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The impact of CLIL on the acquisition of L2 competences and skills in primary education

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ABSTRACT
The aim of this paper is to provide new evidence on the effectiveness of Content and Language Integrated Learning (CLIL) in the acquisition of English language competences (reading, writing, listening and spoken production and interaction) compared to traditional learning of English as a foreign language (EFL) in primary school settings. To do so, results of CLIL and non-CLIL learners enrolled in the 4th year of primary education (9-10-year-olds) were examined and contrasted. Findings showed that the only communicative competence in which differences in favour of CLIL students were significant was spoken production and interaction. However, significant differences have also been detected in the following indicators: "preparing an outline before writing" (writing), "understanding space-time relations" (reading), and "global comprehension" and "identification of details" (listening). The confined effectiveness of CLIL may be due to the limited time of extra exposure to English, the young age of participants and the absence of any selection process for CLIL learners.

KEYWORDS: CLIL, effectiveness, language competences, primary education.

1. INTRODUCTION

Bilingual programmes consisting of teaching curricular areas by means of a foreign language are regarded as being innovative and effective methodologies for learning languages. The positive outcomes of the pioneering Canadian and American immersion programmes led to their gradual implementation in Europe, where the spread of Content and Language Integrated Learning (CLIL) programmes is being supported by European Union institutions, due to the role learning foreign languages have in building a European identity and promoting economic development and European cohesion and integration.

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The main advantage of the CLIL methodology as opposed to traditional EFL lessons is that CLIL students "learn to use language and use language to learn" (Mehisto, Marsh & Frigols, 2008: 26), focusing, thereby on language and communication, since integrated learning entails a two-fold focus: meaning and form. Thus, CLIL methodology is based on communication, providing a rich and varied input (different language functions, different genres, academic language, classroom language…) and fostering students' involvement and production of comprehensive output (Swain, 1985). Moreover, CLIL is also characterised by its increased attention to students' development of learning and cognitive strategies as a means of compensating for the double challenge implied in learning new content through a foreign language (Halbach, 2009).

It is claimed that this multi-faceted approach improves the level of proficiency the students have in English, and there are a great number of studies in which the benefits of CLIL have been reported, although these are mainly focused on a secondary school context, "while primary settings remain unexplored" (Bret Blasco, 2011: 10). Furthermore, there are aspects whose findings are not conclusive, such as the ranking of the language competences which are favourably affected or unaffected by CLIL. Hence, in this paper, new evidence for the debate is provided by means of data analysis on the acquisition of communicative skills and subskills of 9-10-year-old CLIL and non-CLIL primary learners.

2. LITERATURE REVIEW

2.1. Benefits of CLIL methodology

Research supports the benefits of integrated learning in the acquisition of the target language and shows CLIL students possess a significantly higher mastery of the foreign language compared to their non-CLIL partners (Admiraal, Westhoff & de Bot, 2006; Alonso, Grisaleña & Campo, 2008; Jiménez Catalán & Ruiz de Zarobe, 2009; Loranc-Paszylk, 2009; Lorenzo, 2010; Lorenzo, Casal & Moore, 2009; Navés, 2011; Navés & Victori, 2010; Pérez Cañado, 2011; San Isidro, 2009, 2010; Várkuti, 2010). CLIL learners even score as well or higher than non-CLIL students who are one, two and even three years above them (Lasagabaster, 2008; Navés, 2011; Navés &Victori, 2010).

These successful results in the acquisition of the foreign language stem from the fact that CLIL programmes provide not only more exposure to the foreign language, but also a higher quality of this exposure, as CLIL promotes more naturalistic learning than traditional EFL lessons because CLIL "replicates the conditions to which infants are exposed when learning their first language" (Mehisto, Marsh & Frigols, 2008: 26). In this sense, the focus on content provides an aim for language use (Dalton-Puffer, 2007) and reduces anxiety

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(Jiménez Catalán & Ruiz de Zarobe, 2009: 82), thus creating safer learning and participation environments.

Furthermore, initial concerns about the deleterious effect CLIL has on the assimilation of content were rapidly calmed thanks to studies showing that teaching subjects by means of a foreign language does not hinder the acquisition of content (Badertscher & Bieri, 2009; de Jabrun, 1997; Housen, 2002; Jäppinen, 2005; Seikkula-Leino, 2007; Stohler, 2006; Van de Craen, Ceuleers, Lochtman, Allain & Mondt, 2007) and there is even evidence of more effective learning of content in CLIL contexts (Bergroth, 2006; Grisaleña, Campo & Alonso, 2009).

These findings suggest that the double cognitive effort of learning content through a foreign language makes CLIL students more effective learners (de Jabrun, 1997) because "linguistic problems, […] often prompt intensified mental construction activity […], resulting in deeper semantic processing and better understanding of curricular concepts" (Dalton-Puffer, 2008: 143). Mental construction, scaffolding, development of lower and higher order thinking skills (LOTS and HOTS), student-centred learning, and attention to diversity and multiple intelligences in the classroom are all cornerstones in CLIL methodology. Not surprisingly, cognition constitutes one of the four building blocks of CLIL together with communication, content and culture according to the 4c's framework (Coyle, Hood & Marsh, 2010: 41).

The integration of communication, content, cognition and culture in the CLIL classroom and its enriching methodology are conducive to the development of synergies which can explain the potential the integrated curriculum has to foster motivation (Coyle, 2006), creativity (Baetens Beardmore, 2008), emotional competence (Nieto Moreno de Diezmas, 2012), social inclusion, egalitarianism, gender mainstreaming, school development (Marsh, 2002), episodic and semantic memory and, in the long term, protection against the symptoms of dementia (Bialystok, Craik & Freedman, 2007).

2.2. Affected and non-affected language competences and skills by CLIL

Although there is a growing body of research that shows the many benefits of the CLIL approach, there are still some aspects that require further investigation, such as the most and least benefited skills in the target language. Research on Canadian immersion consistently shows that bilingual students acquire a native command of L2 comprehension (listening and reading) whilst their progress in expression (speaking and writing) is more limited (Cummins & Swain, 1986; Genesee, 1987, 1991). Nevertheless, it is likely that this dichotomy between receptive and productive competences may not be extrapolated to CLIL contexts, mainly because of differences in methodological design, since research on Canadian immersion compares immersion students to natives, while the aim of investigations on CLIL is testing

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the efficiency of these programmes compared to traditional EFL lessons and, thus, the control group is always made up of EFL students.

Thus, Dalton-Puffer (2007, 2008) lists receptive skills, vocabulary, morphology, creativity, fluency and quantity, and emotive and affective outcomes as areas that are positively affected by CLIL. As competences unaffected by CLIL, the author cites syntax, writing, informal language, pronunciation and pragmatics. However, there is evidence that CLIL has had a positive effect on lexical richness in writing tasks (Jiménez Catalán, Ruiz de Zarobe & Cenoz, 2006) and in speaking (Bret Blasco, 2011; Hüttner & Rieder-Bünemann, 2007; Lasagabaster, 2008; Ruiz de Zarobe, 2008), which are both productive skills, while in listening, which is a receptive skill, the benefits are not so clear-cut (Lasagabaster, 2008; Navés, 2011).

Ruiz de Zarobe (2011: 145, 146) makes a review of further studies on CLIL and develops a new list of areas benefited by CLIL including reading, listening, receptive vocabulary, speaking (fluency), writing (fluency and lexical and syntactic complexity), some morphological phenomena, and emotive and affective outcomes. Listening would be included in this group although the author deems further research would be necessary to confirm the progress made in this competence. On the other hand, the areas unaffected by CLIL would include productive vocabulary, informal language, some aspects of writing (accuracy, discourse skills), pronunciation and some aspects of syntax.

In turn, Dalton-Puffer (2011) once again looked at recent research in the field and concluded that the most noteworthy breakthrough CLIL has made is in the mastery of oral production (a productive skill), and additionally, analysed positive outcomes on another productive competence: writing, stressing the effectiveness of CLIL in some areas such as the use of more complex vocabulary and morphosyntactic structures.

As a result, rather than debating which competences are most benefited, we should concern ourselves more with which areas or subskills have been most positively affected, because, even with the most favourably affected skills, not all the linguistic aspects are developed to the same extent. For example, regarding oral production, although CLIL has a positive impact on some facets of this, such as self-confidence (Dalton-Puffer, 2008), fluency (Bret Blasco, 2011), morphology, syntactic complexity (Lázaro Ibarrola, 2012) and micro-level features of the narrative (Hüttner & Rieder-Bünemann, 2007), there are other aspects such as pronunciation, and particularly degree of foreign accent, which are not affected by this methodology (Dalton-Puffer, 2011; Gallardo del Puerto, García Lecumberri & Gómez Lacabex, 2009).

On the other hand, most studies on CLIL have been carried out in a secondary school setting, and further research would be needed to shed light on the areas whose findings are not conclusive (Escobar Urmeneta & Sánchez Sola, 2009; Pérez Cañado, 2011; Sierra, Gallardo del Puerto & Ruiz de Zarobe, 2011; Van de Craen, Ceuleers, Lochtman Allain & Mondt, 2007) and to determine the positive effects CLIL has on younger learners.

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3. THE STUDY SETTING: THE EUROPEAN SECTIONS OF CASTILLA-LA MANCHA

This study was based in Castilla-La Mancha, a monolingual autonomous region located in the centre of Spain. Although there had been some previous bilingual programmes with second and heritage languages in Spain, it was throughout the first decade of the 2000s when different regulations introduced CLIL for the learning of foreign languages at school. For example, the Basque Country launched its plurilingual programme in 2003, followed by La Rioja, Madrid and Extremadura in 2004, Andalusia and Castilla-La Mancha in 2005, and Castilla y León in 2006. The most common denominations of CLIL programmes are European Sections, Bilingual Sections and Bilingual Centres, and they are characterised by diversity.

The European Sections were introduced in Castilla-La Mancha by means of Order 07/02/2005 and subsequent amendments (Order 13/03/2008). A bilingual programme had been implemented in the region prior to these dates by means of the agreements signed in 1996 between the British Council and the MEC (Spanish Ministry of Education), which gave rise to the creation of 14 bilingual schools. Nevertheless, the creation of the European Sections in 2005 by the local administration was an important milestone, since these programmes enabled CLIL to be progressively implemented throughout the region, and nowadays it has been set up in more than 300 educational establishments.

The implementation of integrated learning in Castilla-La Mancha has led to significant progress in the teaching and learning of foreign languages, in particular, English, which is the vehicular language of most European Sections in this region of Spain. CLIL has generated unprecedented interest among families, schools and teachers, and there is a growing demand for training by in-service teachers and by future teachers to improve their mastery in foreign languages and in CLIL methodology.

The most important features of the European Sections in primary education in Castilla-La Mancha are summarised in Table 1 below:

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Number of subjects taught by means of a foreign language	At least two non-language subjects. The subjects most frequently taught by means of English are science, art and music.
Extra CLIL exposure to the target language	At least 50% of the lessons of each subject.
CLIL groups in every year	All groups in every year are enrolled in the CLIL programme. CLIL programmes at primary education are comprehensive, egalitarian and non-selective.
Teacher training	A B2 level is required to receive a bonus. Content subjects are often taught by EFL teachers.
School access to CLIL programmes.	The procedure for the inclusion of new educational centres in this programme is regulated by the government by means of an official call and subsequent selection of projects presented by the applicant schools. The outline of the CLIL programme that each school is committed to develop is established in the "Singular Commitment".
Student access to bilingual schools	General rules of the admission procedure common to all schools (proximity of home to school, siblings enrolled at the school, income, etc.). The regulation forbids any selection of students based on linguistic or academic merits.
Support of educational administration	The administration assumes responsibility for management of resources and teacher-training, including stays abroad.

Table 1. Features of European Sections of Castilla-La Mancha.

Although CLIL programmes have also been put into practice in secondary schools, we have focused on the specific features of its implementation in primary schools, which is the educational level on which our study is based, and although both levels share the same regulation, there are some variations in CLIL implementation in primary and secondary schools. In primary education, all students take part in the CLIL programme when they enrol in a school which has a European Section feature. In contrast, there is usually only one bilingual group per year in the European Sections of secondary schools and, as a result, it is easier for struggling students to drop out of CLIL and continue more traditional programmes at the same establishment. Moreover, secondary students are more aware of their abilities and motivations when deciding whether to enrol on a CLIL programme, and because of this, CLIL learners may be inadvertently selected in secondary school.

Finally, it must be added that, although CLIL programmes in Castilla-La Mancha have to date been running for 10 years, there is no empirical data as regards the outcomes of CLIL students in this autonomous region, except for emotional competences and learning to learn competence in CLIL secondary school students (Nieto Moreno de Diezmas, 2012, 2016), and the issue of teacher training (Fernández Cézar, Aguirre Pérez & Harris, 2009, 2013). This situation is illustrated in the publication *CLIL in Spain* (Lasagabaster & Ruiz de Zarobe, 2010), in which implementation and research on CLIL in Castilla-La Mancha is not mentioned.

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4. RESEARCH QUESTIONS

The following research questions are posed in this study:

1. Is the effectiveness of CLIL in the acquisition of the English language evident in 4th year primary school students?
2. Which are the competences and skills most positively affected by CLIL for 4th year students?

If we consider the aforementioned literature, in which significant differences in favour of CLIL students are reported, significantly higher results would be expected for 4th year primary school students enrolled in CLIL programmes. However, the participants in the review studies were mostly secondary school students. In such a setting, the access students have to CLIL programmes is often conditioned by their level in the target language and, hence, their English proficiency is already higher before enrolling in CLIL (Admiraal, Westhoff & de Bot, 2006; Bruton, 2011; Grisaleña, Campo & Alonso, 2009; Lasagabaster, 2008; San Isidro, 2010). These contextual differences can presumably affect the results initially expected.

Regarding the second research question, the CLIL methodology was expected to have a wide-ranging impact, depending on the different competences and skills assessed, as the pertinent literature consistently shows. In this sense, we also expected our results would be in line with previous research in which there was an implication that the skills and areas most favourably affected by CLIL were reading, receptive vocabulary, speaking (fluency), writing (fluency and lexical and syntactic complexity), and to a lesser extent, listening (as results in this competence have not been conclusive in former studies).

5. METHOD

5.1. Participants and instruments

The data analysed in this study were collected during a Diagnostic Assessment of the Educational System of Castilla-La Mancha. The tests were carried out throughout a three-year period. In the first year, the skill of writing was evaluated; in the second year, oral production and interaction were tested; and in the third year, skill tests for reading and writing were made.

The participants were 4th year primary school students, whose ages ranged between 9 and 10. The sample was the census of all schools in Castilla-La Mancha. The participants were divided into two cohorts: 1) the experimental group, consisting of CLIL students enrolled in European Sections, and 2) the control group (non-CLIL group), composed of students following only traditional English lessons. The difference in the number of

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participants of the CLIL and the non-CLIL groups was due to the fact that the data came from the census of primary students of Castilla-La Mancha in year 4, and by the time the study was carried out only about 1 out of 10 students in Castilla-La Mancha was enrolled in CLIL programmes. Both groups studied English in infant education (270 hours) and in primary education (450 hours). The CLIL group also received on average 250 hours in total of extra exposure to English by means of CLIL since the 1st year of primary school. Table 2 below shows the number and age of students who took the tests for each of the competences:

TEST	COMPETENCE	NUMER OF PARTICIPANTS		AGE
		CLIL	NON-CLIL	
"My favourite animal"	Writing	1,980	18,061	9-10
"Choose a new bedroom"	Oral production and interaction	2,110	19,187	9-10
"The football match"	Reading	2,918	17,459	9-10
"Wash your hands"	Listening	2,840	17,143	9-10

Table 2. Tests, competences, number and age of participants.

As shown in Table 2, four tests were taken. In the reading test, students had 30 minutes to read an email containing 51 words and select the correct option for the six tasks assessed. In the listening test, students also had 30 minutes to read the tasks, to watch a video twice about hygiene habits lasting 1.41 minutes (132 words) and to answer the six questions in the tasks questionnaire. For the writing test, students had 30 minutes to carry out the two tasks (preparation of an outline and the writing of an article) and they could use the dictionary. As for the oral production and interaction test, students had 10 minutes to observe the scenario (a picture of two different bedrooms), make their choice, write it down and justify it. Then, in groups of two or three they had to explain and discuss their choices for another 10 minutes. The interactions were taped on video, so assessment criteria could be applied.

Tests were organised around four elements: 1) a scenario, 2) a tasks questionnaire, 3) a system of indicators, and 4) a set of assessment criteria. The scenario provided a real and significant context and worked as an initial stimulus from which knowledge and skills could be mobilised. The scenario for "My favourite animal" was an article for the school newspaper; in "Choose a new bedroom" there were images from furniture brochures; in "The football match" there was an email; and, finally, in "Wash your hands" there was a video on hygiene habits. Along with the scenario, a task questionnaire was aimed at checking how capable students were to solve problems by integrating skills, strategies, knowledge and attitudes in a real situation. There were three response formats for the tasks: short answer, with a score of 2/1/0; longer answer, with a score of 3/2/1/0; and multiple choice, with 1/0/-0.25. These tasks were related to a system of indicators, which provided evidence on the level of English acquisition in the four competences: reading, writing, listening and, finally, oral production and interaction, which have been assessed together. The indicators used for evaluating each of the skills are listed in Table 3 below:

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WRITING	ORAL PRODUCTION AND INTERACTION	READING	LISTENING
Preparing an outline	Preparing the conversation	Global comprehension	Global comprehension
Cohesion and textual typology	Active listening	Identifying main ideas	Identifying situation of communication
Clear and orderly presentation	Respect for the rules of communicative exchange	Identifying details	Identifying details
Use of written vocabulary	Interpretation and use of paralinguistic elements	Use of L1 as a reference	Interpretation of paralinguistic elements
Fluency and lexical richness	Answering questions	Understanding and use of written vocabulary	Understanding and use of oral vocabulary
Use of grammatical structures	Rhythm, intonation and pronunciation	Understanding and use of space-time relations	Understanding and use of space-time relations
Spelling	Use of oral vocabulary		
	Fluency		

Table 3. Indicators or dimensions of every language competence.

The tasks and indicators were also connected to a set of assessment criteria. There was a multiple choice format for the tasks in the reading and listening tests, and the score for correct answers was 1 point. No answers scored 0 and wrong answers -0.25. In these tests, every task was connected to one single indicator. Table 4 shows examples of the connections of indicators, tasks and assessment criteria for the reading and listening tests. Correct answers are in bold:

SKILL	INDICATOR	TASK	ASSESSMENT CRITERIA
Reading	Global comprehension	Task 2. Choose the best title: a) Watching a football film b**) Playing a football match** c) Buying new football boots d) Watching a football match	* Option b: 1 point * Options a, c, d: -0.25 points * No answer: 0 points
Listening	Identifying details	Task 3. You have to wash your hands… a) For five to ten seconds b**) For fifteen to twenty seconds** c) For more than five minutes d) For more than two minutes	* Option b: 1 point * Options a, c, d: -0.25 points * No answer: 0 points

Table 4. Example of connections of indicators, tasks and assessment criteria of reading and listening.

On the other hand, in the tests for the assessment of the productive competences of writing and of oral production and interaction there were only two tasks: 1) preparation of a production outline (written or oral) and 2) production of a text (written or oral). This time,

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several indicators were related to a single task. For example, six indicators (cohesion, presentation, vocabulary, fluency, grammar and spelling) were used to assess task 2 (write an article) of the skill of writing. To establish the score of every indicator, a set of assessment criteria were connected to the system of indicators. Table 5 shows the connection of a task with its indicator and its assessment criteria from the evaluation of both skills of writing and of oral production and interaction:

SKILL	TASK	INDICATOR	ASSESSMENT CRITERIA
Writing	Task 2. Write a brief article about your favourite animal for your school magazine	Spelling	- 2 mistakes or less: 2 points - 3 or 4 mistakes: 1 point - 5 or more mistakes: 0 points.
Oral production and interaction	Task 2. Say which bedroom would you like to have, explain why and exchange your opinions	Answering questions	- Justify or explain the answers: 2 points - The answers are not developed: 1 point - No answer, unintelligible answers: 0 points.

Table 5. Example of connections of tasks, indicators and assessment criteria of writing and of oral production and interaction.

5.2. Data analysis

Statistical analysis of data was carried out by using the Statistical Package SPSS (Statistical Package for Social Science).

The internal consistency and reliability of the tests was high for the tests evaluating writing and oral production and interaction (the Cronbach's alpha was over 0.85 in both cases), and reasonable in the tests evaluating reading and listening, in which the Cronbach's alpha was slightly below 0.7.

The Kolmogorov-Smirnov Test (K-S test) showed the sample to have a normal distribution, so it was possible to do a parametric test. Independent sample t-tests were run to compare the results of the CLIL and the non-CLIL group and to determine if their differences were significant. The results were presented as marks out of 10.

6. RESULTS

6.1. English proficiency of CLIL and non-CLIL 4th year students

In answer to the first research question and to determine if CLIL significantly affected mastery of the target language in the first years of instruction, we have compared the overall results obtained by 9-10-year-old CLIL and non-CLIL learners enrolled in 4th year of primary school education.

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Results showed that CLIL students only significantly outperformed their counterparts in oral production and interaction, as p-value=0.000 in this competence. The CLIL group did score higher in reading and writing, but not to a significant extent. However, in the skill of listening, the non-CLIL group outperformed their bilingual partners, albeit their results were not significantly higher.

In light of these findings, it follows that there were not significant differences in the acquisition of English language in CLIL and non-CLIL learners for 4th year primary school students, except for oral production and interaction (Figure 1):

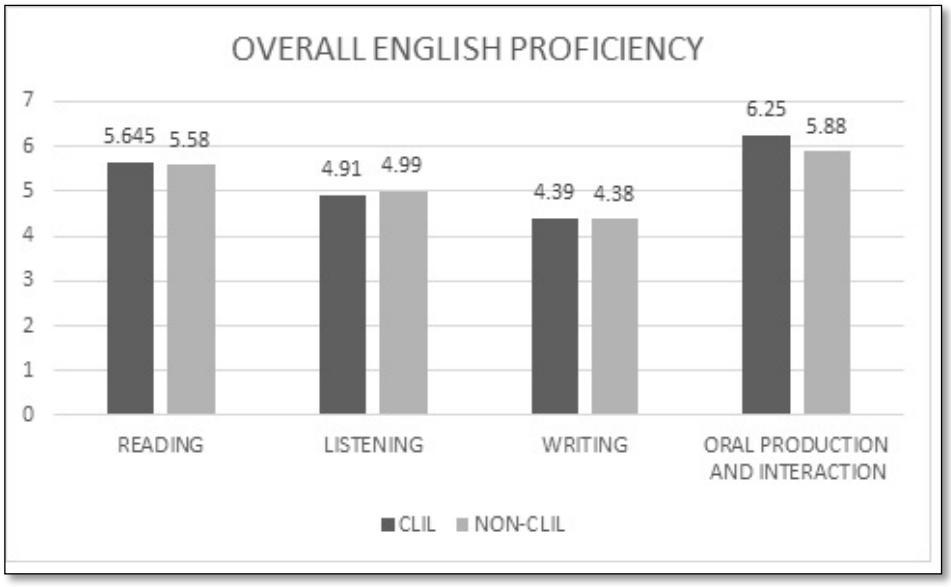

Figure 1. Overall English proficiency.

6.2. Skills and subskills positively affected by CLIL instruction

In order to answer the second research question, we compared the results of the CLIL and the non-CLIL group with the indicators or dimensions assessed for every language competence.

6.2.1. Writing

As we could observe in the previous figure, the integrated curriculum did not significantly influence acquisition of the writing competence. If we examine the results yielded from the different indicators (Figure 2), it can be seen that CLIL students only significantly outperformed their peers for "preparing an outline", although they obtained slightly (but not significantly) higher scores for "use of vocabulary", "fluency" and "spelling".

Furthermore, the non-CLIL students scored significantly higher for two indicators: "clear and orderly presentation" and "use of grammatical structures", which means that the texts they wrote were more readable and had fewer items crossed out than those written by

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CLIL students, and that mainstream students made fewer grammatical errors than their bilingual peers:

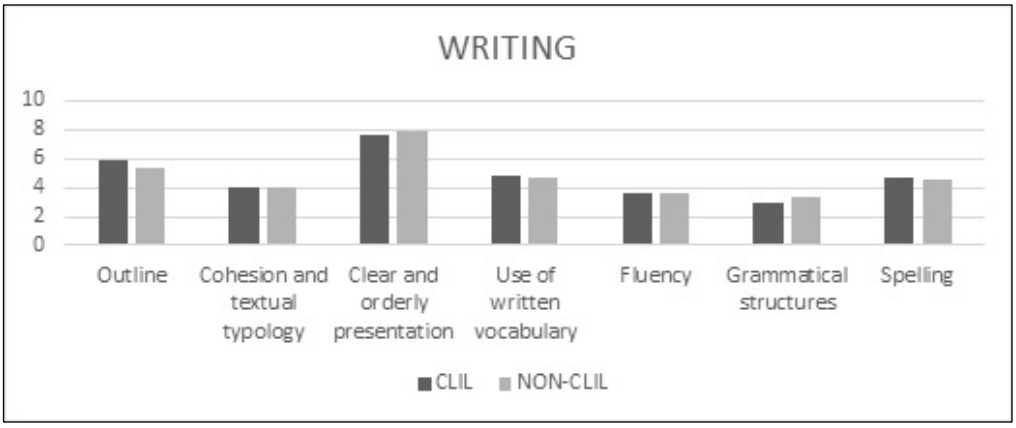

Figure 2. Results of writing.

6.2.2. Oral production and interaction

As shown in Figure 1, oral production and interaction was the only skill in which we can clearly see the benefits of CLIL instruction for 4th year primary school students.

Additionally, differences in favour of CLIL students were significant in all the indicators for this competence (Figure 3), except for "interpretation and use of paralinguistic elements". Both groups scored higher for indicators that assessed purely linguistic skills (answering questions, vocabulary, fluency, etc.) than in the aforementioned dimension, which evaluated the use of body language.

The areas in which CLIL students showed greater differences compared to their counterparts were, in the following order: "vocabulary", "answering questions", "fluency" and "rhythm, pronunciation and intonation":

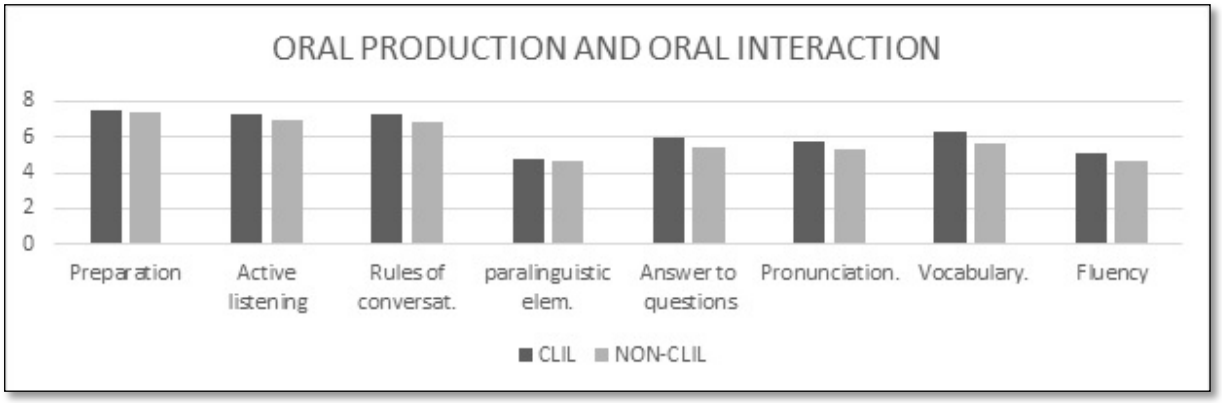

Figure 3. Results of oral production and interaction.

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6.2.3. Reading

CLIL learners displayed higher performance levels than their peers in five of the six indicators considered to evaluate reading competence (Figure 4): "global comprehension", "use of L1 as a reference", "identifying details", "vocabulary" and "understanding of space-time relations", although the differences were only significant in the latter:

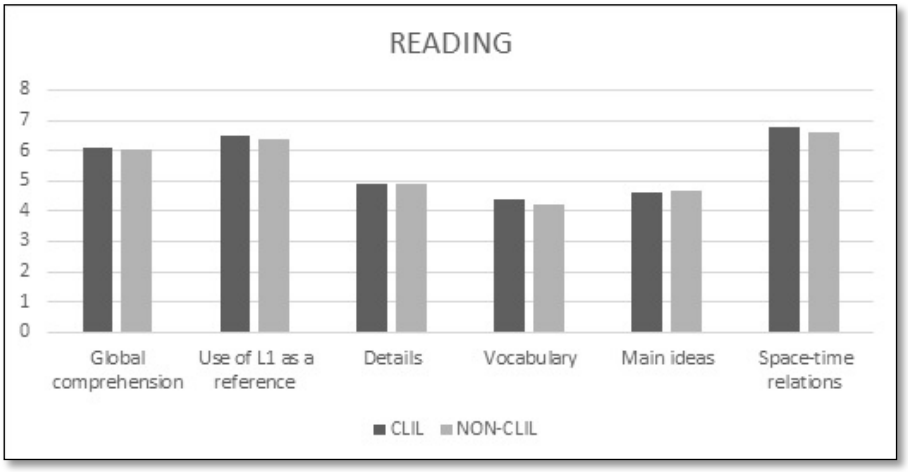

Figure 4. Results of reading.

6.2.4. Listening

In view of the results, it can be seen that the listening competence was not affected by CLIL at this stage. However, it seems that CLIL students possessed specific skills related to oral understanding (Figure 5), as "global comprehension" (p=0.000) and "identifying details" (p=0.001), facets in which they scored significantly higher than their peers. Conversely, results revealed CLIL students to be significantly lacking in other aspects such as "vocabulary" (p=0.000) and "understanding of space-time relations" (p=0.000):

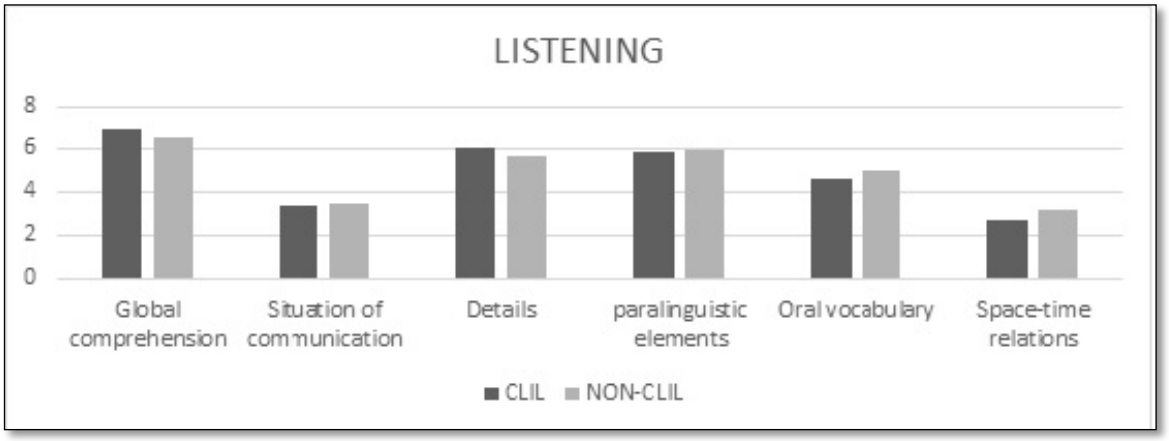

Figure 5. Results of listening.

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7. DISCUSSION

Data analysed in this study showed that 4th year primary school CLIL students only significantly outperformed their non-CLIL counterparts in spoken production and interaction. If we compare these findings with the results of studies mostly carried out in a secondary school setting, we can answer the first research question and conclude that the effectiveness of CLIL methodology is not so striking in young primary school learners. It is possible that the difference in the amount of extra exposure to the target language of 250 hours between our CLIL and non-CLIL group was not enough to significantly improve outcomes in all language competences. In the same vein, Ruiz de Zarobe did not find overall significant differences between traditional and CLIL groups with a difference of CLIL exposure slightly lower than in the present study, and explained that "this could be due to the fact that the difference in the amount of hours (210 hours) is not sufficient to obtain significantly better results" (2007: 51).

Additionally, the age of the students would be another factor to bear in mind because of the relatively undeveloped cognitive, learning and transference strategies 9- and 10-year-old learners possess. Therefore, it may well be necessary to wait until learners are older and can take full advantage of CLIL methodology (and this would most probably be when they reach secondary school age) to observe all the benefits CLIL provides.

Furthermore, voluntary access of students to CLIL programmes in secondary education could be linked to their greater motivation and proficiency in the target language (Lasagabaster, 2008; San Isidro, 2010), which would explain, in part, the very promising results of most research in contrast with the finding of this study. In fact, Grisaleña, Campo and Alonso (2009) found, after examining the results of an English level test, that CLIL students who were about to enrol on the programme already had a higher level of foreign language proficiency than mainstream students. In the same vein, Bruton (2011) draws attention to the issue of selecting CLIL students. However, as described before, in Castilla-La Mancha selection of students is forbidden and, additionally, all students in European Sections of primary schools are enrolled on the CLIL programme. This entails designing a comprehensive and egalitarian bilingual programme, particularly at primary school level, and it may be because of these features that the results were lower than expected.

Regarding the second research question, the outcomes pointed to one clearly benefited skill: spoken production and interaction. These findings are in line with previous studies conducted in primary (Bret Blasco, 2011) and secondary schools (Admiraal, Westhoff & de Bot, 2006; Lasagabaster, 2008; Lorenzo, Casal & Moore, 2009; Mewald, 2007; Zydatiß, 2007), and in this sense, Dalton-Puffer (2011: 189) summarises research in the field stating that "the area where a difference between CLIL students and mainstream learners is most noticeable is their spontaneous oral production".

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All the indicators or subskills of oral production assessed in this study were favourably affected by CLIL, apart from "use of paralinguistic elements", in which there were no significant differences between the two groups. This showed body language lagging behind verbal language, possibly due to the age of the students (9-10-year-olds) and the special situation of oral assessment. This finding, in a sense, belies the CLIL learners' profile presented in some studies as "more self-assured in conveying their intended meanings in the L2 even if they momentarily lacked linguistic resources" (Dalton-Puffer, 2011: 187). On the other hand, results showed bilingual education led to greater efficiency in developing more expressive and varied vocabulary, and in the acquisition of conversational verbal skills needed for speaking and answering questions. Moreover, the benefits detected in this study for oral fluency and oral vocabulary are in keeping with research carried out in secondary school settings (Lasagabaster, 2008; Ruiz de Zarobe, 2008). The question of pronunciation is more debatable. In our study, CLIL learners significantly outstripped their non-CLIL counterparts for the indicator "rhythm, intonation and pronunciation" and there are studies with analogous results (Lasagabaster, 2008; Ruiz de Zarobe, 2008). However, Gallardo del Puerto, García Lecumberri and Gómez Lacabex (2009) did not report any advantages of the CLIL methodology for reducing the degree of foreign accent, and Dalton-Puffer (2011) considers pronunciation to be the least affected of speaking skills.

Conversely, the poorest results of our primary CLIL students were detected in listening, as their overall scores in this language competence were lower than their non-CLIL peers, albeit not significantly so. To some extent, this finding was linked to previous studies. Lasagabaster (2008) compared 14-15-year-old CLIL students enrolled in the 3rd year of secondary school (SE henceforth) to one year older non-CLIL students enrolled in the 4th year of SE, and the CLIL group scored higher, albeit not significantly, in speaking and writing, but not in listening, which suggests that oral comprehension was less positively affected by CLIL methodology. However, in the same study, when learners of the same age were compared, the CLIL group significantly outstripped their counterparts in all skills assessed, including listening. Likewise, Navés (2011), who analysed data from CLIL and non-CLIL learners from the 5th to 10th year, found that CLIL students outperformed or caught up with learners two or three years ahead of them in all proficiency tests (dictation, cloze and grammar) except in oral comprehension. However, in Lasagabaster's study (2008), when learners in the same year are compared, CLIL students outscored their non-CLIL peers in all proficiency tests, including listening comprehension, and in this sense, these outcomes cannot be extrapolated to our findings, as in this study learners the same age enrolled in the same grade are compared. Nevertheless, it would still be true to claim that development of listening skills lagged behind proficiency in other language areas and skills, at least in comparison to its acquisition by older non-CLIL students.

Concerning subskills or dimensions of oral comprehension, CLIL students in our study significantly overtook their counterparts in some aspects of listening, such as global

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comprehension and identification of details. It is difficult to compare these findings with previous studies because most of them did not specify the dimensions or indicators assessed (Lasagabaster, 2008; Lorenzo, Casal & Moore, 2009; Navés, 2011; Navés & Victori, 2010), but it is possible to link the positive results in these two important components of oral comprehension with studies which showed sound results of CLIL in listening. However, higher scores in global comprehension and identification of details were tempered by significantly lower results in receptive oral vocabulary and understanding of space-time relations, a finding that indicated CLIL has different impacts on particular areas of communicative skills, which might have led to contradictory results in previous research.

The results for writing and reading showed that these competences seemed to be unaffected by CLIL, as, while CLIL learners displayed higher scores in both language skills, differences were not significant. However, it was expected that CLIL would have a positive effect on reading and writing (Ruiz de Zarobe, 2011). Regarding the competence of writing, gains in specific aspects such as fluency, lexical and syntactic complexity (Ruiz de Zarobe, 2011) and spelling were predicted (Dalton-Puffer, 2011). However, while CLIL learners displayed higher scores in vocabulary, fluency and spelling, differences were not significant in these areas and, moreover, they scored significantly lower in the use of grammatical structures, the dimension that assesses the number of grammatical errors in written compositions. The lower results of CLIL learners in this area were in keeping with the findings of some studies (Ackerl, 2007; Navés, 2011) which showed gains in lexical and morphosyntactic complexity lagging behind improvements in other domains of writing such as accuracy. Finally, reading competence has traditionally been considered one of the language competences positively affected by CLIL (Dalton-Puffer, 2007; Jiménez Catalán, Ruiz de Zarobe & Cenoz, 2006; Ruiz de Zarobe, 2011) but, although our students scored higher in global comprehension, use of L1 as a reference, identification of details and vocabulary, differences were only significant in understanding of space-time relations. These findings may suggest that the CLIL students in our study were moving in the right direction, but there is still work to be done before more definitive results can be gained. Therefore, the conclusion can be drawn that when starting CLIL early on in primary education all its positive effects can only be perceived after some years of instruction. In fact, Reilly and Medrano (2009: 63), at the stage of secondary education, place not only the acquisition of higher levels of foreign language competences but also the development of cognitive and social skills as a by-product of bilingual programmes. This cannot be considered a hindrance, but rather a justification for the introduction of CLIL in primary school, and for the continuation of these programmes in secondary education.

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8. CONCLUSIONS

This paper has been aimed at detecting the benefits of CLIL in the acquisition of language competences and in the mastery of dimensions, skills and subskills in the target language for young learners aged 9-10 as opposed to traditional EFL lessons. Results show that the first language competence to be positively affected was spoken production and interaction, while in reading and writing, although CLIL learners displayed higher scores, the differences were not significant. The least positively affected language competence was listening, in which CLIL students scored lower than their counterparts, but again, to no significant extent.

The dimensions most benefited by CLIL methodology were those of oral production and oral interaction. The CLIL group significantly outperformed the non-CLIL group in their use of oral vocabulary, answering questions, fluency, rhythm, pronunciation and intonation, active listening, respect for the rules of communicative exchange and preparing conversations. CLIL learners also showed significantly higher mastery for some indicators corresponding to different communicative competences such as preparing an outline before writing (writing), understanding space-time relations in a written text (reading), and global comprehension and identification of details in oral texts (listening). However, CLIL students wrote compositions with more grammatical mistakes and with a less clear presentation, and displayed problems in understanding vocabulary and space-time relations in oral texts, and the differences were significant for these four dimensions.

Therefore, these findings contrast in some aspects with a wide range of studies conducted mostly in a secondary school setting, which, although showing certain diverging results in some language areas, broadly concur that with CLIL methodology higher levels of English proficiency are achieved. Voluntary access to CLIL and, in some cases, selection of CLIL students in secondary school settings, may presumably affect motivation and better proficiency in English at entry-level and, hence, potentially reflect the highly beneficial results of CLIL.

On the other hand, on the basis of previous research (Dalton-Puffer, 2011; Ruiz de Zarobe, 2011) we expected gains in reading, some aspects of speaking (fluency), some aspects of writing (fluency and lexical and syntactic complexity) and, finally, a slight lead in listening. These expectations were largely confirmed in speaking, which turned out to be by far the most favourably affected competence, and in listening, in the sense that it was the skill least developed by CLIL, while in writing, and especially in reading, the outcomes were lower than expected. CLIL learners scored higher in use of vocabulary, fluency and spelling in their written compositions, and outperformed their peers in some reading skills, such as global comprehension, use of L1 as a reference, identification of details, and understanding of space-time relations, but differences were only significant in the latter dimension. The fact that significant differences were only detected in some dimensions and skills may have been due to the number of hours of CLIL instruction received by the CLIL group (only 250 hours

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in four years), which could have been insufficient for all the language competences to be developed to a significant degree and bring about all the positive effects connected to the use of CLIL methodology. Additionally, the age of the students (9-10) and the implication this has not only on the development of academic and written language, but also on the acquisition and transfer of general linguistic strategies, can also offer a plausible justification for these results.

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