (20.4)	72 (45.9)	38 (24.2)
my reading skills in English (academic documents, online information and similar activities).	3.06 (0.76)	7 (4.5)	19 (12.1)	88 (56.1)	43 (27.4)
my written skills in English (essays, exam questions, written portfolios and similar activities).	3.13 (0.70)	4 (2.5)	17 (10.8)	91 (58.0)	45 (28.7)

Note: St.D: Strongly Disagree; D: Disagree; A: Agree; St.A: Strongly Agree

Results indicate that the students hold the view that the programme has exerted a positive impact on their English competence. Curiously enough, students seemed to perceive that their overall language improvement was smaller than in specific language activities such as speaking or writing. Our findings seem to contradict previous studies that concur that students in EMI programmes perceive higher improvement in receptive skills -and, particularly, in listening- than in productive skills (Aguilar & Rodríguez, 2012; Muñoz, 2001; Yang, 2015) since speaking and writing were among the three skills in which the participants in our study felt they had improved the most.

This perception of enhanced linguistic ability occurs despite the fact that the programme included neither an English learning module nor specific English-language objectives, which runs contrary to expert opinion that insists on the need for an English-taught programme to have clear language development instructional goals in place

(Airey et al., 2017; Rogier, 2012) and provide some kind of language support (Rogier, 2012), either as a supplement to the programme (Yang, 2015) or as an integral part of it (Kirkpatrick, 2019).

In the focus group interviews students were almost evenly divided as to their perspectives on English improvement. While some of them interpreted that the programme had provided them with the opportunity to improve their command of English, others seemed rather disappointed as it had not fulfilled their expectations concerning English learning, even though they were all aware that the course was not specifically aimed at language learning. The following students' statements illustrate these conflicting perceptions:

I think there are aspects to be improved, but I am sure that I have learned quite a lot of English.

Although I don't have a very positive overall opinion of the programme, I have improved my English language skills to some extent.

If I have a good level of English, it is not precisely because of my enrollment in the bilingual group.

Some students in the interview voiced their opinion in favour of English modules as compulsory components of the bilingual programme:

I consider that we should have English courses in order to improve our English from the beginning of the programme.

English modules should be part of the curriculum.

In accordance with the data obtained from the questionnaire, the students in the focus groups agreed that writing was the language skill they had developed the most as they were asked to produce a number of written assignments in English, while listening was the skill in which they observed the least development. Some students attributed it to

some of the lecturers' incorrect pronunciation. As illustrated by the following comment, some students also expressed the view that they were learning the specific discourse of the teaching profession and subject-related language in English rather than general, functional English language:

> *My expectations of English learning have not been fulfilled. I am learning the language of teaching, but I don't think I can communicate better in English.*

Additionally, the students attributed their language improvement to the facts that they were exposed to English and they had to produce output, mainly in oral presentations and written tasks. However, they complained that they never received any feedback on their use of English that could have contributed to further improve their English. This is reflected in the following statement:

> *You got your assignment grade – it was a holistic, numerical score, but we did not get any feedback on language use or on how the text was organised and structured.*

Several other studies have documented EMI lecturers' reluctance to provide feedback to the students' use of English and to apply assessment criteria for English, and, in general, to assume responsibility for their students' language improvement (Airey, 2011, 2012; Aguilar, 2017; Aguilar & Rodríguez, 2012; AUTHORS, 2019; Dearden & Macaro, 2016; Yang, 2016).

Students' perceptions concerning English learning and satisfaction with the programme: associations with self-perceived English proficiency

The respondents were divided into three groups according to their self-rated proficiency: B1 (n = 24), B2 (n = 85) and C1 (n = 48). Statistically significant differences were only found between groups concerning their satisfaction with the programme ($H(_2)$ = 6.995; p = .030, d = 0.37). As Table 6 shows, the higher the self-

rated competence, the lower the satisfaction with the programme. *Post hoc* comparisons with the Mann-Whitney test using a Bonferroni-adjusted alpha level of .017 (0.05/3) were used to compare all three pairs of groups. A significant difference was found between the group that self-rated its competence in English as B1 and the group that self-rated it as C1, with an intermediate effect size ($U = 350.500$, $Z = -2.619$, $p = .009$, $d = 0.65$). An explanation for this result may be that the expectation of learning English that acted as a motivation to enroll in the programme in 63.06% of the sample may have been met in a higher degree in the case of the lower English proficiency students. The lower satisfaction with the course manifested by the advanced students, that is also the group that perceived the lowest improvement in English (Table 6), may have been associated to the recognition of modest language gains. As already mentioned, previous research (Fernández-Costales, 2017; Muñoz, 2001) concluded that the higher the students' competence in the language, the less satisfied they were with their language improvement from participation in EMI.

Curiously enough, no statistically significant differences were found across self-rated proficiency groups regarding their perceptions of language improvement as a result of participating in the programme.

Table 6
Descriptive Statistics for the Scales by Competence Group

Scale	Self-rated competence group	*M*	*SD*	*Mean ranks*
Perceptions of language improvement (range: 4-24)	B1	18.38	2.37	84.33
	B2	18.22	3.80	83.84
	C1	17.19	3.91	67.77
	Total	17.93	3.67	
Satisfaction with the programme' (range: 4-24)	B1	17.67	2.88	92.58
	B2	16.44	4.03	82.77
	C1	14.96	3.71	65.53
	Total	16.17	3.87	

Conclusions

The present study investigated the students' evolution in English proficiency over a four-year partial EMI programme that did not include any language-specific learning objectives. Additionally, the study set to explore their perceptions concerning language gains and language learning experiences in the programme.

These results may be indicative of the questionable effects of EMI initiatives that do not assume any predefined language learning goals. They suggest that less proficient students may certainly obtain some benefit whereas language learning in more proficient students may become stagnant, unresponsive to exposure or even regress. However, although a certain effect of the programme on these results may be undeniable, it would be simplistic and misleading to attribute these results exclusively to it and also to conclude that the language skills in some students are either unaffected or even negatively affected by the EMI programme. Firstly, three quarters of the participants declared that they studied English outside the programme and those with a lower competence did so in a greater proportion than more proficient students. Secondly, it may be hypothesised that the language exposure and practice in the programme may be more conducive to language learning for less proficient students and that, for language skills to be maintained in an FL context, some communicative and also form-focused activity is needed. And thirdly, as previously discussed, the tests used may not capture the English learning that survey and interview data indicated that had taken place across proficiency groups and skills. Only tests and assessment instruments oriented to assess discipline-specific language learning can probably provide realistic results concerning the linguistic development promoted by EMI courses. The study also identified a demand for language instruction as part of the EMI curriculum and the perception in some participants that their expectations of English learning had not been fully satisfied, which reinforces the argument for these initiatives to incorporate language learning goals. Some experts (e.g.,

Pecorari et al., 2011) have argued that, for language learning to take place in EMI, the necessary conditions must be ensured. Additionally, as Dearden and Macaro (2016) highlighted, no conclusive evidence exists to suggest that the students' command of English improves as a consequence of participating in EMI initiatives. They also added that the language gains found in some studies "merely tell us that in four years of exposure to English students improved their language proficiency, not that learning through EMI is better than, say, a programme of L1 content instruction plus English as a foreign language (EFL) support" (p. 459). Further research is still needed on the impact of EMI on language learning, on the conditions that could facilitate efficient language learning and on how students interpret their language learning in EMI experiences.

When interpreting the study findings, two main limitations should be acknowledged. First, the study did not have an equivalent non-EMI comparison group; this, together with a study design that considers individual, social and contextual factors would certainly provide more conclusive results concerning the impact of EMI on language proficiency. And secondly, research was conducted in only one university and, therefore, no claims are made about the generalisability of the findings to the wider EMI student population. Regardless of these limitations, the present investigation is a further contribution to the existing limited literature on language learning in EMI contexts that confirms the need for language instruction within EMI curricula.

Declaration of interest: None

References

Aguilar, M. (2017). Engineering lecturers' views on CLIL and EMI. *International Journal of Bilingual Education and Bilingualism*, *20*(6), 722–735. https://doi.org/10.1080/13670050.2015.1073664

Aguilar, M., & Muñoz, C. (2014). The effect of proficiency on CLIL benefits in Engineering students in Spain. *International Journal of Applied Linguistics*, *24*(1), 1–18. https://doi.org/10.1111/ijal.12006

Aguilar, M., & Rodríguez, R. (2012). Implementing CLIL at a Spanish university: Lecturer and student perceptions. *The International Journal of Bilingual Education and Bilingualism, 15*(2)*,* 183–197.

Airey, J. (2011). Talking about teaching in English: Swedish university lecturers' experiences of changing teaching language. *Ibérica*, 22, 35–54.

Airey, J. (2012). "I don't teach language." The linguistic attitudes of physics lecturers in Sweden. *AILA Review*, 25(25), 64–79.

Airey, J., Lauridsen, K. M., Räsänen, A., Salö, L., & Schwach, V. (2017). The expansion of English-medium instruction in the Nordic countries: Can top-down university language policies encourage bottom-up disciplinary literacy goals? *Higher Education*, *73*(4), 561–576.

Allan, D. (2005a) *Oxford Placement test 1*. Oxford University Press.

Allan, D. (2005b) *Oxford Placement test 2*. Oxford University Press.

Bozdoğan, D., & Karlıdağ, B. (2013). A case of CLIL practice in the Turkish context: Lending an ear to students. *Asian EFL Journal*, *15*(4), 89–110.

Byun, K., Chu, H., Kim, M., Park, I., Kim, S., & Jung, J. (2011). English-medium teaching in Korean higher education: Policy debates and reality. *Higher Education, 62*(4), 431–449.

Coleman, J. A. (2006). English-medium teaching in European Higher Education. *Language Teaching*, *39*(1), 1–14. https://doi.org/10.1017/S026144480600320X

Council of Europe. (2001). *Common European Framework of Reference for languages: Learning, teaching, assessment*. Cambridge University Press.

Creswell, J. W., & Clark, V. L. P. (2011). *Designing and conducting mixed methods research*. Sage.

Dearden, J. (2014). *English as a medium of instruction - a growing global phenomenon*. British Council. Retrieved from https://www.britishcouncil.es/sites/default/files/british_council_english_as_a_medium_of_instruction.pdf

Dearden, J., & Macaro, E. (2016). Higher education teachers' attitudes towards English Medium Instruction: A three-country comparison. *Studies in Second Language*

Learning and Teaching, *6(*3), 455–486. https://doi.org/10.14746/ssllt.2016.6.3.5 http://www.ssllt.amu.edu.pl

Elder, C., & O'Loughlin, K. (2003). Investigating the relationship between intensive English language study and band score gain on IELTS. *IELTS Research Reports* 4. Retrieved from https://www.ielts.org/research/research-reports/volume-04-report-6

Fernández-Costales, A. (2017). Assessing students' perceptions regarding English Medium Instruction in Higher Education. *Didáctica: Lengua y Literatura*, *29*, 43–63. https://doi.org/10.5209/DIDA.57129

Guest G., McQueen, K.M., & Namey, E.E. (2011). *Applied thematic analysis*. Sage.

Hernandez-Nanclares, N., & Jimenez-Munoz, A. (2017). English as a medium of instruction: Evidence for language and content targets in bilingual education in economics. *International Journal of Bilingual Education and Bilingualism*, *20*(7), 883–896. https://doi.org/10.1080/13670050.2015.1125847

Jiménez-Muñoz, A. (2014). Measuring the impact of CLIL on language skills: a CEFR-based approach for higher education. *Language Value*, *6*(1), 28–50.

Kirkpatrick, A. (2019). The rise of EMI: Challenges for Asia. In E. Macaro, A. K. Hultgren, A. Kirkpatrick and D. Lasagabaster, *English medium instruction: Global views and countries in focus. Introduction to the symposium held at the Department of Education, University of Oxford on Wednesday 4 November 2015* (pp. 237-240). *Language Teaching*, *52*(2), 231–248. https://doi.org/10.1017/S0261444816000380

Lei, J., & Hu, G. W. (2014). Is English-medium instruction effective in improving Chinese undergraduate students' English competence? *International Review of Applied Linguistics in Language Teaching*, *52*(2), 99–126. https://doi.org/10.1515/iral-2014-0005

Macaro, E., Curle, S., Pun, J., An, J., & Dearden, J. (2018). A systematic review of English medium instruction in higher education. *Language Teaching*, *51*(1), 36–76. https://doi.org/10.1017/S0261444817000350

Muñoz, C. (2001). The use of the target language as the medium of instruction. University students' perceptions. *Anuari de Filologia*, *23*(1), 71–82.

O'Dowd, R. (2018). The training and accreditation of teachers for English medium instruction: an overview of practice in European universities. *International*

Journal of Bilingual Education and Bilingualism, 21(5), 553–563. https://doi.org/10.1080/13670050.2018.1491945

Pecorari, D. (2020). English Medium Instruction: Disintegrating language and content? In S. Dimova and J. (Eds.), *Integrating Content and Language in Multilingual Universities* (pp. 15–36). Springer.

Pecorari, D., Shaw, P., Irvine, A., & Malmström, H. (2011). English for Academic Purposes at Swedish universities: Teachers' objectives and practices. *Ibérica*, *22*, 55–77.

Rogier, D. (2012). *The effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE* (Doctoral dissertation). University of Exeter, United Kingdom. Retrieved from https://ore.exeter.ac.uk/repository/bitstream/handle/10036/4482/RogierD.pdf?sequence=2

Salaberri-Ramiro, M. S., & Sánchez-Pérez, M. M. (2018). Motivations of higher education students to enrol in bilingual courses. *Porta Linguarum*, *Monográfico III*, 61–74.

Sert, N. (2008). The language of instruction dilemma in the Turkish context. *System*, *36*(2), 156–171. https://doi.org/10.1016/j.system.2007.11.006

Tai, H.-Y. (2015). Writing development in syntactic complexity, accuracy and fluency in a content and language integrated learning class. *International Journal of Language and Linguistics*, *2*(3), 149–156.

Toledo, I., Rubio, F., & Hermosín, M. (2012). Creencias, rendimiento académico y actitudes de alumnos universitarios principiantes en un programa plurilingüe. *Porta Linguarum*, *18*, 213–228.

van der Worp, K. (2017) English Medium Instruction: a way towards linguistically better prepared professionals in the Basque Autonomous Community? *International Journal of Multilingualism, 14*(1), 53–68. https://doi.org/10.1080/14790718.2017.1258994

Wächter, B., & Maiworm, F. (Eds.) (2014). *English-taught programmes in European Higher Education*. Lemmens.

Yang, W. (2015). Content and language integrated learning next in Asia: Evidence of learners' achievement in CLIL education from a Taiwan tertiary degree

programme. *International Journal of Bilingual Education and Bilingualism*, *18*(4), 361–382. https://doi.org/10.1080/13670050.2014.904840

Yang, W. (2016). An investigation of learning efficacy, management difficulties and improvements in tertiary CLIL (Content and Language Integrated Learning) programmes in Taiwan: A survey of stakeholder perspectives. *Latin American Journal of Content & Language Integrated Learning*, 9(1), 64–109. https://doi:10.5294/laclil.2016.9.1.4

Yeh, C.-C. (2014). Taiwanese students' experiences and attitudes towards English-medium courses in tertiary education. *RELC Journal*, *45*(3), 305–319. https://doi.org/10.1177/0033688214555358

Appendix I: Questionnaire of Perceptions on EMI

1. Gender: Female Male Non-binary I prefer not to say
2. Age: ___
3. Course year: First Second Third Fourth
4. What are the main reasons why you enrolled in the bilingual programme?

To have better professional opportunities.

To improve your level of English.

To have more opportunities regarding international mobility (study or work abroad)

Other (Please, specify):

5. Have you been studying English alongside with your course? Yes No
6. Have you got a certified English level? If "yes", please indicate what level:

No

A1

A2

B1

B2

C1

C2

7. How would you rate your current level of English?

A1

A2

B1

B2

C1

C2

Please indicate your personal agreement with the following statements according to the following scale: 1 (Strongly Disagree), 2 (Disagree), 3 (Agree) and 4 (Strongly Agree.

Perceptions of Language Improvement in EMI

- I think taking part in this programme has improved my level of English.
- Taking part in this programme has improved my listening skills in English.
- Taking part in the bilingual programme has improved my speaking skills in English (oral presentations and similar activities).
- Taking part in the bilingual programme has improved my oral interaction skills in English (in dialogues, debates and similar activities).
- Taking part in the bilingual programme has improved my reading skills in English (academic documents, online information and similar activities).
- English (essays, exam questions, written portfolios and similar activities).

Satisfaction with the EMI programme

- Being part of the bilingual group has been a satisfactory experience.
- I am generally satisfied with the delivery of the contents of the subjects taught in English.
- I am generally satisfied with the methodology used in the English-taught subjects.
- Learning through the medium of English has been a positive experience.
- I would recommend other students to join the bilingual programme.
- In general, the quality of lessons is, at least, as good as the quality of the ones taught in Spanish.

Appendix II: Focus group interview questions

- What are your impressions about and personal experiences about learning English in the context of the bilingual programme?
- Was the learning of English one of the reasons to enroll in the bilingual programme? Was it the main reason, or one of the main reasons?
- If this was a reason, to what extent did the programme meet your expectations?
- Which skills (speaking, oral interaction, etc.) have you developed to a greater extent as a consequence of participating in the bilingual programme? And to a lesser extent?
- What factors or circumstances have contributed to your English learning in the bilingual programme?
- What are the causes that played a part for not learning more English?
- Do you want to add any other remarks on the topic of the interview?

Language learning in a partially English-taught teacher education programme

This paper reports on a study aimed to investigate the students' development in English proficiency over a four-year partially English-taught course that did not integrate any language learning goals. Additionally, the study investigated their perceptions concerning language gains and experiences in the programme. Both quantitative and qualitative research methods were employed. Paired-sampled t-tests indicated statistically significant differences from pretest to posttest for listening but not for grammar. Repeated measures ANOVA determined that the least proficiency (B1) students obtained the highest language gain over the 4-year period, particularly in listening. In contrast, advanced (C1) students performed worse in the listening and grammar posttests. Further findings indicated that the students perceived a positive impact of the programme on their English competence. No significant differences were found across self-rated proficiency groups regarding their perceptions of language improvement as a result of participating in the programme. The study also found that the higher the students' proficiency in the language, the less satisfied they were. In the focus group interviews, the students attributed their language improvement to being exposed to English and having to produce output, mainly in oral presentations and written tasks, and demanded English language instruction within the curriculum.

Keywords: English Medium Instruction (EMI); higher education; bilingual programme; English proficiency; student perceptions

Introduction

English Medium Instruction (EMI) in Higher Education (HE) is attracting intense research interest. This surge of attention is associated with a strong increase of fully or partially English-taught programmes, throughout not only European countries but also worldwide, in the last decades (Dearden, 2014; Macaro et al., 2018; Wächter &

Mainworm, 2014). To illustrate, only 7% of the 70 European universities in O'Dowd's (2018) survey study were not holding any EMI courses at all.

The most commonly alleged advantage of EMI is "the double benefit of subject knowledge and improved target language proficiency" (Coleman, 2006, pp. 4-5). This analysis proceeds from the assumption that the mere exposure to English will facilitate language learning and yet the students will simultaneously learn the specialised academic subject. However, as Jiménez-Muñoz (2014, p. 30) argues, unless conclusive evidence is found, the controversy surrounding EMI as a strategy that promotes excellence in both academic subject matter and language learning will not disappear. There is, therefore, an urgent need to provide proof that EMI does not negatively impact on students' academic achievement while, at the same time, their English language competence is enhanced. Particularly in contexts where the EMI initiative does not acknowledge any language goals and no specific language instruction is provided, the questions remain as to whether students actually make any significant progress in their language proficiency and to whether they actually acquire the purported benefit of the added value of EMI in terms of English language learning.

As Macaro et al. (2018, p. 57) note in their systematic review study of EMI instruction in HE, there is a surprising dearth of research that objectively measures the effect of EMI on English proficiency through language tests. This was precisely one of the aims of our study, to assess the impact on the students' English language proficiency of a four-year partial EMI programme that does not include any language learning objectives. Additionally, the study investigated the students' perceptions concerning their English language gains and experiences as a result of participating in the programme.

Literature review

Impact of EMI on language learning

As mentioned above, the impact of EMI instruction on language proficiency has not been thoroughly researched yet. Additionally, as will become evident below, the majority of the available studies use measures of general language or skill-specific proficiency tests that may not be appropriate to capture the impact of EMI on language learning (Macaro et al., 2018, p. 57).

In a study with female Emirati undergraduates, Rogier (2012) measured language skills improvement over a four-year programme. Her findings indicated statistically significant gains in all areas tested by the IELTS exam. Speaking was the area with the highest gain, followed by reading, writing and, finally, listening. Rogier did not have a non-EMI comparison group but she compared these gains with those reported in studies of general English programmes that have shown that, for learners to move up .05 of a level (the average gain in her study), between 200 and 240 hours of general English tuition are needed (Elder & O'Loughlin, 2003). As Macaro et al. (2018) pointed out, it is questionable that an average one half band score gain like the one Rogier (2012) obtained in her study can be regarded as enough validation of the positive impact of the programme on language learning.

Another study that employs an international standardised language test is that conducted by Aguilar and Muñoz (2014). Language gains after a semester in an EMI engineering postgraduate programme were measured through the same instrument as in the present study, the Oxford Placement Test (OPT) (Allan, 2005a and b). Results indicated that only differences between the pre- and post-listening tests were significant. The study also found that less proficient students (elementary level, OPT Band 3) improved significantly more in listening and grammar skills than more proficient ones.

They are also the only group that obtained significant gains in both listening and grammar skills. In contrast, higher proficiency students (advanced level, OPT Band 6) obtained no language gains in any of the subtests; surprisingly, they scored significantly less in the grammar post-test than in the pre-test. As for the students in the intermediate group (upper intermediate level, OPT Band 5), although a positive development in listening skills was found, it did not reach statistical significance and their improvement in grammar was extremely small. There was no non-EMI comparison group and the significant differences were exclusively observed within-group.

Two studies, one conducted in China (Lei & Hu, 2014) and, the other, in Taiwan (Yang, 2015), also employed general ability language tests. Results in Lei and Hu's (2014) study indicated that EMI students did not outperform their Chinese-medium counterparts on the test after one year of EMI instruction when biographic (gender and year of study) and perception variables (perceived necessity and perceived study burden) were partialed out. Somewhat more positive findings seemed to be obtained in Taiwan by Yang (2015) as students made significant improvements in receptive skills and they also outperformed non-EMI students from other universities in receptive competence. No significant differences compared to other test-takers were identified in productive skills.

Another study set in an elective course on international communication at a university in Taiwan conducted by Tai (2015) aimed to assess the progress in writing syntactic complexity, accuracy and fluency over a one-semester period. Gains were found in accuracy and fluency but not in syntactic complexity. Only within-group comparisons were made.

A very different orientation to language improvement tries to assess language improvement by analysing the students' performance in authentic academic-related

language use situations. Hernandez-Anclares and Jimenez-Munoz (2017) conducted a study on two first-year, six ECTS, compulsory modules in a BA in Business Administration at a university in northern Spain. They collected participants' written assignments and video-recordings of tutorial groups throughout the academic year and contrasted their language performance against the Common European Framework of Reference (CEF) descriptors for the 25 skills or sub-skills required to accomplish content-related assignments. On average, students progressed slightly less than half a CEF level in one academic year (the CEF [Council of Europe, 2001] estimates approximately 200 guided learning hours for a language learner to progress from one level to the next).

To summarise, considering the expansion of fully or partially English-taught programmes throughout Europe and indeed worldwide, there are only just a few studies that assess the effect of EMI instruction on language proficiency as determined by language tests and measures. Additionally, comparability across studies is problematic due to variability in data collection instruments (Macaro et al., 2018, p. 57) as well as contextual (instructional, organisational, institutional, language policy-related and support, etc.) factors. Furthermore, most of the studies do not have a non-EMI comparison group, and, what is more, the available studies that found a beneficial effect of EMI on language learning only confirm modest gains, which does not fulfill the expectations for language learning that EMI may arouse. It is true, though, that, although limited, research that tries to capture language progress by focusing on students' performance in authentic academic tasks does provide a more favourable picture of the impact of EMI on language development.

Students' perceptions of language learning

A review of the literature on students' perceptions in fully or partially English-taught university programmes reveals that the expectation of language improvement ranks high among the reasons to enroll in an EMI course (Fernández-Costales, 2017; Salaberri-Ramiro & Sánchez-Pérez, 2018; Yeh, 2014). Additionally, students seem to recognise this potential language gain as one of the advantages of EMI, despite the challenges it poses for understanding and learning subject matter (Bozdoğan & Karlıdağ, 2013; Byun et al., 2011).

Most of the studies conclude that students actually perceive an overall progress in their language ability (Fernández-Costales, 2017; Hernandez-Anclares & Jimenez Muñoz, 2017; Rogier, 2012; Toledo et al., 2012). However, conflicting evidence also exists. Although the study conducted by Sert (2008) with fourth-year Turkish undergraduate students concluded that EMI was significantly more effective than formal language instruction, it was still not perceived sufficiently effective for the acquisition of language learning skills except for speaking. After a semester of EMI instruction at an engineering school in a Spanish university, 59% of the students reported that they had not learnt any English (Aguilar & Rodríguez, 2012). Similarly, students interviewed by Lei and Hu (2014) in China expressed their dissatisfaction with the programme as it failed to improve their English proficiency.

In terms of improvement of language knowledge since entering the EMI programme, studies unanimously highlight technical, specialized vocabulary as the area in which students perceive they improve the most (Aguilar & Rodríguez, 2012; Fernández-Costales, 2017; Toledo et al., 2012). As regards the communicative skills, findings from different studies are sometimes contradictory, except for listening, which seems to be recognised as the skill or one of the skills most highly developed. Students in the studies conducted by Aguilar and Rodríguez (2012), Hernandez-Anclares and

Jimenez-Munoz's (2017), and van der Worp (2017) identified listening and speaking as the abilities they thought that they had improved the most since the start of the EMI programme. In three other studies (Bozdoğan & Karlıdağ, 2013; Rogier, 2012; Toledo et al. 2012) students reported that they had made the most gains in their receptive skills. Students interviewed by Bozdoğan & Karlıdağ (2013) reported a regression in their productive skills while those surveyed by Sert (2008) claimed that EMI was effective only for the development of speaking skills. Unlike our study, none of these studies differentiated between speaking in monologue and oral interaction. The conditions and contexts in which these EMI programmes were realised most probably impacted on the students' perceptions of their language progress. Additionally, the students' competence at the beginning of the programme will have probably affected these perceptions, as research by Fernández-Costales (2017) and Muñoz (2001) suggests.

The study

Objectives and research questions

As mentioned above, this study set to assess the impact of a four-year partial EMI programme on the students' English language proficiency and to investigate their perceptions concerning their language learning as a result of participating in the programme. More specifically, the study addressed the following research questions (RQs):

RQ1. Are there statistically significant differences in English proficiency skills between the beginning and the end of the partial EMI programme?

RQ2. Are the differences in English proficiency skills between the beginning and the end of the programme associated with the students' starting proficiency level?

RQ3. What are the students' perceptions regarding English learning in a partial EMI programme?

RQ4. Are there any statistically significant differences concerning their perceptions according to self-perceived English proficiency?

Methodology

The study adopted an exploratory sequential mixed methods design (Creswell & Clark 2011, p. 81), where the qualitative data gathered from the focus group interviews was meant to help explain the quantitative results obtained by a perceptions questionnaire. Furthermore, a quantitative approach was used to investigate language proficiency test data.

Context

The university of Málaga (UMA) started offering a partially English-taught course at the Faculty of Education in 2014. This course, leading to a Degree in Primary Education, can be characterised as a partial EMI programme in that "content is the priority and […] no assessment of student's English competence is made because no language learning outcomes are acknowledged" (Aguilar, 2017, p. 725, based on Greere & Räsänen, 2008). Throughout the four-year duration of the course, around 35% of the 240 ECTS credit points were delivered in English. Although some English-taught modules have changed over the years, the following are some of the ones included in the EMI programme: Music Education, Arts Education, History of Education, General Didactics, Social Sciences Education, Physical Education and Science Education.

Participants

A total of 157 students between the ages of 18 and 40 (M = 20.66, SD = 3.22; Mo = 20) participated in the survey study. In the academic year in which data were obtained

(2018-2019), 250 students were enrolled in this partially English-taught course. The study sample that completed the study questionnaire thus represents 62.8% of the total students enrolled. A hundred and twenty-four (79%) were female, 29 (18.5%) were male, one was non-binary and the remaining three preferred not to say what gender they identified as. All four course years were represented in the sample (Table 1).

Table 1
Distribution of the Sample by Course Year

Course year	Frequency	Percentage
1st	56	35.67
2nd	41	26.11
3rd	18	11.46
4th	42	26.75

Only 20 students (12.7%) declared not to hold any officially certified English proficiency level. Of the remaining 137 students, 48 (35.0%) held a B1 level or below, 67 (48.91%), a B2 and the remaining 22 (16.06%), a certified C1 level. When asked to self-rate their proficiency level, 24 (15.3%) considered that they had a B1 level, 85 (54.1%) a B2, and 48 (30.6%), a C1. Three quarters of the sample (n = 118) declared that they studied English outside the programme while 25% admitted that they did not do so.

When asked about their motivation to join a bilingual Spanish-English course, improving the level of English was the second most frequently indicated reason behind the prospect of better job opportunities, indicated by 132 students (84.08%). A total of 99 students (63.06%) selected improving their competence in English, either as the only reason to enroll in the course (n = 9) or, more commonly, as one of the main reasons alongside others, mainly the perception of obtaining better opportunities in the job market.

Seventy students (58 female and 13 male) from the first cohorts of the partial EMI degree took *the Oxford Placement Test 1* (Allan, 2005s) at the beginning and the *Oxford Placement Test 2* (Allan, 2005b) at the end of the course.

Instruments

English Language Learning Perceptions Questionnaire. An online questionnaire was designed to tap into the participants' perceptions about their experiences in the partially English-taught programme (Appendix I). The questionnaire consisted of a demographics section and two different scales. The 6-item 'Perception of language improvement' scale (Cronbach's alfa = .89) aimed to obtain the students' views on progress in English. The second scale, 'Satisfaction with the bilingual course scale' (Cronbach's alfa = .89) was meant to obtain a measure of programme satisfaction.

Focus group interviews: Focus group interviews were conducted with three different groups of volunteer students from the last three years following a semi-structured interview format (Appendix II). Permission was obtained to record the interviews. Students were asked questions linked to the questionnaire items so as to validate and enrich the quantitative results with more in-depth insights. Twenty four students participated in these interviews.

The Oxford Placement Test. The *Oxford Placement Test (OPT) 1* and *2* (Allan, 2005b) were used as measures of English ability. Each test consists of two subtests (a listening section and a grammar section) and has 100 items. According to the information provided in the test kit, the OPT results are calibrated against the CEF levels (A1-C2).

Data analysis

Two summative scales were obtained from items in the questionnaire, each participant's

score being calculated by adding up the points for the corresponding items: the 'Perceptions of language improvement scale' (6 items, range: 6-24) and the 'Satisfaction with the programme scale' (6 items, range: 6-24).

Descriptive statistics were used to summarise aspects of the data to provide information about the sample and the groups of the study. A paired-samples t-test was conducted to compare students' performance in the listening and grammar subsets of the OPT between the beginning and the end of the programme. Repeated measures ANOVA were used for three-group comparisons. Kruskal-Wallis tests were performed to compare perceptions held by the different self-rated proficiency groups as represented by the scales of 'Perceptions of language improvement' and 'Satisfaction with the programme'. A qualitative thematic analysis was used to identify salient themes in the interview data (Guest et al., 2011).

Findings and discussion

RQ1: Are there statistically significant differences in English proficiency skills between the beginning and the end of the partial EMI programme?

Students from the first two cohorts of the bilingual programme (starting year: 2014-2015; 2015-2016) were tested in English through the two subtests (Listening and Grammar tests) of the Oxford Placement Test, first at the beginning and then four years later at the end of the programme. Descriptive results are shown in Table 2.

Table 2
Descriptive Statistics for the OPT subtests

	Listening (*M*, *SD*)	Grammar (*M*, *SD*)
Pretest (OPT1)	68.20 (7.59)	65.39 (10.84)
Posttest (OPT2)	72.70 (5.68)	63.21 (10.31)

As Table 3 shows, our study found a significant language improvement in listening over the four-year programme with a medium effect size but not in grammar. Aguilar and Muñoz (2014) found strikingly similar results after a six-month EMI prostgraduate course although the effect size for listening in their study was substantially smaller (0.30).

Table 3

Results for the T-test

	t	*df*	Sig. (2-tailed)	Effect size *d*
Listening	-4.57	70	**< .001**	0.67
Grammar	1.79	70	.078	0.21

Our study is in line with previous research that has also identified gains in listening after a period of EMI instruction (e.g., Aguilar & Muñoz, 2014; Aguilar & Rodríguez, 2012; Muñoz, 2001; Yang, 2015).

RQ2: Are the differences in English proficiency skills between the beginning and the end of the programme associated with the students' starting proficiency level?

The study also aimed at identifying if the students' language development over the four-year course was affected by their English competence at the start of the programme. In order to identify how different proficiency groups performed in terms of language development over the four-year programme, students were classified according to their performance in the OPT1 test in three groups: Up to B1, B2 and C1. Table 4 shows the descriptive statistics for the Listening and the Grammar subtests according to competence.

Table 4						
Descriptive Statistics by Proficiency Level						
	Groups					
	Up to B1 (n = 40)		B2 (n = 22)		C1 (n = 9)	
	Pretest (M, SD)	Posttest (M, SD)	Pretest (M, SD)	Posttest (M, SD)	Pretest (M, SD)	Posttest (M, SD)
Listening	64.35 (6.38)	71.58 (5.60)	70.86 (4.55)	73.95 (5.01)	78.78 (5.65)	74.67 (6.78)
Grammar	58.38 (6.79)	59.60 (9.90)	70.50 (4.96)	66.95 (7.64)	84.11 (5.11)	70.11 (11.88)

The results of the repeated measures ANOVA revealed that there was a marginally significant main effect of time on participants' performance in the listening subtest ($F_{(1,68)} = 3.76$, $p = .057$, $\eta p^2 = 0.052$). In contrast, there was a significant interaction between the variable time and the variable proficiency level with a large effect size ($F_{(2,68)} = 8.94$, $p > .001$, $\eta p^2 = 0.210$). This result indicates that the development in listening of the participants with different proficiency levels was not the same. Pairwise comparisons between the estimated marginal means show that the effect of time is significant for the 'up to B1' proficiency group with a large effect size ($F_{(1,39)} = 32.59$, $p > .001$, $\eta p^2 = 0.46$), marginally significant for the 'B2' group ($F_{(1,21)} = 4.12$, $p = .062$, $\eta p^2 = 0.063$) and non significant for the C1 group ($F_{(1,21)} = 4.63$, $p = .06$, $\eta p^2 = 0.043$).

A significant main effect of time on participants' performance in the grammar subtest was revealed by the repeated measures ANOVA results ($F_{(1,68)} = 17.63$, $p > .001$, $\eta p^2 = 0.21$). The interaction between the variable time and the variable competence level was also significant with a large effect size ($F_{(2,68)} = 10.59$, $p > .001$, $\eta p^2 = 0.235$). This result indicates that the development in English grammar of the participants with different proficiency levels was not the same. Pairwise comparisons between the estimated marginal means show that the effect of time is not significant for the 'up to B1' competence level group ($F_{(1,39)} = 0.62$, $p = .436$, $\eta p^2 = 0.46$), and

significant for the B2 group ($F(_{1,21}) = 5.62$, $p = .027$, $\eta p^2 = 0.210$) and for the C1 group ($F(_{1,8}) = 16.56$, $p = .004$, $\eta p^2 = 0.671$).

The least proficient students make the greatest gains in listening over the four-year programme while the upper intermediates ones make a more modest progress. Surprisingly, advanced students performed worse in the listening test at the end of the programme, although the difference is not significant. In the case of grammar, the lower intermediate group makes only a slight progress over the four-year duration of the programme while the upper intermediate and advanced students performed worse at the end of the programme.

Several explanations may have interacted to produce these results. Students with a lower level of competence undoubtedly have more room for language progress and the higher exposure to English may have contributed to improve their comparatively less developed grammar knowledge and, particularly, their listening skills in a greater degree. Furthermore, as mentioned above, three quarters of the sample that completed the perceptions questionnaire declared that they were studying English outside the programme. Probably, those with a lower level of English were the ones that, in a higher proportion, were doing that, as a C1 CEF level will soon become a requirement to teach in the bilingual schools in our context. The decline in grammar test scores may be due to the fact that, particularly in FL contexts, if no formal study of the language takes place, knowledge of the language may consequently deteriorate. Furthermore, an EMI programme *per se*, with no specific language-learning objectives of its own, may have differential effects depending on the language skills being assessed. Finally, the incongruence between perceptions of gains and actual language progress as a function of proficiency level may be explained because, as discussed above, general or skill-specific ability tests may not capture the effect of EMI on language learning that is

acknowledged by the students themselves. Most probably, the language development caused by EMI is more specifically associated with academic or field-specific discourse and/or language tasks.

In terms of the trend of the evolution in language performance of students of different language ability, our study results are strikingly similar to those obtained by Aguilar and Muñoz (2014) using the same assessment instrument. Similarities are even more remarkable if we consider that their study aimed to ascertain the language gains after just a one-semester course, which leads to contemplate the possibility of an instrument effect. Of course, this hypothesis would need further investigation.

RQ3: What are the students' perceptions regarding English learning in a partial EMI programme?

Table 5 shows the results for items aimed to obtain information about the students' perceptions of language improvement as a consequence of enrolment in this partially English-taught programme.

Table 5

Perceptions of Language Improvement

Taking part in this programme has improved…	Mean (SD)	St.D (*n*, %)	D (*n*, %)	A (*n*, %)	St.A (*n*, %)
my level of English.	2.90 (0.81)	11 (7.0)	26 (16.6)	87 (55.4)	33 (21.0)
my speaking skills in English (oral presentations and similar activities).	3.06 (0.63)	0 (0.0)	26 (16.6)	95 (60.5)	36 (22.9)
my oral interaction skills in English (in dialogues, debates and similar activities).	2.92 (0.73)	7 (4.5)	27 (17.2)	94 (59.9)	29 (18.5)
my listening skills in English.	2.85 (0.89)	15 (9.6)	32 (20.4)	72 (45.9)	38 (24.2)
my reading skills in English (academic documents, online information and similar activities).	3.06 (0.76)	7 (4.5)	19 (12.1)	88 (56.1)	43 (27.4)
my written skills in English (essays, exam questions, written portfolios and similar activities).	3.13 (0.70)	4 (2.5)	17 (10.8)	91 (58.0)	45 (28.7)

Note: St.D: Strongly Disagree; D: Disagree; A: Agree; St.A: Strongly Agree

Results indicate that the students hold the view that the programme has exerted a positive impact on their English competence. Curiously enough, students seemed to perceive that their overall language improvement was smaller than in specific language activities such as speaking or writing. Our findings seem to contradict previous studies that concur that students in EMI programmes perceive higher improvement in receptive skills -and, particularly, in listening- than in productive skills (Aguilar & Rodríguez, 2012; Muñoz, 2001; Yang, 2015) since speaking and writing were among the three skills in which the participants in our study felt they had improved the most.

This perception of enhanced linguistic ability occurs despite the fact that the programme included neither an English learning module nor specific English-language objectives, which runs contrary to expert opinion that insists on the need for an English-taught programme to have clear language development instructional goals in place (Airey et al., 2017; Rogier, 2012) and provide some kind of language support (Rogier, 2012), either as a supplement to the programme (Yang, 2015) or as an integral part of it (Kirkpatrick, 2019).

In the focus group interviews students were almost evenly divided as to their perspectives on English improvement. While some of them interpreted that the programme had provided them with the opportunity to improve their command of English, others seemed rather disappointed as it had not fulfilled their expectations concerning English learning, even though they were aware that the course was not specifically aimed at language learning.

> *I think there are aspects to be improved, but I am sure that I have learned quite a lot of English.*
>
> *Although I don't have a very positive overall opinion of the programme, I have improved my English language skills to some extent.*

If I have a good level of English, it is not precisely because of my enrollment in the bilingual group.

Some students in the interview voiced their opinion in favour of English modules as compulsory components of the bilingual programme:

I consider that we should have English courses in order to improve our English from the beginning of the programme.

English modules should be part of the curriculum.

In accordance with the data obtained from the questionnaire, the students in the focus groups agreed that writing was the language skill they had developed the most as they were asked to produce a number of written assignments in English, while listening was the skill in which they observed the least development. Some students attributed it to some of the lecturers' incorrect pronunciation. Some students also expressed the view that they were learning the specific discourse of teaching and subject-related language in English rather than general, functional English language.

My expectations of English learning have not been fulfilled. I am learning the language of teaching, but I don't think I can communicate better in English.

Additionally, the students attributed their language improvement to the facts that they were exposed to English and they had to produce output, mainly in oral presentations and written tasks. However, they complained that they never received any feedback on their use of English that could have contributed to further improve their English.

You got your assignment grade – it was a holistic, numerical score, but we did not get any feedback on language use or on how the text was organised and structured.

RQ4: Are there any statistically significant differences concerning the students' perceptions according to self-perceived English proficiency?

The respondents were divided into three groups according to their self-rated proficiency: B1 (n = 24), B2 (n = 85) and C1 (n = 48). Statistically significant differences were only found between groups concerning their satisfaction with the programme ($H(_2)$ = 6.995; p = .030, d = 0.37). As Table 6 shows, the higher the self-rated competence, the lower the satisfaction with the programme. *Post hoc* comparisons with the Mann-Whitney test using a Bonferroni-adjusted alpha level of .017 (0.05/3) were used to compare all three pairs of groups. A significant difference was found between the group that self-rated its competence in English as B1 and the group that self-rated it as C1, with an intermediate effect size (U = 350.500, Z = -2.619, p = .009, d = 0.65). An explanation for this result may be that the expectation of learning English that acted as a motivation to enroll in the programme in 63.06% of the sample may have been met in a higher degree in the case of the lower English proficiency students. The lower satisfaction with the course manifested by the advanced students, that is also the group that perceived the lowest improvement in English (Table 6), may have been associated to the recognition of modest language gains. As already mentioned, previous research (Fernández-Costales, 2017; Muñoz, 2001) conclude that the higher the students' competence in the language, the less satisfied they were with their language improvement from participation in EMI.

Curiously enough, no statistically significant differences were found across self-rated proficiency groups regarding their perceptions of language improvement as a result of participating in the programme.

Table 6
Descriptive Statistics for the Scales by Competence Group

Scale	Self-rated competence group	*M*	*SD*	*Mean ranks*
Perceptions of language improvement (range: 4-24)	B1	18.38	2.37	84.33
	B2	18.22	3.80	83.84
	C1	17.19	3.91	67.77
	Total	17.93	3.67	
Satisfaction with the	B1	17.67	2.88	92.58

programme' (range: 4-24)	B2	16.44	4.03	82.77
	C1	14.96	3.71	65.53
	Total	16.17	3.87	

Conclusions

The present study investigated the students' evolution in English proficiency over a four-year partial EMI programme that did not include any language-specific learning objectives. Additionally, the study set to explore their perceptions concerning language gains and language learning experiences in the programme.

These results may be indicative of the questionable effects of EMI initiatives that do not assume any predefined language learning goals. They suggest that less proficient students may certainly obtain some benefit whereas language learning in more proficient students may become stagnant, unresponsive to exposure or even regress. However, although a certain effect of the programme on these results may be undeniable, it would be simplistic and misleading to attribute these results exclusively to it and also to conclude that the language skills in some students are either unaffected or even negatively affected by the EMI programme. Firstly, three quarters of the participants declared that they studied English outside the course and those with a lower competence will probably do so in a greater proportion than more proficient students. Secondly, it may be hypothesised that the language exposure and practice in the programme may be more conducive to language learning for less proficient students and that, for language skills to be maintained in an FL context, some communicative and also form-focused activity is needed. And thirdly, as previously discussed, the tests used may not capture the English learning that survey and interview data indicated that had taken place across proficiency groups and skills. Only tests and assessment instruments oriented to assess discipline-specific language learning can probably provide realistic results concerning the linguistic

development promoted by EMI courses. The study also identified a demand for language instruction as part of the EMI curriculum and the perception in some participants that their expectations of English learning had not been fully satisfied, which reinforces the argument for these initiatives to incorporate language learning goals. Some experts (e.g., Pecorari et al., 2011) have argued that, for language learning to take place in EMI, the necessary conditions must be ensured. Additionally, as Dearden and Macaro (2016) highlighted, no conclusive evidence exists to suggest that the students' command of English improves as a consequence of participating in EMI initiatives. They also added that the language gains found in some studies "merely tell us that in four years of exposure to English students improved their language proficiency, not that learning through EMI is better than, say, a programme of L1 content instruction plus English as a foreign language (EFL) support" (p. 459). Further research is still needed on the impact of EMI on language learning, on the conditions that could facilitate efficient language learning and on how students interpret their language learning in EMI experiences.

When interpreting the study findings, two main limitations should be acknowledged. First, the study did not have an equivalent non-EMI comparison group; this, together with a study design that considers individual, social and contextual factors would certainly provide more conclusive results concerning the impact of EMI on language proficiency. And secondly, research was conducted in only one university and, therefore, no claims are made about the generalisability of the findings to the wider EMI student population. Regardless of these limitations, the present investigation is a further contribution to the existing limited literature on language learning in EMI contexts that confirms the need for language instruction within EMI curricula.

Declaration of interest: None

References

Aguilar, M. (2017). Engineering lecturers' views on CLIL and EMI. *International Journal of Bilingual Education and Bilingualism*, *20*(6), 722–735. https://doi.org/10.1080/13670050.2015.1073664

Aguilar, M., & Muñoz, C. (2014). The effect of proficiency on CLIL benefits in Engineering students in Spain. *International Journal of Applied Linguistics*, *24*(1), 1–18. https://doi.org/10.1111/ijal.12006

Aguilar, M., & Rodríguez, R. (2012). Implementing CLIL at a Spanish university: Lecturer and student perceptions. *The International Journal of Bilingual Education and Bilingualism, 15*(2)*,* 183–197.

Airey, J., Lauridsen, K. M., Räsänen, A., Salö, L., & Schwach, V. (2017). The expansion of English-medium instruction in the Nordic countries: Can top-down university language policies encourage bottom-up disciplinary literacy goals? *Higher Education*, *73*(4), 561–576.

Allan, D. (2005a) *Oxford Placement test 1*. Oxford University Press.

Allan, D. (2005b) *Oxford Placement test 2*. Oxford University Press.

Bozdoğan, D., & Karlıdağ, B. (2013). A case of CLIL practice in the Turkish context: Lending an ear to students. *Asian EFL Journal*, *15*(4), 89–110.

Byun, K., Chu, H., Kim, M., Park, I., Kim, S., & Jung, J. (2011). English-medium teaching in Korean higher education: Policy debates and reality. *Higher Education, 62*(4), 431–449.

Coleman, J. A. (2006). English-medium teaching in European Higher Education. *Language Teaching*, *39*(1), 1–14. https://doi.org/10.1017/S026144480600320X

Council of Europe. (2001). *Common European Framework of Reference for languages: Learning, teaching, assessment*. Cambridge University Press.

Creswell, J. W., & Clark, V. L. P. (2011). *Designing and conducting mixed methods research*. Sage.

Dearden, J. (2014). *English as a medium of instruction - a growing global phenomenon*. British Council. Retrieved from https://www.britishcouncil.es/sites/default/files/british_council_english_as_a_medium_of_instruction.pdf

Dearden, J., & Macaro, E. (2016). Higher education teachers' attitudes towards English Medium Instruction: A three-country comparison. *Studies in Second Language Learning and Teaching*, *6(*3), 455–486. https://doi.org/10.14746/ssllt.2016.6.3.5 http://www.ssllt.amu.edu.pl

Elder, C., & O'Loughlin, K. (2003). Investigating the relationship between intensive English language study and band score gain on IELTS. *IELTS Research Reports* 4. Retrieved from https://www.ielts.org/research/research-reports/volume-04-report-6

Fernández-Costales, A. (2017). Assessing students' perceptions regarding English Medium Instruction in Higher Education. *Didáctica: Lengua y Literatura*, *29*, 43–63. https://doi.org/10.5209/DIDA.57129

Greere, A., & Räsänen, A. (2008). *Year One Report. LANQUA subproject on Content and Language Integrated Learning: Redefining 'CLIL'—Towards Multilingual Competence.* Retrieved from https://www.unifg.it/sites/default/files/allegatiparagrafo/20-01-2014/lanqua_subproject_on_clil.pdf

Guest G., McQueen, K.M., & Namey, E.E. (2011). *Applied thematic analysis*. Sage.

Hernandez-Nanclares, N., & Jimenez-Munoz, A. (2017). English as a medium of instruction: Evidence for language and content targets in bilingual education in economics. *International Journal of Bilingual Education and Bilingualism*, *20*(7), 883–896. https://doi.org/10.1080/13670050.2015.1125847

Jiménez-Muñoz, A. (2014). Measuring the impact of CLIL on language skills: a CEFR-based approach for higher education. *Language Value*, *6*(1), 28–50.

Kirkpatrick, A. (2019). The rise of EMI: Challenges for Asia In E. Macaro, A. K. Hultgren, A. Kirkpatrick and D. Lasagabaster, *English medium instruction: Global views and countries in focus. Introduction to the symposium held at the Department of Education, University of Oxford on Wednesday 4 November 2015* (pp. 237-240). *Language Teaching*, *52*(2), 231–248. https://doi.org/10.1017/S0261444816000380

Lei, J., & Hu, G. W. (2014). Is English-medium instruction effective in improving Chinese undergraduate students' English competence? *International Review of Applied Linguistics in Language Teaching*, *52*(2), 99–126. https://doi.org/10.1515/iral-2014-0005

Macaro, E., Curle, S., Pun, J., An, J., & Dearden, J. (2018). A systematic review of English medium instruction in higher education. *Language Teaching*, *51*(1), 36–76. https://doi.org/10.1017/S0261444817000350

Muñoz, C. (2001). The use of the target language as the medium of instruction. University students' perceptions. *Anuari de Filologia*, *23*(1), 71–82.

O'Dowd, R. (2018). The training and accreditation of teachers for English medium instruction: an overview of practice in European universities. *International Journal of Bilingual Education and Bilingualism, 21*(5), 553–563. https://doi.org/10.1080/13670050.2018.1491945

Pecorari, D., Shaw, P., Irvine, A., & Malmström, H. (2011). English for Academic Purposes at Swedish universities: Teachers' objectives and practices. *Ibérica*, *22*, 55–77.

Rogier, D. (2012). *The effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE* (Doctoral dissertation). University of Exeter, United Kingdom. Retrieved from https://ore.exeter.ac.uk/repository/bitstream/handle/10036/4482/RogierD.pdf?sequence=2

Salaberri-Ramiro, M. S., & Sánchez-Pérez, M. M. (2018). Motivations of higher education students to enrol in bilingual courses. *Porta Linguarum*, *Monográfico III*, 61–74.

Sert, N. (2008). The language of instruction dilemma in the Turkish context. *System*, *36*(2), 156–171. https://doi.org/10.1016/j.system.2007.11.006

Tai, H.-Y. (2015). Writing development in syntactic complexity, accuracy and fluency in a content and language integrated learning class. *International Journal of Language and Linguistics*, *2*(3), 149–156.

Toledo, I., Rubio, F., & Hermosín, M. (2012). Creencias, rendimiento académico y actitudes de alumnos universitarios principiantes en un programa plurilingüe. *Porta Linguarum*, *18*, 213–228.

van der Worp, K. (2017) English Medium Instruction: a way towards linguistically better prepared professionals in the Basque Autonomous Community? *International Journal of Multilingualism, 14*(1), 53–68. https://doi.org/10.1080/14790718.2017.1258994

Wächter, B., & Maiworm, F. (Eds.) (2014). *English-taught programmes in European Higher Education*. Lemmens.

Yang, W. (2015). Content and language integrated learning next in Asia: Evidence of learners' achievement in CLIL education from a Taiwan tertiary degree programme. *International Journal of Bilingual Education and Bilingualism*, *18*(4), 361–382. https://doi.org/10.1080/13670050.2014.904840

Yeh, C.-C. (2014). Taiwanese students' experiences and attitudes towards English-medium courses in tertiary education. *RELC Journal*, *45*(3), 305–319. https://doi.org/10.1177/0033688214555358

Appendix I: Questionnaire of Perceptions on EMI

1. Gender: Female Male Non-binary I prefer not to say
2. Age: ___
3. Course year: First Second Third Fourth
4. What are the main reasons why you enrolled in the bilingual programme?

To have better professional opportunities.

To improve your level of English.

To have more opportunities regarding international mobility (study or work abroad)

Other (Please, specify):

5. Have you been studying English alongside with your course? Yes No
6. Have you got a certified English level? If "yes", please indicate what level:

No

A1

A2

B1

B2

C1

C2

7. How would you rate your current level of English?

A1

A2

B1

B2

C1

C2

Please indicate your personal agreement with the following statements according to the following scale: 1 (Strongly Disagree), 2 (Disagree), 3 (Agree) and 4 (Strongly Agree.

Perceptions of Language Improvement in EMI

- I think taking part in this programme has improved my level of English.
- Taking part in the bilingual programme has improved my speaking skills in English (oral presentations and similar activities).
- Taking part in the bilingual programme has improved my oral interaction skills in English (in dialogues, debates and similar activities).
- Taking part in the bilingual programme has improved my reading skills in English (academic documents, online information and similar activities).
- Taking part in this programme has improved my listening skills in English.
- Taking part in the bilingual programme has improved my written skills in English (essays, exam questions, written portfolios and similar activities).

Satisfaction with the EMI programme

- Being part of the bilingual group has been a satisfactory experience.
- I am generally satisfied with the delivery of the contents of the subjects taught in English.
- I am generally satisfied with the methodology used in the English-taught subjects.
- Learning through the medium of English has been a positive experience.
- I would recommend other students to join the bilingual programme.
- In general, the quality of lessons is, at least, as good as the quality of the ones taught in Spanish.

Appendix II: Focus group interview questions

- What are your impressions about and personal experiences about learning English in the context of the bilingual programme?
- Was the learning of English one of the reasons to enroll in the bilingual programme? Was it the main reason, or one of the main reasons?
- If this was a reason, to what extent did the programme meet your expectations?
- Which skills (speaking, oral interaction, etc.) have you developed to a greater extent as a consequence of participating in the bilingual programme? And to a lesser extent?
- What factors or circumstances have contributed to your English learning in the bilingual programme?
- What are the causes that played a part for not learning more English?
- Do you want to add any other remarks on the topic of the interview?