The Manifold Nature of Bilingual Education

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Edited by

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INTRODUCTION

M. TERESA CALDERÓN-QUINDÓS
NATALIA BARRANCO-IZQUIERDO
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The Manifold Nature of Bilingual Education follows the plurilingual approach, which believes that a person "builds up a communicative competence through which all knowledge and experience of language contributes and in which languages interrelate and interact"[1]. The work also places increased emphasis on the *education* concept in the belief that it is through education that bilingual or plurilingual complex cultures can develop into modern inclusive societies. In our view, native acquisition of languages and second language school education both work toward the same aim: developing flexible minds that are able to communicate through languages and cultures in a multicultural global society.

The Manifold Nature of Bilingual Education is the result of research in the field of bilingual education taking into account different perspectives: foreign language education in school contexts, native bilingualism, and societal stances towards bilingualism; and includes contributions from authors from many different parts of the world such as America, Europe and Asia.

Through the different chapters, the authors examine how societies influence language education: as school contexts regulated by curriculum policies (see chapter by Pérez Cañado and by Sanz Trigueros); as linguistic examiners of the presence of foreign languages in learners and in mother tongue discourse in general (see chapters by Castro-García and by Hosokawa), and as informal family contexts where children are naturally raised bilingually (see chapters by Alvarez and by Tremaglio).

[1] Council of Europe 2001, *Common European Framework of Reference for Languages: Learning, Teaching, Assessment*. Strasbourg: Language Policy Division, 4.

Thus, the following chapters have been arranged in three sections, according to the authors' research contributions on different components of Bilingual Education.

In the first section "Bilingualism in School Education", the authors deal with two different topics which are intrinsically related to formal language education and foreign language teacher training.

Chapter One, *Common CLIL (Mis)conceptions: Setting the Record Straight,* by María Luisa Pérez Cañado, explores common CLIL myths regarding CLIL characterization, implementation or teacher training. She bases her research on two longitudinal macro-studies and presents possible solutions to address such myths.

Chapter Two, *Plurilingual Education from the European Guidelines. The Foreign Language Curriculum in Spain and Teacher Training issues*, by Francisco Javier Sanz Trigueros, attends to teacher training issues concerning the plurilingual and pluricultural competence. He reviews European referential documents and the Spanish curriculum in order to detect absences of attention to this competence in the latter.

The second section, "Reception of Second Languages" focuses on how language learners and society may respond to second or foreign languages. It deals with vocabulary conscious learning as a tool to improve reading comprehension skills, which in turn seems to be a basic activity towards written communicative competence. This section also examines how the rising importance of foreign languages is sometimes perceived in monolingual societies.

Chapter Three, *Receptive Vocabulary Size and its Effects on Reading Ability*, by Damaris Castro García, shows tested evidence that reading skills in a second language are largely influenced by vocabulary enlargement especially in the lower levels. The tests reveal that the 2000 word band seems to be the springboard towards the possibility of applying L1 reading strategies to L2 reading comprehension. The author also emphasizes the importance of developing a wider lexical competence as a cornerstone for second language acquisition and proposes the use of conscious and meaningful vocabulary learning activities to complement reading comprehension activities.

In Chapter Four, *"The New Wild". Thinking Linguistic Globalization through the Ecology of Species*, Naoko Hosokawa refers to the use of loanwords and the controversy this issue generates. The author uses the

metaphor of biology applied to language in order to explain how loans can be perceived either as a threat of alien languages invading native language "ecosystems", or as an opportunity of renewal from the old systems into newer stronger ones.

In the third and final section, "Native Bilingualism in Context" the authors devote their works to generational differences and how these differences influence attitudes toward bilingualism or even their linguistic competence.

In Chapter Five, *Attitudes and Self-Perceptions of Bilingualism: A Study on Generational Differences,* Gina Tremaglio analyzes the attitudes and perceptions of 75 bilingual adults among three different generations, Baby Boomers, Generation X and Millennials. The author demonstrates the significant relation between generation and attitude toward bilingualism.

Chapter Six, *Partially Schematic Constructions in Multilingual Interaction: A Vector for Intergenerational Transmission?* by Eric Alvarez, offers an analysis between second-generation bilingual parents and their children. He analyzes 22 mixed adult utterances paying special attention to different factors such as context, interlocutor and language dominance.

As we will see, dealing with bilingual education means addressing complex social realities, since today's societies are formed, fortunately, by populations that communicate through different languages and cultures. In this plurilingual world, formal, non-formal and informal education play important roles in contributing to the shaping of our bilingual or plurilingual minds.

CHAPTER ONE

COMMON CLIL (MIS)CONCEPTIONS: SETTING THE RECORD STRAIGHT

MARÍA LUISA PÉREZ CAÑADO[1]

Abstract

This chapter will showcase ten of the most common CLIL myths which are currently proliferating in monolingual language teaching contexts and will employ empirical evidence stemming from two governmentally-funded research projects to debunk or substantiate them. It will begin by documenting how the so-called "pendulum effect" which has characterized foreign language teaching history has just made itself conspicuous in the CLIL research arena: we have moved from a celebratory educational rhetoric which saw CLIL as a near-panacea to dwelling almost exclusively on the problematic issues of CLIL. This pessimistic outlook on the feasibility of CLIL implementation has spawned a substantial number of articles, particularly in monolingual contexts, based on opinions and isolated personal experiences, as opposed to solid empirical research, and which have caused a series of potentially very dangerous (mis)conceptions about CLIL to surface which could seriously misguide its implementation process. Ten of these most frequent myths will be foregrounded and examined, pertaining to issues of CLIL characterization, implementation, research, and teacher training. Empirical evidence fresh from two longitudinal macro-studies which have just been conducted will then be furnished in order to dispel or confirm those (mis)conceptions and possible solutions will be ventured to address them. The ultimate aim is to set the

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record straight vis-à-vis the current CLIL scenario, to bring the pendulum to a standstill, and to ensure that solid empirical research is our compass for the future.

Keywords
CLIL, characterization, implementation, investigation, training

Introduction

The past two decades have been characterized by profound transformation and upheaval in the language teaching arena. Europe's desire to meet the "mother tongue + 2" mandate established in the European Commission's 1995 White Paper[2] brought about a real revolution in language pedagogy, where monolingual education has been increasingly superseded by the so-called "multilingual turn" (May 2014, 1) in language teaching. Against this backdrop, CLIL (Content and Language Integrated Learning) has forcefully positioned itself within the European scene as the potential lynchpin to tackle the foreign language deficit on our continent and "has enjoyed massive uptake in continental Europe over the last twenty years in very diverse educational settings" (Hüttner and Smit 2014, 160).

Initially, a very flattering spotlight was shone on CLIL. It was embraced as a potential lever for change and success in language teaching, particularly considering that traditional foreign language instruction was not delivering the intended outcomes. It was also heralded as "awesome innovation" (Tobin and Abello-Contesse 2013, 224), "a major step forward" (Tobin and Abello-Contesse 2013, 224), or "the ultimate opportunity to practice and improve a foreign language" (Pérez-Vidal 2013, 59), pinning extremely high hopes on CLIL as a potential success story in language leaning.

However, particularly in the last half decade, the so-called "pendulum effect" (Swan 1985, 86) has made itself conspicuous in the CLIL scenario. The metaphorical pendulum has swung violently to the other extreme (cf. Pérez Cañado 2016, 2017a), and now research and opinion articles (Bruton 2011a, 2011b, 2013, 2015; Paran 2013; Marías 2015) levelling harsh criticism at this approach have mushroomed. They consider CLIL a scam, a plague, or a total disaster, and they speak of "camps" and "battles" between its advocates and detractors. This second standpoint has spawned

[2] *Teaching and Learning. Towards the Learning Society*. It established the need for EU citizens to be proficient in three European languages: their mother tongue plus two additional ones.

a considerable number of (mis)conceptions affecting CLIL, many of which stem from unsubstantiated opinions, personal experiences, and obsolete or methodologically compromised research, and are in turn demotivating grassroots practitioners, discouraging CLIL program set-ups, as well as alarming participating stakeholders. These actions could thus ultimately derail current and future CLIL practice.

It is on these (mis)conceptions or false myths which are currently proliferating around CLIL that the present chapter seeks to focus. It will address ten of these most common misguided perceptions which are plaguing the CLIL arena at present, classifying them into four core blocks (CLIL characterization, implementation, investigation, and teacher training) and employing empirical evidence stemming from two governmentally-funded research projects to debunk or confirm them. It will also signpost ways to continue pushing the CLIL agenda forward on the basis of these outcomes. The ultimate aim is to bring the metaphorical pendulum to a standstill and to have methodologically sound research be our compass for the future.

The backdrop: The projects and study

The afore-mentioned evidence stems from two governmentally-funded research projects (cf. Acknowledgements) into the effects of CLIL in monolingual communities, where making the shift towards multilingualism poses an even steeper challenge.

Objectives

The broad objective of the study has been to conduct a longitudinal CLIL evaluation and consultancy project in a monolingual context where the foreign language (English) has very little presence outside the school setting and where the main differentiating variable is the type of language learning program followed (CLIL vs. EFL). Three key metaconcerns have driven the investigation and served as cornerstones for the project. Quantitatively, it has sought to determine the impact of CLIL on English language competence (grammar, vocabulary, and the four skills), on the mother tongue (in this case, Spanish), and on the content subjects taught through the FL (and which belong to the area of Natural Sciences). In turn, from a qualitative standpoint, the study has carried out a SWOT (strengths, weaknesses, opportunities, threats) analysis into the satisfaction generated by CLIL programs for all participating stakeholders (teachers, students, and parents). All the curricular and organizational levels affected by CLIL

programs have been probed (competencies, methodology, materials and resources, evaluation, teacher training, mobility programs, workload, coordination and organization).

Research design

The study thus presents a mixed research design, as it is both quantitative and qualitative in nature. The quantitative part of the study is an instance of applied, primary, quasi-experimental research, with a pre-test/post-test control group design, to which a delayed post-test has also been added. In turn, the qualitative side of the investigation is also an instance of primary research, and within it, of survey research, as it includes interviews and questionnaires (Brown 2001). Within it, what Denzin (1970) terms multiple triangulation have been employed, specifically of the following four types:

- ***Data triangulation,*** as multiple sources of information have been consulted to mediate biases interjected by people with different roles in the language teaching context: students, parents, and teachers (and within the latter, non-linguistic area teachers, English language teachers, and teaching assistants).
- ***Methodological triangulation***, since multiple data-gathering procedures have been drawn on: questionnaires, interviews, and observation.
- ***Investigator triangulation***, due to the fact that different researchers have analyzed the open-response items on the questionnaire and interviews, written up their conclusions, and collated their findings.
- ***Location triangulation***, given that language learning data has been collected from multiple data-gathering sites: Primary Schools, Secondary Schools, and the provincial educational administration.

Sample

A total of 2,245 students (from 6th grade of Primary Education, 4th grade of Compulsory Secondary Education, and 1st grade of Baccalaureate), 333 teachers (language, content, and teaching assistants), and 595 parents have participated in the study (cf. Figure 1).

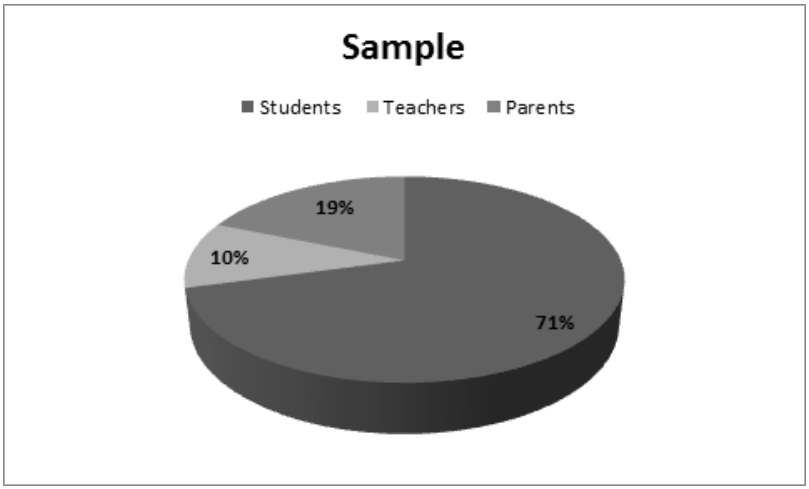

Figure 1. Breakdown of the sample

A total of 53 Primary and Secondary schools have taken part in the investigation, in 12 provinces of three of the autonomous communities in Spain with the most firmly entrenched monolingual model: Andalusia, Extremadura, and the Canary Islands. The schools have been of three types: dual-track public bilingual (with a CLIL strand and mainstream EFL group coexisting in each grade), charter non-bilingual, and private bilingual. The CLIL and non-CLIL branches have been matched for verbal intelligence, four factors of motivation and anxiety, and English level at the outset of the study to guarantee their homogeneity and, thus, comparability (this has not been done in many prior studies, thereby compromising the validity of the outcomes obtained – cf. Rumlich 2014, 2016; Verspoor et al. 2016; or Pérez Cañado and Lancaster 2017 for some instances where homogeneity *has* been ensured).

Variables

In the quantitative part of the study, three types of variables have been taken into account: *dependent*, *independent*, and *moderating* ones.

- The *dependent variables* have been the students' English language (FL) competence (grammar, vocabulary, and the four skills), the students' Spanish language (L1) competence, and the students'

level of mastery of the contents of those subjects implemented through CLIL.
- In turn, the *independent variable* corresponds to the CLIL programs implemented in the different types of schools.
- Finally, as *moderating variables*, the following have been considered:
  1. Verbal intelligence
  2. Motivation
  3. Socioeconomic status
  4. Gender
  5. Type of school (public – private – charter)
  6. Setting (urban – rural)
  7. Province
  8. Exposure to English outside school
  9. Time of exposure to English a formal school context

In turn, within the qualitative investigation, a series of *identification (subject) variables* have been contemplated, related to the individual characteristics of the three different stakeholders who have been polled through the questionnaires. The modulating effects exerted by these variables on the aspects considered within the teacher, parent, and student questionnaires have been gauged by determining the existence of statistically significant differences within cohorts.

Instruments

Three main types of instruments have been employed for information-gathering: tests (verbal intelligence, motivation, L1, subject content, and English language competence) and direct observation, which Brown (2001, 3) classifies within *non-survey tools;* and semi-structured interviews (individual and focus group) and questionnaires (self-administered and group-administered), which Brown (2001) subsumes within *survey tools*. All of them have been designed and validated via a double-fold pilot process: the expert ratings approach and a pilot study with a representative sample of 264 subjects of the same traits as the target respondents. The motivation and verbal intelligence tests were administered in November 2014; the questionnaires, interviews, and classroom observation were all carried out in March-April 2015; the English, L1, and content tests were applied in May-June 2015; and the delayed post-test was administered six months later, in December 2015, when the same students were in the first grade of Baccalaureate.

Results: Common CLIL (mis)conceptions

The variables in the study have thus been tightly controlled and the results are empirically solid, as they overcome the chief deficiencies found in prior research (cf. Pérez Cañado 2012, Pérez Cañado and Ráez Padilla 2015, and Pérez Cañado 2016 for an overview of these shortcomings and how this study supersedes them). These outcomes will now be employed to counter ten of the most common CLIL (mis)conceptions which are plaguing attempts to characterize, implement, and investigate CLIL. Direct quotes will be offered from recent opinion articles to illustrate each myth, empirical evidence will be furnished to debunk or confirm them, and ways forward will be offered in each area on the basis of those findings.

(Mis)conceptions on CLIL characterization

"The only thing that's bilingual in our schools is the plaque on their doors."

This initial misconception affects a burning issue currently affecting CLIL: its characterization. Most schools across Europe which are implementing this approach explicitly acknowledge it via a plaque which identifies them as a "bilingual center". However, many stakeholders (teachers, parents, or superintendents, among others) consider that these schools are not truly bilingual because it is impossible for students to speak and write in the target language at the same level as in their mother tongue: *"Por mucho que lo llamen 'bilingüe' es falso, porque la realidad es que es imposible que un niño hable y redacte en inglés igual que en castellano"*[3]. These CLIL skeptics highlight that there is no real immersion *("no hay immersión de verdad"*[4]) and that these students speak the foreign language (FL) with a thick accent *("un fortísimo acento"*[5]). However, we contend that these critics are not up-to-speed with two key acronyms in the language teaching field (CLIL and ELF – English as a lingua franca) and

[3] "They might call it bilingual but this is false, because the reality is that it is impossible for a child to speak and write in English exactly the same as in Spanish" (our translation)
(https://www.elconfidencial.com/alma-corazon-vida/educacion/2016-09-10/colegio-no-quiere-ser-bilingue-madrid_1256910/).

[4] "There is no real immersion" (our translation)
(http://www.elperiodico.com/es/sociedad/20160107/los-colegios-bilingues-son-un-timo-4794811).

[5] "A very thick accent" (our translation)
(https://elpais.com/elpais/2015/05/13/eps/1431541076_553813.html).

that this initial misconstrued perception thus accrues from lack of information.

Indeed, although there is currently a vibrant debate vis-à-vis the vagueness, ambiguity or excessively broad scope of CLIL (Cenoz, Genesee, and Gorter 2013; Bruton 2013; Dalton-Puffer et al. 2014 - cf. Pérez Cañado 2016 for a detailed discussion stemming from the literature review conducted for the research projects), it is uncontestable that it is a "well-recognized and useful construct for promoting L2/FL teaching" (Cenoz, Genesee, and Gorter 2013, 16). CLIL is an approach to bilingual education which has clearly identifiable parameters (Ball, Kelly, and Clegg 2015) and which differentiate it from its predecessors (e.g., Canadian immersion or Content-Based Instruction). It has to begin with, a markedly European character: it is a "European solution to a European need" (Marsh 2002, 11) - the need to upgrade Europe's language standards. The language of instruction is generally not present in the students' context, its methodology involves the integration of language and content, and the language level targeted is a functional (as opposed to a native-like) competence of the language studied. This, in turn, impinges on the linguistic command of teachers (who no longer need to have a native-like mastery of the target language). The amount of exposure to the FL is also lower, as age of onset of language learning tends to be pushed back in CLIL contexts; the types of materials employed are normally adapted or originally designed, as opposed to authentic ones; and content is taken from academic subjects and not from the everyday language of communication outside the classroom.

In turn, the second acronym -ELF- has concomitantly been gathering momentum in response to the increased use and ownership of English by non-native (NN) speakers. It favors a more realistic model of linguistic instruction, where the N-NN distinction is becoming increasingly irrelevant (Ur 2011). What is now important is the instructor's level of linguistic and intercultural competence and his/her teaching ability, and not whether (s)he is a native speaker of the target language.

Thus, those who consider that CLIL is not bilingual education are clearly not familiar with the fact that there are many approaches to bilingual education (cf. Met's 1999 continuum) and that Content and Language Integrated Learning is the European one. They are also not aware of its key traits and of the fact that "the term 'bilingual' in most parts of Europe does not refer to the mastery of a second language at native-like proficiency, but it describes a partial foreign language competence" (Brüning and Purrmann 2014, 315). As Mearns (2012, 176) has put it, "Unlike the case of EFL approaches, the main goal of CLIL is

to produce competent and confident target language users, while at the same time teaching subject content". In fact, according to Coyle (in Piquer Vives and Lorenzo Galés 2015, 89), "My vision for the future is that CLIL, as a concept or term, won't even be used". It will be so firmly embedded in mainstream education that it will become invisible, something which is considered positive since it will mean the onus is placed on general language competencies. It consequently becomes incumbent on those who consider that CLIL schools are not bilingual schools to be up-to-speed with its definition, together with that of ELF, in order to avoid using the term loosely. Perhaps labeling schools "CLIL" rather than "bilingual" centers would force stakeholders to become familiar with the term and would help attune expectations to reality, thereby debunking this initial myth.

(Mis)conceptions on CLIL implementation

The second group of misconceptions affects another aspect which is currently generating considerable controversy: CLIL implementation.

> *"It's impossible to guarantee the homogeneity of CLIL and non-CLIL groups."*

This initial statement points to the well-documented level of self-selection in CLIL strands. As Bruton (2013, 2015) has underscored, CLIL groups normally comprise the more motivated, intelligent, and linguistically proficient students. CLIL is thus held to lead to segregation, social discrimination, and disintegration, with non-CLIL learner being considered "remnants" (Bruton 2013, 593) and non-CLIL groups, the refuge of slow learners *("el refugio de los torpes"*[6]). Thus, according to Bruton (2011b, 230), it is extremely problematic "to find comparison groups, since, in non-CLIL schools, it is not permitted to select and stream state-school students".

After having devoted an entire academic year of the project to guaranteeing the homogeneity of CLIL experimental groups and EFL control groups, our data allows us to refute the afore-mentioned claims. The CLIL and mainstream EFL branches *can* and *have* been matched in terms of verbal intelligence, four factors of verbal intelligence, and English level in the 53 schools with which we have worked. This has been done across the board, in both Primary and Secondary Education, and in

[6] http://anterior.ultimocero.com/blog/la-s%C3%A1bana-perforada/la-plaga-del-biling%C3%BCismo

rural and urban settings. In all the schools considered, despite not working under perfectly controlled experimental conditions, but with a randomly assigned sample, the CLIL and non-bilingual groups were perfectly homogenous from the outset on all the aspects considered[7] (cf. Table 1).

Aspect	Group	Mean	Standard deviation	*p* value
Verbal intelligence	Non-CLIL	12,19	4,65	0,911
	CLIL	12,33	4,01	
Motivation factor 1: Desire to work	Non-CLIL	18	2,43	0,422
	CLIL	15	1,22	
Motivation factor 2: Anxiety	Non-CLIL	23	1,85	0,475
	CLIL	21	1,80	
Motivation factor 3: Lack of interest	Non-CLIL	25	1,89	0,405
	CLIL	20	2,31	
Motivation factor 4: Self-demand	Non-CLIL	23	2,06	0,101
	CLIL	18	1,32	
English grade (pre-test administered)	Non-CLIL	4,27	0,81	0,352
	CLIL	4,64	1,06	

Table 1. Homogeneity of the groups in a sample school

Thus, since treatment and comparison groups can be matched even under quasi-experimental conditions, all studies aiming to gauge the possible differences between them should guarantee homogeneity from the

[7] The EFAI (*Evaluación Factorial de las Aptitudes Intelectuales*) battery (Santamaría, Arribas, Pereña, and Seisdedos 2016) was used to measure verbal intelligence, the MA questionnaire (Pelechano 1994) was employed for motivation and anxiety ones, and an originally designed and validated English test was used to measure language competence (cf. Pérez Cañado and Lancaster 2017).

very outset, something which both prior studies (cf. Bruton 2011a, 2011b and Pérez Cañado 2012 for an overview) and recent investigations (e.g., the one conducted by Anghel, Cabrales, and Carro 2016, which has caused great alarm in the Spanish press) have not done, thereby seriously compromising the validity of the outcomes obtained.

With CLIL increasingly being mainstreamed program-wide (in Spain, for instance, we are now moving from CLIL sections which co-existed with EFL strands to fully bilingual schools), ensuring that this approach works for over- and under-achievers alike should figure high on the future CLIL agenda. The onus will now be on catering to diversity so that all types of students acquire both language and content successfully (cf. Madrid and Pérez Cañado 2018).

"CLIL only works with the elite."

Directly related to the previous misconception is this third one. Strong claims have been made for the elitist nature of CLIL. As Bruton (2011b: 523) underscores, "there is every reason to believe some students may be prejudiced by CLIL", as "rather than increasing the equality of opportunity, CLIL in certain contexts is subtly selecting students out" (Bruton 2013, 593). In this sense, Paran (2013, 331) upholds that CLIL "probably works best in elite contexts" and that "implicitly, CLIL is likely to be elitist and cream off certain students" (Bruton 2013, 595).

Pedagogical practice in countries like Spain renders these statements invalid. In the three autonomous regions where our study was conducted, for instance, there is no imposed streaming. It is the parents' and students' choice to decide which methodology (CLIL or traditional FL-driven tuition) the learner follows, something which Lorenzo, Casal, and Moore (2011, 453) consider has favored –and not hindered- egalitarianism: "In Andalusian policy-making, equality has been interpreted as free choice". In addition, CLIL has officially embedded itself in mainstream education, since there are no longer CLIL and non-CLIL groups in public schools: bilingual education is being applied program-wide up until the end of Compulsory Secondary Education (CSE). Thus, CLIL is affording all students, irrespective of social class or economic consideration, the opportunity to learn bilingually, something which is promoting –rather than impeding- social inclusion and equity.

In turn, empirical evidence from our study has also confirmed that CLIL is not only working with the elite. The 53 schools with which we worked were grouped in terms of socioeconomic status (SES) (the parents' level of studies was taken as a proxy for this variable) and those with the highest and lowest levels were compared. As can be observed in Table 2

(appendix), socioeconomic status does not yield statistically significant differences in Primary Education, but extremely marked ones at Secondary level, where the parents' sociocultural level is crucial. However, as can be ascertained, this is the case with both bilingual and non-bilingual students alike, and not only for the CLIL learners. Socioeconomic status is thus an important variable in students' language competence across the board and not exclusively for bilingual strands.

The question of elitism was also examined from another perspective in the study. A public high school was selected from the sample with CLIL and EFL branches, in a rural context (a small town in the province of Granada), in a socioeconomically deprived area, with low sociocultural levels on the part of the parents, and with a majority of students of gypsy ethnicity. Homogeneous CLIL and non-CLIL groups were compared and statistically significant differences emerged on absolutely all the linguistic aspects considered in favor of the CLIL group (cf. Table 3).

Aspect	**Group**	**Mean**	**SD**	**Cohen's d**	***p* value**
Use of English	Non-CLIL	11,86	6,46	2,31	0,001
	CLIL	30,68	9,94		
Vocabulary	Non-CLIL	5,57	2,89	1,67	0,001
	CLIL	10,59	3,11		
Listening	Non-CLIL	2,03	1,34	1,93	0,001
	CLIL	5,05	1,81		
Reading	Non-CLIL	1,70	1,26	1,56	0,001
	CLIL	3,91	1,57		
Total	Non-CLIL	20,86	9,68	2,50	0,001
	CLIL	50,23	14,00		

Table 3. FL results in a rural high school with low SES

Thus, these outcomes reveal that CLIL has the potential to work even in the most socioeconomically deprived contexts, where students would not have previously had access to bilingual education had it not firmly embedded itself in public contexts (cf. Pérez Cañado in press for a detailed discussion on elitism and CLIL).

The way forward on this score lies, according to this study (cf. Ráez Padilla 2018), in stepping up parental support, especially for those parents

who have a lower level of studies. SES has a clear bearing on academic results, as we have ascertained, so didactic guidance for those parents who are more disenfranchised acquires a particularly sharp relief in order to empower them to a greater extent in their children's education.

(Mis)conceptions on CLIL research

This leads us to the third set of misconceptions, which affect another very hot topic, namely, that of CLIL research.

> *"There has been no reflection on or evaluation of the pros and cons of bilingual projects."*

This categorical claim, made in a recent national newspaper in Spain[8], once again stems from misinformation and from not being up-to-date with the current research panorama. There have been numerous SWOT analyses conducted across Europe into the functioning of CLIL programs. In Europe, Czura, Papaja, and Urbaniak (2009), Infante, Benvenuto, and Lastrucci (2009), or Brüning and Purrmann (2014) particularly stand out. There is an even greater number of studies in Spain, a country which is particularly conspicuous on the CLIL research map (Fernández Fernández et al. 2005; Pena Díaz and Porto Requejo 2008; Fernández and Halbach 2011; Durán- Martínez and Beltrán-Llavador 2016). To take a case in point, Andalusia, one of the communities where the study was conducted, has had a trajectory of constant stocktaking in response to ongoing implementation in order to troubleshoot problematic areas and keep CLIL implementation on track. Qualitative evaluations of the bilingual program in this region have been carried out ever since it started to be experimentally tested in 1998 (Lorenzo et al. 2009; Rubio Mostacero 2009). Subsequent studies (Cabezas Cabello 2010; Lancaster 2016) have focused on increasingly representative cohorts, and our own qualitative study has worked with a total of 2,654 respondents (1,763 students, 307 teachers, and 561 parents).

This ongoing program evaluation has revealed that considerable headway has been made in the implementation of the Andalusian Plan for the Promotion of Plurilingualism in the twelve years since it became a full-fledged plan (2005) and which has been updated by the PEDLA[9] (2017). Participating teachers' linguistic level has been pushed up; there has been

[8] https://www.elconfidencial.com/alma-corazon-vida/educacion/2016-09-10/colegio-no-quiere-ser-bilingue-madrid_1256910/

[9] Plan Estratégico de Desarrollo de las Lenguas en Andalucía

a move towards more communicative, student-centered methodologies; evaluation is increasingly diversified, formative, and holistic; and stakeholders have greater familiarity with the official plan and its theoretical underpinnings (cf. Pérez Cañado 2018a for the full results). Thus, this points to the need to continue providing updated evidence through ongoing stocktaking in different contexts, since what may be happening in one autonomous community cannot be extrapolated to another one where the CLIL implementation process may be envisaged differently due to the decentralization of Spanish educational law and to the diverse types of applications which CLIL is having across our continent.

> *"What really works is teaching content and language separately, increasing the number of hours devoted to EFL classes."*

This next false myth is extremely widespread at present in the CLIL scenario. Many are those who contend that, in order to improve language learning standards, the key lies in increasing the number of hours devoted to formal, language-driven instruction rather than teaching content through that language for it to be picked up unconsciously. This can be done either in class (by reducing the number of hours devoted to subject teaching in the mother tongue and assigning them to English as a foreign language) or outside it (through traditional language academies): *"¿por qué no se añade alguna hora más al inglés? Es más saludable para el Conocimiento del Medio, de las mates o de la Plástica, que les quiten una hora a la semana que que se imparta en una lengua semidesconocida"*[10].

These claims impinge on two pivotal aspects of language teaching: *exposure* and *integration*. The first of these was examined in our study by means of a questionnaire based on Sundqvist and Sylvén (2014), which strived to determine whether CLIL was encouraging students to seek out more extramural exposure to the language as well. The amount of hours bilingual and non-bilingual students devoted weekly to activities such as reading (books or magazines) in English, watching movies or TV series in original version, using the Internet or playing videogames in the target language, listening to songs, or going to academies was gauged. The results revealed statistically significant differences in favor of CLIL students both in Primary and Secondary Education, with the differences

[10] "Why don't we add more hours of EFL? It's healthier for Science, Math, or Arts & Crafts to have fewer hours a week than to teach them in a practically unknown language" (our translation) (http://anterior.ultimocero.com/blog/la-s%C3%A1bana-perforada/la-plaga-del-biling%C3%BCismo).

being particularly conspicuous in this subsequent educational stage (cf. Table 4).

Educational level		Group	Mean	SD	Rosenthal's R	*p* value
Primary Education	Hours/ week of extramural exposure	Non-CLIL	10,15	18,59	0,11	0,001
		CLIL	12,13	22,74		
Compuls. Secondary Education	Hours/ week of extramural exposure	Non-CLIL	17,64	32,53	0,24	0,001
		CLIL	22,19	26,75		

Table 4. Number of hours of extramural English per week according to educational level

In turn, the question of integration was addressed by comparing students with exposure to language in a meaningful, authentic, communicative way (public bilingual learners who did not go to academies and thus only received CLIL teaching) with those who experienced EFL instruction in a more formal, conscious, explicit way (public non-bilingual students who clocked in extra hours of EFL teaching through academies, but had no CLIL). The results are eloquent. CLIL learners outstrip their EFL counterparts especially in the long term, when they are at the end of CSE (cf. Table 5, appendix) on absolutely all the linguistic aspects considered.

When both CLIL and non-CLIL students with increased exposure through academies were contrasted, statistically significant differences surfaced in favor of the former even at the Primary Education stage (cf. Table 6, appendix).

Thus, the broader take-way here is that the more exposure to the language (be it implicit or explicit), the better. However, when comparing CLIL and EFL, it is the former which appears to yield superior outcomes. Thus, the integration of language and content through CLIL, where exposure to the language is unconscious, meaningful, and authentic, is more successful than learning through EFL-driven sessions (cf. Lancaster 2018 for a detailed rendering of these outcomes).

To continue pushing the CLIL agenda forward, given the positive effects of increased exposure to the language, it would be desirable to step up extramural exposure in monolingual communities, for instance, through more access to English on TV or in cinemas. In countries like Spain, everything is dubbed and recent studies (e.g., Talaván Zanón 2013) have evinced that those countries which subtitle (e.g. The Netherlands or Portugal) have higher language levels than those who dub (e.g. Spain or Italy).

> *"CLIL programs are a total disaster: children end up knowing no English whatsoever."*

From a quantitative stance, we now move on to examine three key beliefs which many stakeholders are harboring vis-à-vis the effects of CLIL on L2, L1, and content learning. This first one pertains to whether CLIL is promoting or hindering foreign language learning. According to Marías (2015) or Bruton (2011b, 523), it is not: (…) a closer look at some of the research conducted into CLIL and content learning in an L2 suggests that such initiatives do not necessarily produce better results than the alternatives they compete with, (…)."

Our updated research evidence, however, suggests otherwise. Homogeneous CLIL and non-CLIL experimental groups were compared at the end of Primary Education (6th grade –ages 11-12) and Compulsory Secondary Education (4th grade – ages 15-16) in terms of use of English, vocabulary, and the four skills. The latter students were also administered a delayed post-test six months later, when they were in the first year of non-compulsory Secondary Education (Baccalaureate), when CLIL had been discontinued and was thus not being experienced by either of the cohorts.

The results were eloquent: at the end of Primary Education, bilingual students outstripped their non-bilingual counterparts on all the aspects considered, albeit with low effect sizes for listening, reading, and use of English (cf. Table 7). In fact, if these results are qualified in terms of type of school, no statistically significant differences were detected on listening between public CLIL and non-CLIL branches (p=0.361; d=-0.075), or on use of English (p=0.175; d=-0.120) and listening (p=0.310; d=0.091) between public bilingual and charter non-bilingual strands. Medium effect sizes were discerned for the remaining aspects sampled (vocabulary and the five subaspects of speaking). It thus appears that differences between the experimental and control groups are particularly marked for the productive speaking skill at this point.

Linguistic aspect	**Group**	**Mean**	**Standard deviation**	**Cohen's d**	***p* value**
Use of English	Non-CLIL	10,45	6,116	-0,462	<0,001
	CLIL	13,30	6,251		
Vocabulary	Non-CLIL	7,65	3,939	-0,619	<0,001
	CLIL	11,02	6,979		
Listening	Non-CLIL	11,30	2,614	-0,233	<0,001
	CLIL	11,89	2,405		
Reading	Non-CLIL	4,80	3,503	-0,525	<0,001
	CLIL	6,75	3,987		
Speaking (Total)	Non-CLIL	5,432	2,2796	-0,858	<0,001
	CLIL	7,426	2,3784		
Grammatical accuracy	Non-CLIL	1,014	0,5269	-0,727	<0,001
	CLIL	1,426	0,6113		
Lexical range	Non-CLIL	1,041	0,5320	-0,750	<0,001
	CLIL	1,426	0,4902		
Fluency and interaction	Non-CLIL	1,062	0,5133	-0,752	<0,001
	CLIL	1,451	0,5221		
Pronunciation	Non-CLIL	1,288	0,4403	-0,884	<0,001
	CLIL	1,672	0,4271		
Task fulfilment	Non-CLIL	1,027	0,4321	-0,941	<0,001

Table 7. FL results for Primary Education

At the end of CSE, this tendency becomes more pronounced. At this point, statistically significant differences invariably emerged in favor of the CLIL cohorts on absolutely all the linguistic aspects sampled, at extremely high confidence levels and with large effect sizes. The latter were particularly considerable for use of English and speaking, especially lexical range and task fulfillment (cf. Table 8). If type of school is again factored in, now public and private bilingual classes outstripped their non-bilingual public and charter peers across the board.

Linguistic aspect	Group	Mean	Standard deviation	Cohen's d	*p* value
Use of English	Non-CLIL	19,59	11,026	-1,160	<0,001
	CLIL	31,19	8,999		
Vocabulary	Non-CLIL	7,53	3,711	-0,940	<0,001
	CLIL	10,71	3,062		
Listening	Non-CLIL	3,65	1,749	-0,873	<0,001
	CLIL	5,05	1,464		
Reading	Non-CLIL	2,73	1,823	-0,755	<0,001
	CLIL	4,01	1,574		
Speaking (Total)	Non-CLIL	6,282	2,3228	-1,230	<0,001
	CLIL	8,836	1,7494		
Grammatical accuracy	Non-CLIL	1,214	0,5264	-1,218	<0,001
	CLIL	1,757	0,3261		
Lexical range	Non-CLIL	1,210	0,5300	-1,442	<0,001
	CLIL	1,833	0,2744		
Fluency and interaction	Non-CLIL	1,270	0,5536	-1,209	<0,001
	CLIL	1,824	0,3099		
Pronunciation	Non-CLIL	1,339	0,4159	-1,157	<0,001
	CLIL	1,762	0,2950		
Task fulfilment	Non-CLIL	1,250	0,4620	-1,482	<0,001

Table 8. FL results for Compulsory Secondary Education

Six months later, when these same students are in Baccalaureate, the effects of CLIL not only pervaded, but became even stronger. Indeed, statistically significant differences continued to be discerned in favor of bilingual streams on all the linguistic components and skills sampled, at extremely high confidence levels, and with even larger effect sizes. When qualified in terms of type of school, the outcomes evinced that the public bilingual groups still significantly outperformed the public EFL students on absolutely all the aspects considered. However, interestingly, the charter non-bilingual group was catching up, as no statistically significant differences were found between them and the public school students (cf.

Pérez Cañado 2018b for a more detailed rendering of these outcomes) (cf. Table 9).

Linguistic aspect	**Group**	**Mean**	**Standard deviation**	**Cohen's d**	***p* value**
Use of English	Non-CLIL	19,94	9,303	-1,292	<0,001
	CLIL	31,96	9,303		
Vocabulary	Non-CLIL	7,84	2,990	-1,157	<0,001
	CLIL	11,33	3,028		
Listening	Non-CLIL	3,44	1,839	-1,102	<0,001
	CLIL	5,37	1,713		
Reading	Non-CLIL	2,77	1,760	-0,868	<0,001
	CLIL	4,20	1,597		
Speaking (Total)	Non-CLIL	5,900	1,9974	-2,671	<0,001
	CLIL	9,378	0,8870		
Grammatical accuracy	Non-CLIL	1,100	0,4757	-2,204	<0,001
	CLIL	1,837	0,2580		
Lexical range	Non-CLIL	1,125	0,4552	-2,626	<0,001
	CLIL	1,918	0,2128		
Fluency and interaction	Non-CLIL	1,200	0,4974	-2,130	<0,001
	CLIL	1,898	0,2278		
Pronunciation	Non-CLIL	1,275	0,3432	-2,018	<0,001
	CLIL	1,827	0,2405		
Task fulfilment	Non-CLIL	1,200	0,4104	-2,395	<0,001

Table 9. FL results for Baccalaureate

Thus, these results clearly shoot down the claim that CLIL programs are "a total disaster" (Marías 2015); quite on the contrary, in our study, they have proved to be a complete success story. CLIL students outstrip their EFL counterparts on L2 achievement, with long-term effects being especially visible at the end of CSE. The effects of CLIL furthermore pervade, although they seem to be mitigated for certain types of school if these programs are discontinued. Thus, maintaining CLIL instruction even

at the non-compulsory Secondary Education stages would be highly advisable in order to secure higher FL levels.

"*CLIL detrimentally impacts L1 competence."*

Another point of contention vis-à-vis the impact of CLIL affects the mother tongue. Since exposure to it is decreased as foreign language presence is pushed up through content teaching, there are concerns for the detrimental impact of CLIL on L1 competence *("empobrece el contenido de la lengua madre"*[11]). Our study administered Spanish language competence tests (corresponding to the obligatory subject of Spanish Language and Literature) at the end of Primary and Compulsory Secondary Education and the results for both educational stages were identical: public bilingual strands performed either better than or just as well as their non-bilingual public and charter counterparts, respectively. When non-bilingual public and charter schools were compared, the former invariably outperformed the latter (something which is in keeping with the findings of Madrid and Hughes 2011) (cf. Table 10). Thus, the broader take-away from these outcomes is that bilingual education does not curtail L1 competence. In order to advance in the CLIL agenda, it would be interesting to replicate this study in plurilingual schools, which are a growing trend in countries like Spain, where an L3 (most commonly, French) is now being introduced through CLIL. Such future investigations will help shed light on whether the results of our study continue to bear out in these novel contexts (cf. Pérez Cañado 2018c for a full rendering of these outcomes).

[11] "It impoverishes the content of the mother tongue" (our translation) (http://www.hoy.es/extremadura/pide-cree-bilinguismo-20171030190615-nt.html).

Educational level	Type of school / Group	Mean	Standard deviation	Cohen's d	*p* value
Primary Education	Public school non-CLIL	6,61	1,680	-0,48	<0,001
	Public school CLIL	7,39	1,575		
	Charter school non-CLIL	7,49	1,589	0,06	0,559
	Public CLIL	7,39	1,575		
	Public non-CLIL	6,61	1,680	-0,53	<0,001
	Charter non-CLIL	7,50	1,622		
Compulsory Secondary Education	Public school non-CLIL	5,50	1,652	-0,60	<0,001
	Public school CLIL	6,54	1,747		
	Charter school non-CLIL	6,73	1,803	0,10	0,291
	Public CLIL	6,54	1,747		
	Public non-CLIL	5,50	1,652	-0,70	<0,001

Table 10. L1 results for Primary Education according to educational level and type of school

> *"CLIL improves foreign language learning at the expense of content, which is watered down."*

Another pressing concern affects the impact of CLIL on content learning. This area is as yet under-researched and under-examined and should thus figure prominently on the future CLIL research agenda (Lasagabaster and Ruiz de Zarobe, 2010; Cenoz, Genesee, and Gorter 2013; Paran 2013; Dalton-Puffer et al. 2014). Many voices have recently expressed their malaise with the potentially curbing effect of CLIL on subject areas. Foreign language levels are improved, they hold, at the expense of content, which is reduced or undermined: "*nada es gratis: o el aprendizaje de las asignaturas en inglés se ve perjudicado, o el aprendizaje del idioma inglés*

no es suficiente"[12]; "*No se puede intentar ayudar a los alumnos a mejorar un aspecto de su conocimiento machacando otros"*[13]. In order to determine the credibility of these assumptions, our study focused on student performance in subjects within the field of Natural Science taught through English in both 6th grade of Primary Education and 4th grade of CSE.

At the end of the Primary Education stage, no statistically significant differences were detected between public bilingual strands and both public and charter non-bilingual ones; thus, they performed equally well on content subjects taught through the FL. However, at the end of CSE, when the learners have had ten years of exposure to CLIL instruction, the situation changes considerably. At this point, CLIL streams significantly outperformed their control group counterparts (in both public and charter contexts) (cf. Table 11).

Educational level	Group	Mean	Standard deviation	Cohen's d	*p* value
Primary Education	Non-CLIL	7,30	1,64	-0,07	0,416
	CLIL	7,42	1,61		
Compulsory Secondary Education	Non-CLIL	6,47	1,84	-0,23	0,003

Table 11. Subject content results according to educational level and group

These outcomes clearly help defuse fears about the negative effects of CLIL on content learning: our results allow us to affirm that bilingual education does not water down subject learning in either Primary or Secondary Education. The effects of CLIL become conspicuous especially in the long term, as, at the end of CSE, CLIL students are not only not worse than the EFL cohort, but are significantly better in content learning (cf. Pérez Cañado 2018c for the more detailed results).

In order to orchestrate an adequate balance between language and content learning, their integration should become a preferential area of

[12] "Nothing is free: either content learning is hampered or language learning is insufficient" (our translation) (http://www.elmundo.es/espana/2013/12/18/52b1bcda22601d3a6d8b457f.html).

[13] "We cannot help students improve one aspect at the expense of others" (our translation) (https://www.elconfidencial.com/alma-corazon-vida/educacion/2016-09-10/colegio-no-quiere-ser-bilingue-madrid_1256910/).