

WHY TO CLIL?

EFFECTS OF CLIL ON READING COMPREHENSION

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WHY TO CLIL?

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Abstract

This empirical study compares two forms of language instruction in secondary school students by testing English reading comprehension in two groups of students taking the second year of Compulsory Secondary Education. One group was following a CLIL programme (in addition to its EFL lessons) and the other one, which acted as a control group, was receiving conventional EFL instruction. The study aims to prove that CLIL programmes could make an important contribution to second language acquisition (SLA) regardless of the content taught. In this particular case, data analyses show that CLIL pupils have better skills in reading comprehension and are more motivated towards the target language (English in this case) than non-CLIL students.

Keywords: EFL, CLIL, reading comprehension, SLA, motivation.

INTRODUCTION

I. READING COMPREHENSION

1.1 READING COMPREHENSION

Reading is a complex cognitive process of decoding symbols in order to construct or derive meaning (reading comprehension). It is a means of language acquisition, of communication, and of sharing information and ideas. Like all language, it is a complex interaction between the text and the reader which is shaped by the reader's prior knowledge, experiences, attitude, and language community. The reading process requires continuous practice, development, and refinement.

Readers use a variety of reading strategies to assist with decoding and comprehension and they may use morpheme, semantics, syntax and context clues to identify the meaning of unknown words.

The reading process has been studied by many researchers and many reading models and theories have been proposed to explain it, but due to the fact that reading is usually an individual activity, it is difficult to measure it accurately and to extrapolate from research to classroom practice.

1.2 READING SKILLS OR READING STRATEGIES?

These two concepts are very important when reading comprehension is discussed or analysed as they play a decisive role in reading practices. Sometimes both terms are used as synonyms but they do not explain the same reader's actions.

It could be said that reading strategies are deliberate and effortful attempts from readers in order to decode text, understand words and construct meanings of text, while reading skills are automatic actions that result in decoding and comprehension with speed, efficiency and fluency and usually occur without readers' awareness. Two clear statements about this distinction are:

“Strategies lead to skills.” And “You don't think about skills, and you do think about strategies.”

Students learn how to apply various strategies in order to achieve reading comprehension (using background knowledge, inferring meaning from context, scanning, skimming, text marking, decoding, etc.), but when they have practiced them for a long time, some of these strategies can become automatic and effortless, meaning that they have been transformed into fluent skills.

At the heart of accomplished reading is a balance of both—automatic application and use of reading skills, and intentional, effortful employment of reading strategies—accompanied by the ability to shift seamlessly between the two when the situation calls for it. The difficulty of the reading, influenced by text, task, reader, and contextual variables, will determine this shifting balance. (*P. Afflerbach, P.D. Pearson, S.G. Paris, 2008*)

II. CLIL

2.1 CONTENT AND LANGUAGE INTEGRATED LEARNING (CLIL)

Content and Language Integrated Learning (CLIL), a generic umbrella term for bilingual, content-based education, could refer to any educational approach in which a foreign language/second language is used as a means to teach curricular content that is not related to the language itself. It has been spreading throughout Europe since the mid-nineties partly due to a commitment of the European Union to promote a multilingual Europe.

Globalization has made the world interconnected in ways never seen before and the quick development of new technologies is facilitating the exchange of information and knowledge all over the globe, this obviously affects the way we learn and the way we teach languages; in an integrated world, integrated learning should be considered as a modern form of educational approach.

2.2 CLIL CHARACTERISTICS

CLIL covers many different educational models which have been introduced with various degrees of success in many different European countries. As it happens, CLIL is seen as a “flexible system which responds to a very wide range of situational and contextual demands” (Coyle, 2005).

“CLIL is an educational approach that integrates content and language, either by learning a content subject through the medium of a foreign language or learning a foreign language by studying a content-based subject.” (Lambert and Tucker, 1972; Genesee, 1987; Marsh, 2000)

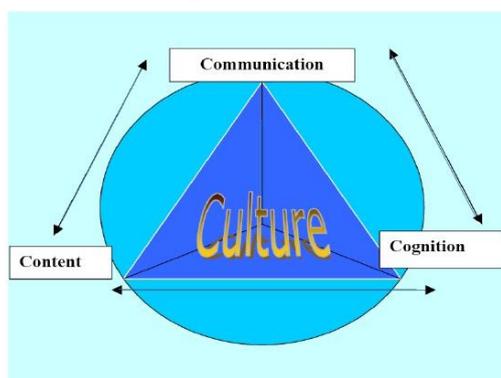
“It increases motivation and interest levels by diversifying methods and forms of classroom teaching and learning.” (Grabe and Stoller, 1997; Pavesi et al, 2001)

As for the CLIL methodology, many of the approaches have followed the path established by two important figures in the field, Cummings and Coyle:

Cummings proposed that if a language other than the mother tongue is used in the process of teaching, two different notions should be taken into account, the everyday language that students use to interact with each other (*BICS*) and the academic language that would take more time to acquire (*CALP*).

Coyle (1999, 2001) stated that in the CLIL classroom four parameters should be considered in order to deliver successful lessons:

The 4Cs conceptual framework for CLIL



Coyle (1999, 2005)

The 4Cs framework for CLIL starts with **content** (such as subject matter, themes, cross-curricular approaches) and focuses on the interrelationship between content (subject matter), **communication** (language), **cognition** (thinking) and **culture** (awareness of self and ‘otherness’) to build on the synergies of integrating learning (content and cognition) and language learning (communication and cultures). It unites learning theories, language learning theories and intercultural understanding.

To determine the language used in a CLIL lesson, the 3As lesson planning tool suggests **analyzing** the language of learning that needs to be used, **adding** necessary functional language for learning the content and **applying** all this language to manage the cognitive demands of the lesson.

The 3As lesson planning tool

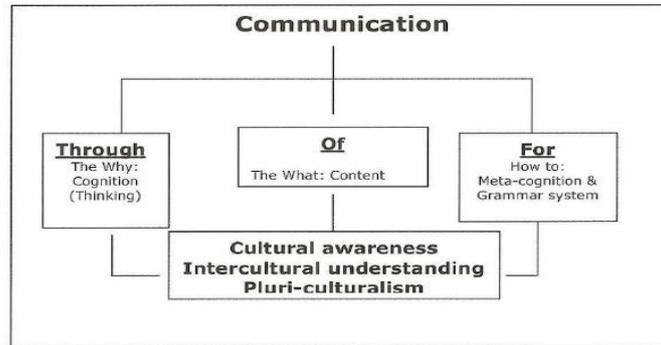
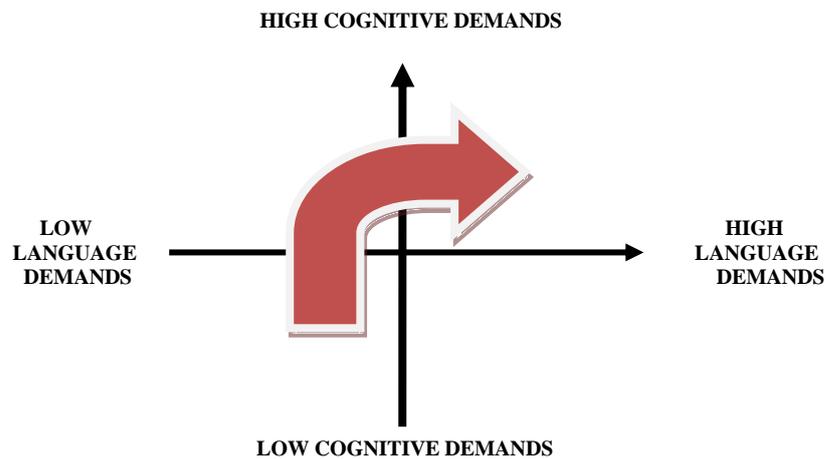


Fig 2.- Embedding language (communication) in CLIL: an analytical framework

Coyle 2005

Cummings proposed another tool to evaluate the cognitive and language demands when designing materials and tasks for the CLIL classrooms, the Cummings' matrix:



Students are initially presented with low demanding tasks and its difficulty increases following the scaffolding theory.

Bearing all of this in mind, it could be stated that the goals of this type of instruction are:

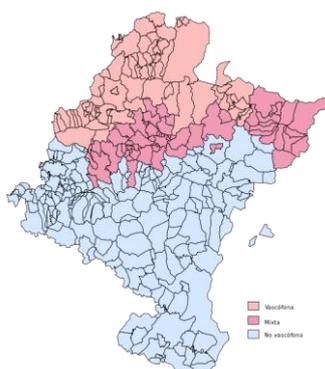
- To develop intercultural communication skills.
- To prepare for internationalisation.
- To provide opportunities to study content through different perspectives.
- To access subject-specific target language terminology.
- To improve overall target language competence.
- To develop oral communication skills.
- To diversify methods and forms of classroom practice.
- To increase learner's motivation.

2.3 CLIL IN SPAIN AND NAVARRE

“Spain is rapidly becoming one of the European leaders in CLIL practice and research” (Coyle 2010). In our country, this approach is distinctive on two counts:

- First, it encompasses a diversity of models practically equal to the number of regions where it is applied, given the decentralization of our educational system, which transfers educational powers to each autonomous community. “Spain is a mixture of heterogeneous language situations that lead to different ways of understanding and managing L2 education” (Fernández Fontecha, 2009).
- Second, it has to be specified that dual-focused education has been developed in Spain with both second (co-official) and foreign (other European) languages as it is a country where bilingual and monolingual communities coexist.

The situation in Navarre is different from the ones described above as great part of the population could be considered monolingual while almost one third of the Navarrese are bilingual (in Spanish and Basque). As shown in the map, Navarre is divided into three different areas (defined by the relevant legislation, the *Ley Foral del Euskera* of 1986), according to the language situation in them:



February 2012

- a.** First there is the Basque-speaking area, in the North of the community, where the Basque language enjoys official status alongside Castilian Spanish. In this zone lives the 10% of the total population of Navarre.
- b.** The mixed area covers the urban industrial centres and the capital, Pamplona, and almost 54% of the population live in this zone. Basque is not a co-official language here but is given a special treatment. As for knowledge of Basque, only 14% of the population are fluent Basque speakers.
- c.** The non-Basque-speaking area or Spanish-speaking area is the most extensive and it holds the 36% of the community's population. Only 6% of them are fluent Basque speakers and Basque is not obligatory nor given any special treatment in this zone.

According to this division, there are 4 different models of education in our community and their availability depends on the region of Navarre where they are to be hold:

- A. **Spanish vernacular:** All the lessons take place in Spanish and students have Basque as a subject. It is available at all levels of education and in all regions of the community.
- B. **Basque vernacular:** All the lessons take place in Basque and students have Spanish as a subject and vernacular in 1 or 2 subjects. It can only be found in a limited number of schools in the Basque-speaking and mixed areas and it is not available in secondary education.
- D. **Basque vernacular:** All lessons are given in Basque and Spanish is taught as a subject; this can be labelled as a CLIL immersion programme where Basque is commonly the L2 of students. Some studies based on this educational model showed very positive results that support CLIL educational approaches. It is available at all levels and in the Basque-speaking and mixed areas.
- G. **Spanish vernacular:** In this model, all lessons are given in Spanish and there is no option to have Basque as a subject. It is available in the Spanish-speaking and mixed areas

In addition to these models Navarre's Government offers two models related to English and other languages, they are the British and the Integrated Language Treatment (TIL), created in 2003 and 2008 respectively.

The British model is established in six public schools of the community, where 50% of the curriculum is given in Spanish and 50% in English.

The TIL approach (or CLIL) is gaining popularity and the number of schools that offer it is increasing, in February 2012, there were thirty four public schools that applied this treatment, mainly in the lower levels of education (kindergarten and primary). The foreign language used in these approaches is mainly English and it is applied in the linguistic models A and G, where 35% of the curriculum is in English, and D, where 18% of the curriculum is in English for kindergarten students and for primary, it raises up to 21-28 % of the curriculum. French is also used in some schools in the linguistic models A and G. Usually one or two subjects are taught through the medium of a foreign language, English or French.

III. GOAL OF THE PRESENT STUDY

This study aims to test whether having CLIL implementation in a subject like mathematics would help students to improve their reading comprehension skills in the target language.

CLIL programs are usually carried out in subjects like Biology or History, both characterized by having a great amount of theoretical content (taught through oral speeches or written materials). Considering this fact, it is normal to assume that students would improve their receptive skills in the L2 (reading and listening) while understanding and assimilating the new content being taught.

In the case of mathematics, the theoretical input students receive is generally lower and there is a great tendency to switch from L2 to L1 to enable students' understanding of certain concepts; it is for this reason that the benefits of these programmes on reading comprehension may not be so clear.

IV. LITERATURE REVIEW

4.1 READING COMPREHENSION

Reading comprehension is a complex process where readers have to apply many strategies and develop a series of skills in order to understand the text, but this is not enough to succeed in comprehension. Over the years many models and theories have been created in order to explain the process of reading:

Two of the most influential reading models are those of *Gough (1972)*, who proposes a bottom-up view of the reading process and *Goodman (1969,1970,1975 and 1988)*, who offers a top-down picture of it.

The bottom-up model represents reading as a letter-by-letter progression through the text; it is a linear progression in which letter identification is followed by the identification of their sounds and the recognition of words and syntactic features that will finally lead to meaning access; it is necessary to master decoding skills in order to achieve comprehension.

On the other hand, the top-down model pays minimal attention to letter-sound correspondences, and considers meaning as the most important part of the procedure. According to this model, reading is characterized as a cyclical process represented as a series of four primary cycles: optical, perceptual, syntactic and semantic. Readers start by making predictions about meaning based on what they recognize from the visual array; then they check meaning by sampling sentences as a whole; and finally, they head towards progressively smaller units (words and letters) if still uncertain, to end up going back to meaning predictions.

The integrated models consider both bottom-up and top-down strategies as part of the reading process and they introduced the concept of many different sources of information competing for processing time when reading, some of them are more bottom-up oriented and others are more centred on meaning. *Rumelhart (1977)* created the concept of schemata (reader's previous knowledge and experience) and stated that it had a great influence on reading comprehension.

When approaching reading and reading comprehension affective factors should also be considered and *Mathewson's model (1985)* draws attention to them taking into account affective variables such as attitude and motivation.

As *Davies (1995)* affirmed in her research about reading, the evidence suggests that no single model of reading accounts for the complex range of reading behaviours which are observable in different contexts. However, each of the different models can contribute in different ways to the understanding of reading behaviour in different contexts.

According to *Bernhardt (1991)* there are three variables that interact in the reading process, linguistic variables, these being the elements of a text including word structure, word meaning, syntax and morphology; literacy variables that include intrapersonal variables such as purpose for reading, intention, preferred level of understanding, goal-

setting and comprehension; and knowledge, which entails the background information that a reader already possesses and may or may not choose to use.

- When considering linguistic variables three aspects should be taken into account: word recognition, that speeds the reading process and is a key factor on reading comprehension; lexicon, being the relation between word and meaning and for which readers need to consider the text context, as *Anderson and Nagy (1991)* appointed, “Really knowing a word...always means being able to apply it flexibly but accurately in a range of new contexts and situations”; and syntax that provides the contexts in which words find themselves and facilitates word recognition. As *Bernhardt* and others have stated, the linguistic system provides a necessary but insufficient understanding of the second language reading process so other variables should be considered.
- Literacy variables consist of operational knowledge when approaching a text and that includes the skills and strategies. Research shows that proficient reading means making the right decisions from the beginning of a passage because as readers attempt to understand, they build a conceptual representation of the text making inferences and generalizations about its meaning. The success of comprehension depends on readers’ accuracy in their conceptual representation of the text. Another fact to consider is the reader’s ability to identify what is important and what is not in the text. Researchers also contend that metacognitive awareness of the comprehension is characteristic of good comprehenders, the capacity to self-monitor their reading and being aware of their understanding help them to succeed.
- The third type is the world knowledge variable and it refers to the background or interpersonal knowledge readers have when confronted with the text. It is the less studied but many studies signal that it is a critical variable to consider when testing reading comprehension.

In relation to this, *Bernhardt (1986)* affirmed that topic familiarity appeared to be the most critical factor in comprehension—more critical, in fact, than text based linguistic factors such as vocabulary, syntax, length of passage, and conceptual and inferential ability. Taking this into account, increasing background knowledge would increase comprehension.

Eskey (1997) supported these utterances with her own research on the topic; she emphasized the necessity to boost student’s motivation towards reading by increasing their background knowledge on the content and the language of the text they were going to read. According to this researcher, a useful way to achieve this objective is to develop effective pre-reading class activities to introduce new texts to ESOL (English for Speakers of Other Languages) readers-- in other words, to bridge the gap between what the students know and what they will need to know to read assigned texts successfully. She also proposed the teaching of strategies to facilitate the bottom-up and the top-down processing, underlining the importance that bottom-up skills have in beginners EFL readers due to their limited knowledge of the language. In her opinion, EFL readers

need to domain the bottom-up level (decoding) in order to engage in an effective top-down processing, which is influenced by the reader's prior knowledge or schemata.

Davies (1995), in her description of the different reading models, also acknowledged the importance of motivation, principally in L2 learners reading in secondary school who may have neither an intrinsic nor extrinsic need to read. She suggested establishing real-world purposes for reading and selecting appropriate texts, not only interesting for students but also representative of the types of texts with which they will be familiar in their first language. She proposed to follow *Mathewson's model (1985)* in which affective factors are considered decisive in the first step readers take, that is to make the decision whether or not to read a text or continue reading.

4.1.1 READING STRATEGIES

According to *Singhal (2001)*, reading strategies could be defined as the way readers conceive of a task, how they make sense of what they read and what they do when they don't understand, in other words, processes used by the learner to enhance reading comprehension and overcome comprehension failures. Following Oxford (1990) indications she made a detailed and complete classification of readers' strategies:

- Cognitive strategies are used by learners to transform and manipulate the language and they include note taking, formal practice with the specific aspects of the target language such as sounds and sentence structure, summarizing, paraphrasing, predicting, analyzing, and using context clues.
- Memory strategies are the techniques that help the learner to remember and retrieve information and these involve creating mental images through grouping and associating, semantic mapping, using keywords, employing word associations, and placing new words into a context.
- Compensation strategies include skills such as inferencing, guessing while reading, or using reference materials such as dictionaries.
- Metacognitive strategies are behaviours undertaken by the learners to plan, arrange, and evaluate their own learning. They consist of directed attention and self-evaluation, organization, setting goals and objectives, seeking practice opportunities, and so forth.
- Others are affective strategies, such as self-encouraging behaviour, and social strategies, which involve other individuals in the process (cooperation with peers, questioning, asking for correction, and feedback).

On the other hand, *Davies (1995)* identified six types of reading or comprehension strategies after thoroughly investigating reading comprehension in the L1 and in the L2 with different types of readers (beginners in L1, skilled readers in L1, adults reading in the L2 and L2 learners in secondary school) :

- Listen read, that means listening to an oral reading of a text. It can be very useful for beginners as a support to the written text and for students of all levels to become aware of the sound, rhythm and rhyme of literary texts.
- Practice read or plodding read is a slow, hesitant text processing aimed at the understanding of content that also requires bottom-up processing, consciously attending to lower -level features of the text such as orthography, lexemes and syntax. It has the dual purpose of understanding the text and learning about the language system, it may also be referred to as detailed reading.
- Skimming “is a rapid style used mainly to establish what a text is about before deciding where to read” (*Lunzer and Gardner*). It involves considerable searching back and forth in the text and can be used for a critical evaluation of texts.
- Scanning is a type of reading to locate particular information in the text; it involves the checking of specific items and hesitations at selected parts of the text. It can be used to organize study reading.
- Reflective reading involves in-depth reading, pausing, regression and reflection on what is read for purposes of learning and appreciation.
- Receptive reading is a smooth, fluent and apparently unconscious reading of undemanding, familiar or narrative text for pleasure. It can involve unconscious language learning.

In a second language study, *Hosenfeld (1977)* determined that successful readers kept the meaning of the passage in mind while reading in broad phrases, skipped inconsequential or less important words, and had a positive self-concept as readers. On the other hand, the unsuccessful ones lost the meaning of the sentences when decoding, read in short phrases, pondered over inconsequential words, seldom skipped words as unimportant, and had a negative self-concept.

Many other studies support this idea that good readers use more strategies and use them more efficiently than poor readers (*Garner, 1987; Waxman and Padron, 1987; Paris and Meyers, 1981 and so forth*).

Better readers also have an enhanced metacognitive awareness of their own use of strategies and what they know, which in turn leads to greater reading ability and proficiency (*Baker & Brown, 1984; Garner, 1987; Pressley & Afflerbach, 1995*).

To conclude, all the studies done in this field agree with the statement that successful readers tend to use top-down strategies rather than bottom-up ones while poor readers usually get stuck at the bottom-up level. Nonetheless the studies also confirm that skilled readers use a combination of both types of strategies to reach comprehension successfully.

4.2 CONTENT AND LANGUAGE INTEGRATED LEARNING

As mentioned before, research on Content and Language Integrated Learning is scarce considering the flexibility and variability of this kind of approach. There are too many aspects to investigate in order to consolidate the theoretical underpinnings of CLIL and create a conceptual framework that is both coherent and applicable to different local conditions. The main obstacle that should be overcome is the disparity between European policies and their theoretical prospects and the local grass-roots reality. Countless initiatives of individual teachers or schools have generally been the actual starting point for implementing CLIL in concrete local educational contexts, initiatives to which regional or national authorities have frequently been slow to answer (*Christiane Dalton Puffer, 2008*).

Following the implantation of the Andalusian Plan for the Promotion of Plurilingualism, many studies have been carried out to test its effectiveness and its weaknesses, *Hughes (2010)* quantitative research confirms the idea that CLIL does not seem to hamper L1 or subject matter learning, even when the amount of L2 exposure is increased to 50%; other studies showed interesting qualitative results:

The study completed by *Lorenzo and associates in 2006-2007*, in which a series of questionnaires were administered to teachers, students, families and school coordinators, displays optimistic and very positive attitudes towards CLIL outcomes. Teachers affirmed that CLIL programmes increased generic competence acquisition and did not water down contents but increased their learning. They also thought that the linguistic competence is enhanced as well as interdisciplinarity and curricular integration due to the more innovative teaching methods and more enriched evaluation procedures; they vehemently asked for linguistic and methodological training. Students agreed with teachers and also thought CLIL fostered motivation and positive attitudes towards the target language; families saw as the main benefit the increased language knowledge of their off springs; and coordinators highlighted cultural openness, increased learning and improved professional opportunities as some of the strengths of the CLIL approach. These results are also supported by another study conducted by *Cabezas Cabello (2010)*, which compiles the opinions of 100 teachers and 30 coordinators.

All of these qualitative studies agree upon one main necessity and this is the congruence between educational policy and what is actually happening in schools, as *Lorenzo* highlights “Innovation in education is normally successful if top-down and bottom-up initiatives share the same goals in such a way that teachers and decision-makers coordinate their actions in the same direction”.

4.2.1 LINGUISTIC THRESHOLD

One of the main questions that arise in relation to CLIL programmes is whether there are interdependencies between second language proficiency and learners' academic achievement. This aspect was thoroughly studied by *Cummings*, who formulated his known threshold hypothesis, *Cummins (1979)* stated "... if a child has a low level of competence in the second (or first) language, interaction with the environment through that language, both in terms of input and output, is likely to be impoverished". These learners may become underachievers at school and not only could their performance be affected but their motivation and attitude towards the language.

Cummings differentiated between two thresholds in the acquisition of a language, the lower level and the upper level, "The attainment of a lower level threshold of bilingual competence would be sufficient to avoid any negative cognitive effects". He also considered that proficiency in a second language was dependent upon the age-appropriate level of competence in the first language and that bilingual learners must attain a "threshold level of L2 competence" to achieve balanced bilingual proficiency. Once balanced bilingual speakers have reached the upper level threshold with proper competence in both languages, cognitive advantages would appear, "The attainment of a second higher level of bilingual competence might be necessary to lead to accelerated cognitive growth".

This hypothesis has been criticised due to the difficulty of establishing valid thresholds in language competence but many other studies support the threshold theory such as the ones that have demonstrated that L2 learners with well-developed L1 literacy skills are only able to apply those reading skills in the L2 if their global L2 knowledge is adequately developed (*Clarke, 1979, 1980; Cziko, 1978*). As Goodman pointed out, "An insufficient L2 proficiency level short-circuits L2 reading development" (*Goodman, 1988*).

4.2.2 CLIL AND READING COMPREHENSION

According to several studies (*Christiane Dalton-Puffer, 2008*), under CLIL conditions, certain aspects of language competence develop more than others and the **receptive skills are within the favourably affected**.

Although the great majority of studies conducted about CLIL claim that this approach benefits the receptive skills (reading and listening), not many of them focus their attention specifically on reading comprehension outcomes.

A study completed by *Anna Várkuti* in Hungary examined the English language achievement of secondary school students learning English through CLIL and intensive language learning programmes. She measured conversational and academic language use (BICS and CALP) and she concluded that the linguistic competence of CLIL students was significantly better, that students possessed a larger social language vocabulary, better use of grammar rules and greater production of correct sentences.

Other interesting outcomes are that CLIL scholars showed a better recognition of text coherence, a better understanding and a higher degree of sociolinguistic awareness in using the language.

Ruiz de Zarobe also carried out a study in 2011 to determine which aspects of the language where the most benefited by the CLIL approach, she based her study on the findings of *Dalton-Puffer's* research on the topic (2007, 2008). According to Dalton-Puffer the skills favourably affected by the content-based instruction where the receptive skills (reading and listening), vocabulary acquisition, morphology, fluency, creativity and motivation and other affective factors. *Ruiz de Zarobe's* research obtained approximately the same results with some differences, such as vocabulary acquisition, because she stated that only receptive vocabulary was benefited not productive vocabulary; and writing, as she found that fluency, complex grammatical structures use and syntax in written production were benefited unlike Dalton-puffer who affirmed writing was not favoured by CLIL.

Another study of *Ruiz de Zarobe and Jiménez Catalán* (2007) on reading comprehension with 6th grade of Primary Education students showed that CLIL students obtained better results on global comprehension and receptive lexical knowledge than their non CLIL counterparts.

Due to the wide range of materials that students have to process in the CLIL classrooms, it is quite obvious that reading is one of the skills most favoured by this approach, as Wolff pointed out:

“Reading and reading skills are regarded as highly important in the CLIL classroom. Most of the acquisitional processes are related to reading comprehension: learners work with documents and other sources in order to acquire knowledge in the content subject. *Although reading strategies play an important role in all learning contexts, in CLIL they decide on the students' success or failure.* A specific CLIL methodology has to take this into account, thus the promotion of reading strategies plays an important role in all methodological discussions. And it must not be forgotten that content subject work also includes specific reading skills: working with graphs, maps, charts, etc. Learners do not read texts in order to learn language but in order to acquire knowledge in the content subject.” (Wolff, 2005)

There are many other studies that confirmed the positive results of CLIL on reading comprehension such as *Admiraal, Westhoff and de Bot study* (2006) in the Netherlands that tested reading comprehension, speech production and receptive vocabulary acquisition in secondary education students. They concluded that reading and speaking were better in CLIL students while there was no difference in vocabulary acquisition. They also stated that CLIL approach did not hamper L1 or subject matter acquisition. In Norway, *Hellekjaer* (2006) also analyzed reading comprehension in secondary students and he encountered that CLIL scholars identified more quickly the main idea of the texts, presented higher tolerance to lexical items' ambiguity, applied reading strategies more effectively and inferred meaning from context in a better way than the non CLIL ones.

Allen (2004), who compared reading comprehension results of students from the Canadian immersion programmes with results of other students through the 2000 PISA exams, found that Immersion scholars outperformed their counterparts in non immersion programmes.

Similarly Serra found that in standardised measures used throughout all the participating autonomous communities of Spain, the Basque Country and Navarre scored above the average for Spain in mathematics and Spanish-language reading comprehension in primary education, in spite of or thanks to educating bilingually (*Sierra, 2008*). The same source revealed that on the PISA 2003 tests for reading skills the rating for the bilingual Basque pupils was higher than those for France and the United States and higher than the OECD mean (*Serra, 2008*).

Finally, according to Bialystock, metalinguistic capacities are more advanced in bilinguals than in equivalent monolingual groups. This refers to better analytical skills as well as better cognitive control over linguistic operations (*Bialystok, 1988, 1991a*).

4.2.3 CLIL APPLIED TO MATHEMATICS

Unfortunately, there are not many studies about the effects of learning mathematics through the medium of a foreign language but some of the findings are the following:

Cecilia Serra, a prominent figure in CLIL research, especially in the field of mathematics, mentioned in her longitudinal study “*Assessing CLIL at Primary School*” (2007) that teachers felt insecure and experienced the ‘dilemma of code-switching, as described by *Adler (1998)* in her study of secondary mathematics teachers in multilingual classrooms, who are continually judging when to switch from L2 to L1 so as to enable learners to make sense of the concept or topic under discussion.

According to Serra, teachers should be able to use both languages in the process of the conceptual development, and to experience that focus-on-form and on-content instruction entails a focus on the linguistic structures (in both L1 and L2) needed to get the content meaning across (*Gajo & Serra, 2000*).

Another characteristic of mathematics teaching is that it uses everyday language to express new meanings and many difficulties arise from the interconnection between everyday and instructional language, both sharing the same discourse forms but having particular usage conventions that even for teachers, let alone pupils, are difficult to grasp. Everyday words become reinterpreted as part of a set of unique meanings and structures, learning these concepts by using L2 everyday language in the context of mathematics enhances comprehension through rephrasing and other metalinguistic procedures needed to process the meaning, thus helping in the process of noticing.

When the terms in L1 and in L2 coincide, such as ‘Piramide/Pyramide’ or ‘Kateten/Cateti’, rephrasings in L1 and in L2 help to anchor them in memory, by experiencing that the two languages share part of the terminology paradoxically diminishes the difficulty of mathematics. The use of metalinguistic devices, such as code alternation, raises the awareness of such linguistic forms, mainly by testing the language paradigm to find equivalent forms, meanings and functions in both L1 and L2.

4.3 STATEMENT OF PURPOSE AND IDENTIFICATION OF THE GAPS

After reviewing all the theoretical background some general ideas should be taken into account in the present study:

- Due to the complexity of the reading process, it is quite difficult to measure reading comprehension and the use of reading skills or strategies accurately.
- The reading process depends on many factors but background knowledge and affective factors are crucial to perform successfully.
- Metacognitive awareness of students is a good indicator of good comprehension.
- Content and Language Integrated Learning approach has positive cognitive effects on students and increases their motivation as they learn the language in a meaningful way.
- CLIL helps to develop students' metalinguistic awareness.
- Reading skills are essential to succeed in the CLIL approach and at the same time are the most favourably affected by it.
- It is stated by many authors that a necessary competence level in L1 is necessary in order to acquire a second language and that an appropriate level of competence in the L2 is necessary in order to benefit from CLIL instruction (threshold hypothesis).
- There is no concordance between European Union policies and grassroots reality in CLIL programmes application and much more research is still needed. Other important need is teachers' instruction in language and methodology.
- CLIL classes tend to focus more on fluency than in accuracy and language problems are not usually attended to with the same likelihood as content problems while conventional EFL lessons focus more on accuracy and on linguistic aspects. Despite their differences, both of them are necessary in education as each of them offers unique opportunities for students to learn and use the target language that are difficult to reproduce in the other.

Saying this, this present research focuses its attention on whether CLIL approach in the mathematics learning context reports benefits to reading comprehension in the L2 at the secondary level of education (2nd grade of CSE).

RESEARCH QUESTIONS

This study, which was conducted with second grade of compulsory secondary education CLIL and non CLIL students address the following questions:

- Does CLIL applied to mathematics teaching programmes improve reading comprehension?
And if that is the case,
- Which reading skills or strategies are more favourably affected?

Based on the findings from previous studies done in the field of reading comprehension and CLIL, two hypotheses have been formulated:

- CLIL students would outperform non CLIL students regarding reading comprehension
- CLIL students would do better at those exercises that require metalinguistic skills and vocabulary knowledge.

These questions and hypotheses led to the design of this study undertaken in the school “Hijas de Jesús” situated in the Pamplonese quarter “La Chantrea” with the aim to test whether CLIL approach benefits reading comprehension, even when the subject taught through this method of instruction is mathematics.

METHOD

As mentioned before, the present study was completed at the school Hijas de Jesús, with two groups of students cursing the second year of compulsory secondary education. One of the groups followed conventional EFL lessons while the other had CLIL instruction in the subject of mathematics in addition to their EFL lessons.

I. Participants

Most of the participants started learning English at school when they were 3 years old (except a girl in the control group who started doing so a couple of years ago) and most of them followed the same EFL lessons with the same teacher, tasks, evaluating tools and materials (except the mentioned girl who had materials and tasks for English beginners and another girl from the same group who was in an adapted curricular programme with tasks and materials from the previous year). In addition to this, there were two students in the control group who were re-taking the course.

It can be concluded by these statements that the control group was more heterogeneous than the experimental one.

The description of the two groups of participants is provided by the following table:

	Type of instruction	Hours of English exposure	Age when data collection	Number of students
Control group Non CLIL	Conventional EFL lessons	3 lessons of 55 min. per week (2h and 45min.)	13-15	16
Experimental group CLIL	Mathematic instruction through CLIL and conventional EFL lessons	7 lessons of 55 min. per week (6h and 25 min.)	13-14	16

As shown in the table, the amount of English exposure in the experimental group, which is the one that receives CLIL treatment, is considerably higher than in the control group. Another factor to consider is the fact that it is the second year that the experimental group receives the CLIL treatment so they were quite familiarized with this approach.

II. Data collection

The data collection took place through the administration of a pre-task and a post-task questionnaires and a reading comprehension test with seven exercises to complete. The first questionnaire was administered to both groups of students on day 1 in order to decide a reading text's topic based on the scholars main interests.

According to previous studies on reading comprehension (*Bernhardt, 1986*), the familiarity of the topic was crucial in the reading process and can influence the affective factors, such as attitude and motivation, that are very important when approaching a reading text. Saying this, with the results obtained in the questionnaire, a text accordant to the students' interests would be selected.

The reading comprehension text was composed of seven exercises and a total punctuation of 20 points. The intention was to evaluate different skills or strategies used by students in the reading comprehension and each exercise was intended to evaluate a different one although more than one skill may have been used on each activity.

There were 5 skills or strategies tested:

- Scanning, as we explained before it is used to locate particular information in the text, and it was required in exercise 1.
- Skimming, used to acquire a general idea of the text, this was intended to be applied in exercises 4 and 7.
- Reading for detail, used to fully understand all the text in depth, was required in exercises 2 and 6
- Inferring meaning from context, for which general vocabulary knowledge was needed, was supposed to be used in exercise 3.
- Linguistic knowledge, which is general grammar and text organization awareness, was necessary to complete exercise 5.

The second questionnaire was given to the students immediately after completing the reading comprehension test. It was composed of 4 questions intended to test the metalinguistic awareness students had in relation to their reading comprehension process. This questionnaire was also useful to obtain students' feedback on their opinions about the text.

III. Procedure and data analysis

The study was conducted in three sessions with each of the groups:

	Control group (non CLIL)	Experimental group (CLIL)
Day 1	Questionnaire to find the topic of the reading text (Q1) 15 minutes	Questionnaire to find the topic of the reading text (Q1) 15 minutes
Day 2	Pre reading activities to introduce the topic of the reading text Vocabulary Visual realia Pair work 55 minutes	Pre reading activities to introduce the topic of the reading text Vocabulary Visual realia Pair work 55 minutes
Day 3	Reading comprehension test Second questionnaire (Q2) Individual work 50 minutes	Reading comprehension test Second questionnaire (Q2) Individual work 75 minutes

As shown above, **on day 1** a questionnaire (Q1) was given to students in order to learn about their hobbies and interests. It included seven questions about general interests, music, films, sports, music instruments, travelling and internet. This general survey was analyzed for choosing the text topic and students spent 15 minutes completing it. According to the results showed in Q1, an appropriate reading text was prepared, the criteria followed was the students' English level and the most popular topic in both groups.

On day 2, a session of pre reading activities was given to both groups with the objective of introducing the text topic, checking previous background knowledge, giving the necessary background knowledge for them to understand the text and raising interest and motivation. Several activities were designed to make students predict the content and the vocabulary with a lot of visual realia. Pair work was used in this session to promote interaction and cooperation among students when working with unknown vocabulary, the lesson lasted 55 minutes

As mentioned in the literature review (*Eskey, 1997*), pre reading activities are very important to boost student's motivation towards reading by increasing their background knowledge on the content and the language of the text. These activities' purpose is to bridge the gap between what students already know and what they need to learn in order to read the assigned text successfully.

On day 3, students were given the reading comprehension test to complete individually; as explained previously, it was composed of seven exercises that intended to test different reading skills or strategies. The text was an adapted version of a reading text used in 4th grade of secondary education; it had a length of 340-360 words. Ten of these words, that may be unknown for students, were explained in the text (five words were translated to Spanish and five of them were explained by an English synonym). Immediately after finishing the test, the second questionnaire was given to students in order to check their metalinguistic awareness and to have their feedback. It had four questions, three of them related to the difficulty of the text (general difficulty, activities' difficulty and vocabulary problems) and one of them related to their opinion of the text. This session was intended to last between 50 and 55 minutes but in the control group another extra 25 minutes were needed for them to complete all the activities.

In relation to the data's compilation, the three different tests were analyzed as follows:

- The initial questionnaire's first question informed about the students' most liked topic or topics (music, cinema, sport, internet, travelling, food, others) and the following questions were useful to discover which aspects they like more about the chosen topic or topics (music and cinema's genres, type of sports, music instruments, English speaking countries to visit or uses of internet). Taking all this into account, firstly, the most liked topic in both groups was selected and secondly, the most popular aspect of that topic was considered. They were able to mark as many topics and aspects as they liked.
- The reading comprehension test had a total punctuation of 20 points assigned among seven different activities. After being corrected, the global mean of the whole test was calculated for each group and afterwards, the global mean of each activity was computed in both groups separately. Other results considered were the relation between the number of students and their marks in each class in the whole test and in the different skills or strategies evaluated. All the punctuations have been reformulated to fit in the same scale (values between 1 and 10).
- The second questionnaire was analyzed to check if the students' perception about the reading test coincides with their results in it (metalinguistic awareness)

RESULTS

I. FIRST QUESTIONNAIRE

The results of the first questionnaire were as follows:

	Music	Internet	Sports	Cinema	Travelling	Food	Others
Control group	11	11	5	4	8	2	2
Experimental group	9	10	9	7	6	5	4
Total	20	21	14	11	14	7	6

As shown above internet and music were the most popular interests, being internet a little bit more liked. Based on these results, the text topic had to be related to internet, to enclose the students' preferences, since internet is a very general topic, another question about the different uses of internet was considered. The results were the following:

	School	Games	Social networks	Search information	Email	News	Others (You Tube)
Control group	11	6	16	7	10	1	1
Experimental group	14	13	13	12	12	2	4
Total	25	19	29	19	22	3	5

It can be appreciated in the table that social networks is the most popular internet use among all the students. Bearing this in mind the text selected was *“Caught in the net”* and it talked about the addiction of young people to internet (social networks, you tube and games).

II. COMPREHENSION TEST

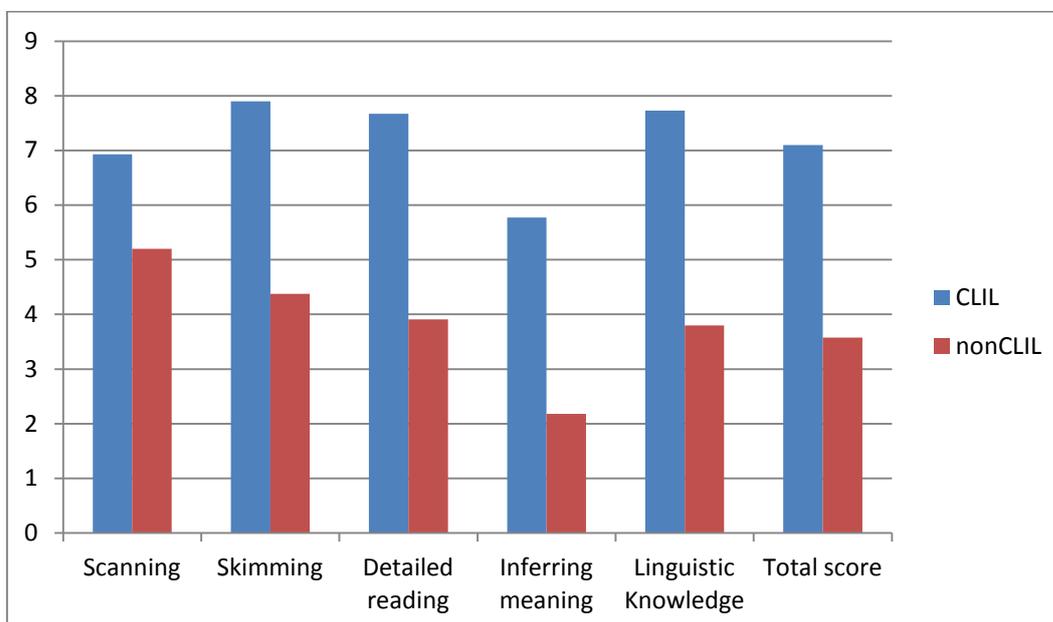
As for the comprehension test results, CLIL students outperformed their non CLIL peers dramatically:

- Group means:

	Total score	Scanning	Skimming	Reading for detail	Inferring meaning from context	Linguistic knowledge
Control group	3.575	5.2	4.375	3.91	2.33	3.8
Experimental group	7.1	6.93	7.9	7.67	5.83	7.73

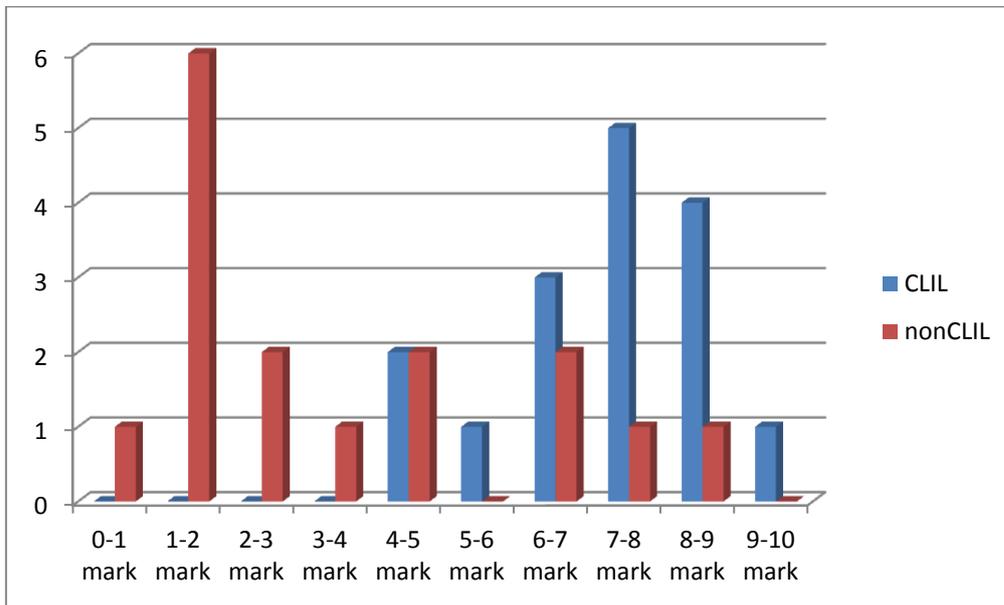
Considering these results it can be stated that CLIL students' mean almost double the non CLIL group's mean. Another important consideration is that CLIL students obtained the best mark in the skimming activities while the control group did so in the scanning exercise. For both groups the worst result is the one related to the skill inferring meaning from context but even so the CLIL group's mean was approximately 2.6 times higher than the non CLIL counterpart; at the same time this mean is the one in which the difference between the groups is higher as we can see in the following graph:

Group means



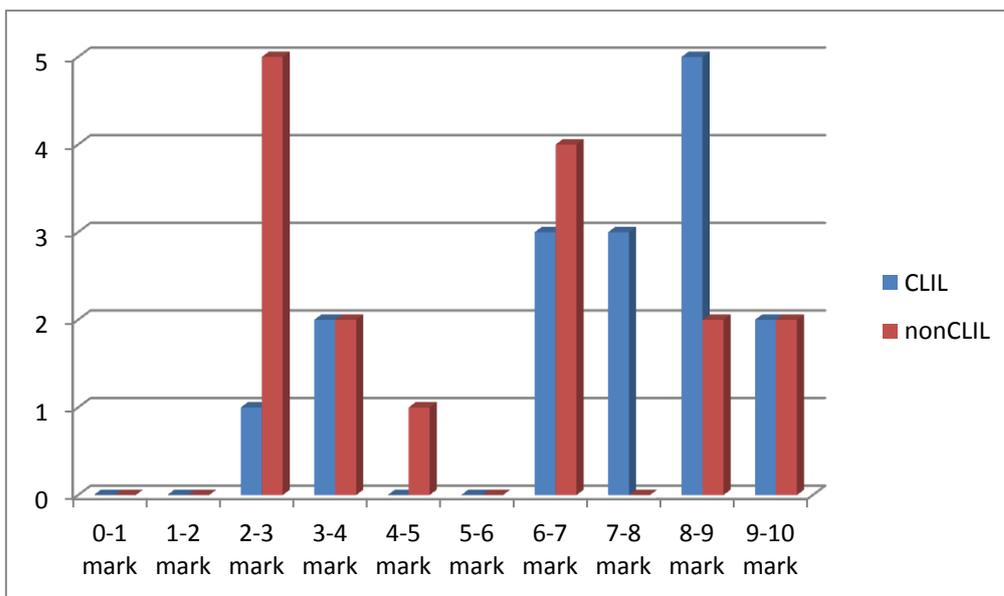
As well as the group means, the distribution of students according to the marks obtained in each category was evaluated and it can be appreciated in the following graphs:

Total punctuation



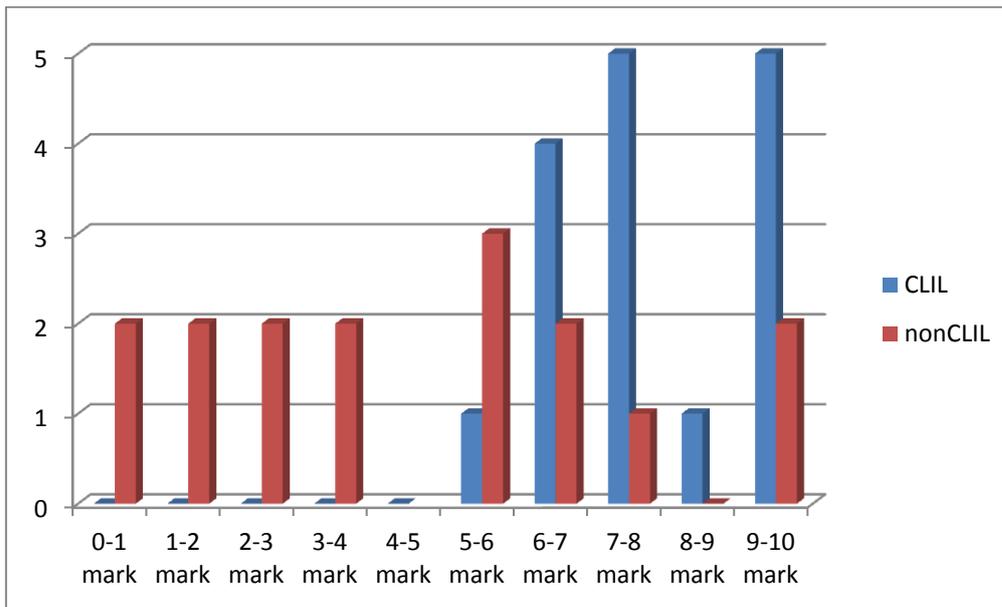
As shown above, in the CLIL group 14 students passed the test (87.5%) and the two of them who failed did it with a mark close to 5, while in the control group only 4 students passed the test (25%).

Scanning



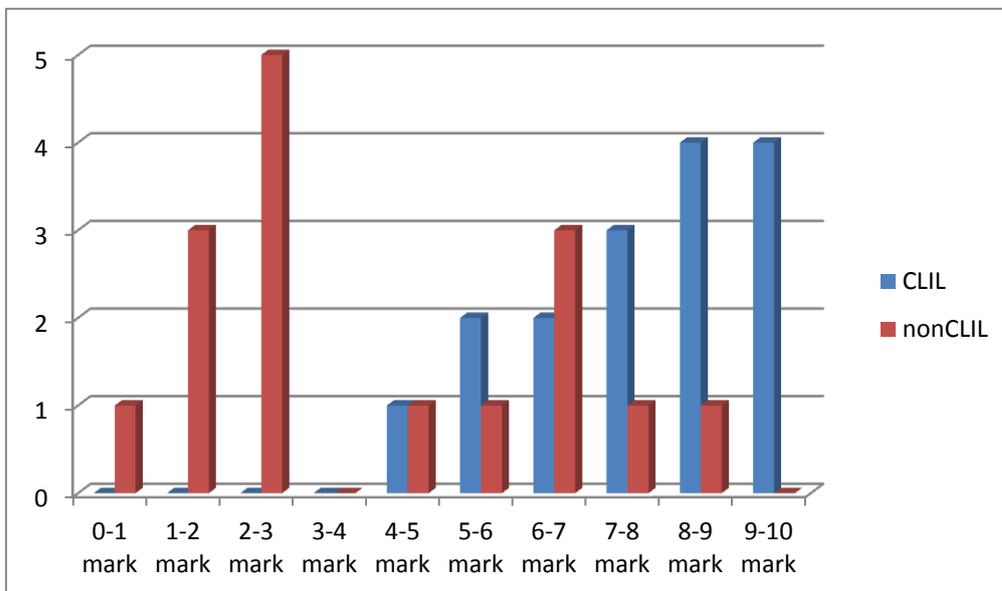
According to the results, 50% of the students in the control group (8 of them) obtained more than 5 points in this activity, it was the one that they did better. In the experimental group only the 18.75% failed this task (3 students).

Skimming



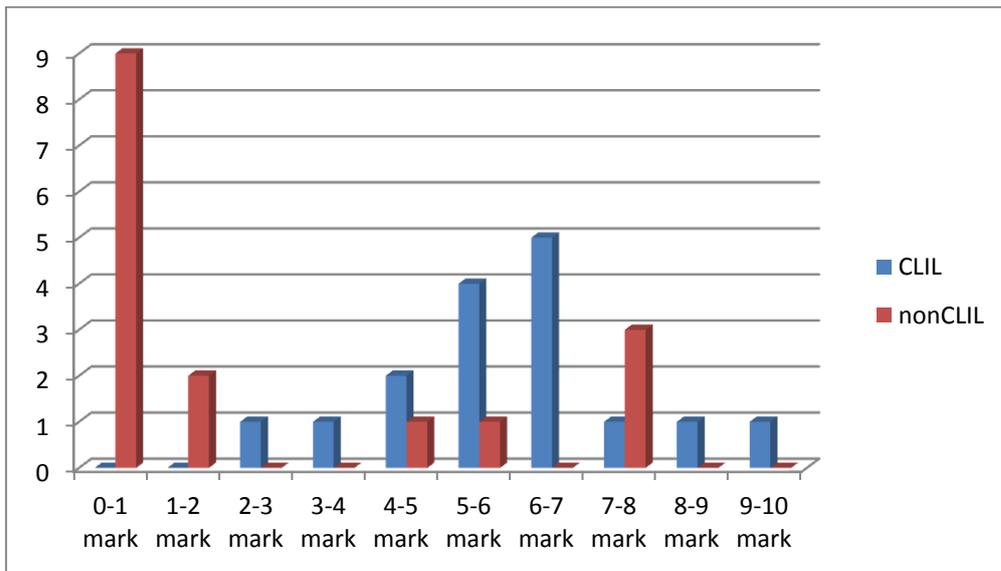
This is the skill in which the CLIL group obtained better results, as shown in the graph the 100% of the students got marks above 5. In respect to the non CLIL students, only 50% of them achieved greater punctuation than 5.

Reading for detail



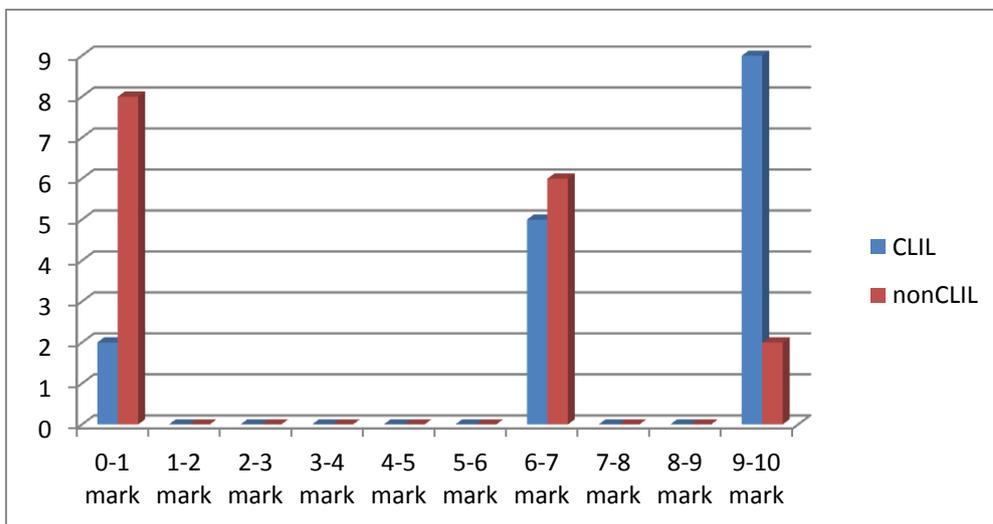
In the case of reading for detail, 62.5% of the scholars from the control group obtained marks under 5 and worryingly, 56.25% scored under 3. On the other hand, only one student from the CLIL group achieved a punctuation lesser than 5 and it was 4.86.

Inferring meaning from context



The use of this skill/strategy was the less successful in both groups but as shown in the graph the 68.75% of non CLIL students scored under 2 while none of the CLIL group obtained marks lesser than 2. The 25% of the CLIL scholars failed in this kind of activity compared to the 75% of students who did so in the non CLIL group.

Linguistic knowledge



In this activity, due to its design, the only possible scores were 0, 3.3, 6.6 and 10, that is the reason the students are distributed only in a few ranges. Only 2 scholars from the experimental group did not show this skill (12.5%) compared to 8 of their counterparts (50%).

III. SECOND QUESTIONNAIRE

Considering the students' answers and their results in the comprehension activities, mainly the ones that tested the reading for detail strategy since their answers to them reflected if they had understood the main idea of each paragraph, it can be said that from the CLIL group most of the participants were conscious of their comprehension skills and their difficulties. Most of them signaled the activity that tested inferring meaning from context as the most difficult and it was the exercise in which they obtained lower marks in general. Only two students' answers from this group were not in accordance with their answers to the comprehension test (12.5%)

In the non CLIL group only the four students who obtained better marks gave answers that reflected their results on the test (25%).

DISCUSSION AND CONCLUSION

As stated previously, the goal of this study was to test whether CLIL instruction in a subject like mathematics enhances students' reading comprehension.

The results obtained confirmed this, as **CLIL students clearly outperformed their non CLIL peers in the reading comprehension test** since the global mean of the experimental group was almost two times higher than the mean achieved by the participants of the control group. This data supported the first hypothesis of the study that suggested CLIL students were going to perform better at the reading test.

In relation to the evaluation of the reading skills or strategies, the findings showed that in general, **CLIL participants were very good at skimming**, meaning that they were skilled at grasping the general idea of the text after a quick reading. This is probably because these students were more used to reading different kind of texts in the target language.

As for the control group, they performed better in the scanning activity, possibly due to the fact that the exercise consisted of an organized table to fill with pieces of information. Because of their low self-esteem towards the language, they may have felt more comfortable when the framework of the answers was provided.

Another interesting finding was that the CLIL group also showed very good skills at reading for detail since half of them achieved very good marks (between 8 and 10 out of ten) and in the other half the lowest mark was 4.86. Considering that detail reading consists of reading in depth the text and understanding most of its information, it can be assumed that CLIL students were successful readers. Saying this and taking into account previous studies on reading comprehension, these participants must have combined top-down and bottom-up strategies to reach understanding.

Non CLIL participants showed more difficulties when this skill/strategy was required as more than half of them obtained very low punctuations (nine of them had marks lower than 3). The explanation for this may be that these students had great difficulties in understanding the text and they were stuck at the bottom-up level of the text processing.

Inferring the meaning from context was the skill/strategy in which the CLIL and the non CLIL groups showed more difficulties, the total mean for this skill was the lowest in

both groups (5.77 and 2.18 respectively) but at the same time it was in this skill test where the difference between both groups was higher (CLIL mean is 2.6 times higher than the non CLIL one). This showed that **the students who received CLIL instruction had a greater lexical knowledge than the ones who had only conventional EFL lessons.**

The findings obtained in the second questionnaire indicated that in general most of the participants of the CLIL group showed metalinguistic awareness when reflecting about their performance in the reading test while only the four students who performed better at the test from the non CLIL group showed this skill. This great difference between groups may indicate that CLIL students are more aware of their language knowledge and comprehension performance. Although it is not clear that this better metalinguistic awareness of the experimental group was due to the CLIL instruction only, as the students who showed this skill in both groups were the ones with higher level of competence in L2.

Considering the second hypothesis of the study which suggested the idea that CLIL students would performed better when metalinguistic awareness and lexical knowledge were required, it could be said that the results obtained confirmed that the students from the experimental group had a **greater domain of the language, showing a better understanding of the text and a greater capacity to infer the meaning from the context** than their peers from the control group.

One possible explanation for the low marks obtained by many of the non CLIL students could be the lack of interest and motivation they showed towards the target language, they had a very low self-esteem and considered themselves unable to understand and practice English so some of them did not even try to carry out the reading test properly. Most of them found the text too difficult to understand and that affected their motivation and self-esteem.

A positive finding about the non CLIL group was that considering their attitude towards English, they enjoyed the pre reading activities session more than their peers from the CLIL group. The explanation may be that all the visual realia and ICTs used in the session and the interactive way in which the class was developed helped them to understand better and be more motivated.

I. Conclusion

Taking all the findings into account, some conclusions can be made about EFL and CLIL:

- CLIL students develop a great ability at skimming.
- Scanning activities where the framework of the answers is provided may help low level L2 learners to organize their reading and to reach a better understanding of the text.
- Students who have difficulties in learning English and a low self-esteem as learners may benefit from the use of ICTs and visual realia in pre reading

activities, as it appears to boost their interest and motivation towards the language.

- **Final conclusion:**

Considering the following statements:

- CLIL in a subject like mathematics helps students to obtain good results in reading comprehension. CLIL in mathematics enhances reading comprehension skills.
- Students who receive CLIL instruction have a better metalinguistic awareness, possibly influenced by their higher level of competence in the target language.
- CLIL students have a greater lexical knowledge than non CLIL ones showing better aptitude to infer the meaning of words from the context than students who do not receive the content-based language approach.

It can be concluded by this study that CLIL instruction in a subject like mathematic increases the general lexical knowledge of the students and benefits reading comprehension, good comprehenders also showed metalinguistic awareness.

II. Limitations and pedagogical recommendations and variables

Due to the threshold hypothesis, many CLIL programmes demand a minimum level of competence in the target language to those students who are going to follow this kind of instruction. As a consequence students who are enrolled in CLIL classes are those who already have a good level of competence in the foreign language. In this study CLIL in mathematics was optional and only those students who had a certain level of competence in English chose to follow this approach. Considering this, it could be assumed that the CLIL group would have a good level of English while the non CLIL group would be more heterogeneous. In fact, the control group had many students who showed low level of competence in the target language. In further research this aspect should be controlled by selecting groups of students with similar level of competence in the target language in order to obtain more accurate results.

It would be interesting to replicate this study with a larger pool of participants, as the benefits of mathematics CLIL programmes and its effects on the receptive skills are not being investigated enough, a great number of participants would help to test this approach more thoroughly. Another suggestion for further research on this topic is to complement the quantitative study with follow-up interviews of students regarding their opinion about CLIL and their reflexions on reading comprehension, this method would provide useful information for analyzing the reading skills/strategies' use more exhaustively.

Another recommendation for further research is to write the questionnaires in the mother tongue of the students as they may feel more comfortable and that could lead to more accurate answers on their behalf.

Finally, this study could be complemented by a longitudinal study with the CLIL group, testing how their reading comprehension develops from the first year of the CLIL instruction to the last. Checking their progression in reading comprehension along with CLIL instruction could notably contribute to this field of research.

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APPENDIXES

QUESTIONNAIRE 1

NAME.....

YEAR.....

1. Which topic do you think is more interesting?

- music cinema sport
internet travelling food

Other.....
.....

2. Which kind of music do you like?

- pop rock heavy metal techno
latin music rap classical music

Other.....
.....

3. Which kind of films do you prefer?

- comedy thriller horror
romantic drama cartoons

Other.....
.....

4. Which sport do you practice? Do you like sports?

- football basketball baseball I don't like sports
karate handball tennis athletics
swimming taekwondo gymnastics

Other.....
.....

5. Do you play any instrument?

- saxophone drums violin classic guitar
flute piano electric guitar I don't play any instrument

Other.....
.....

6. Do you like travelling? Where would you like to go?

- Australia New Zealand Ireland South Africa Kenya
USA India Bahamas United Kingdom Canada
Philippines Cameroon Jamaica

Other.....
.....

7. What do you use internet for?

- school games social networks (facebook, twitter, tuenti...)
email news search information

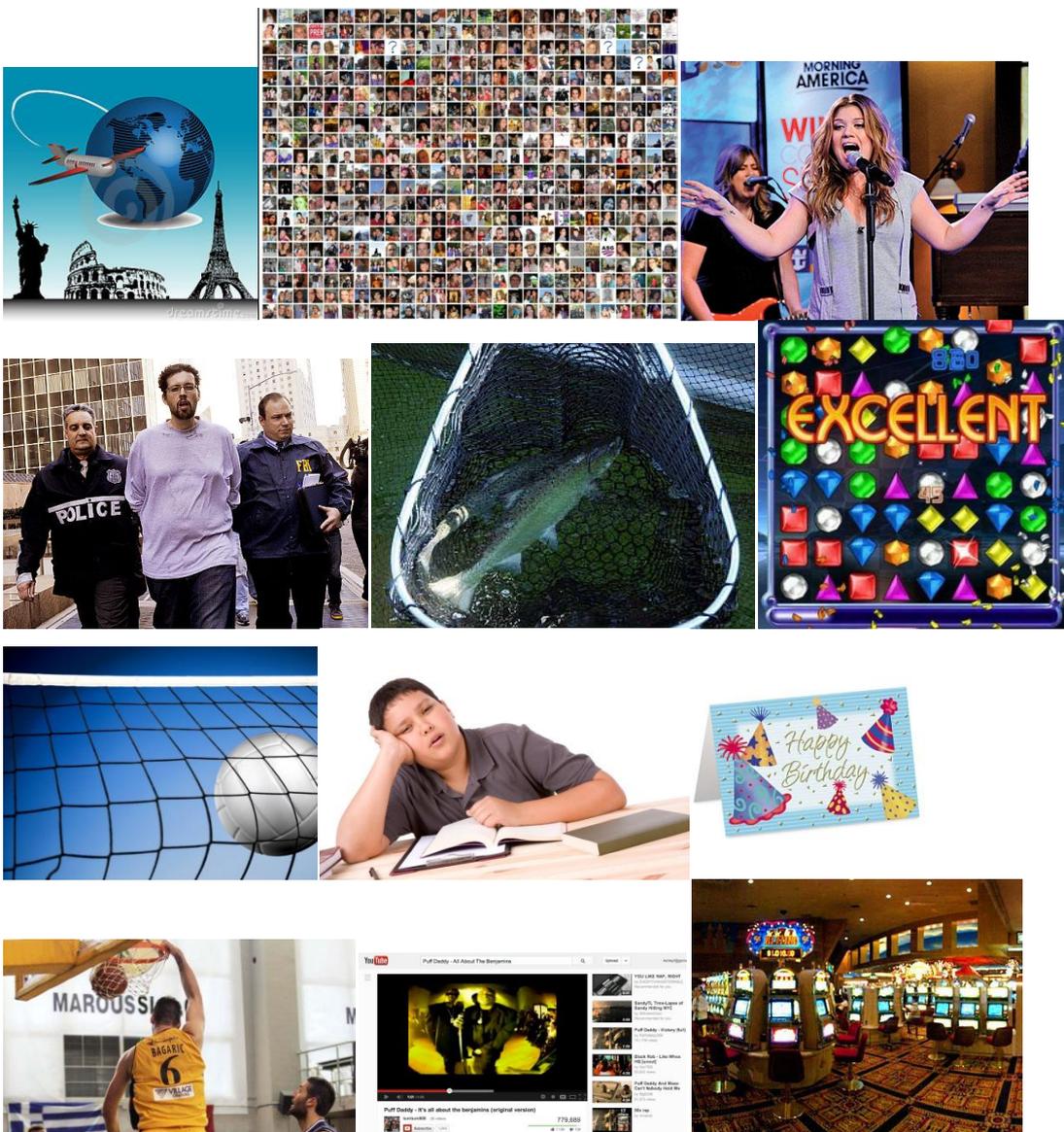
Other.....
.....

PREREADING ACTIVITIES

A) Predicting the content

Given the title: "Caught in the net"

- What do you think the text is about? Fishing, butterflies, computers, internet, criminals...
- Why? What caught means? And net?



- Which pictures do you associate with the text?

Think in pairs of three other possible titles for the text:

Social networks, Internet and teenagers, internet addictions, 4 experiences with internet...

B) Predicting the vocabulary

Here you have a few words...

Give up Gaming Plane Friends Music Travel Fish Sport Amazing

Tickets Family Marks Degree School Laptop Animals Hooked

Enjoy Fun Stay in touch Screen Keyboard Party Site Spare time

Which ones do you think are in the text?

- After the selection of one of the titles of each pair, the students vote for the best one.
- With the selected title students write a short composition about the topic in pairs (40-50 words).

CAUGHT IN THE NET

1. **Ahmed:** Sometimes I think that *My Space* has taken over my life. When I am on the site I lose all sense of time. I have no idea how long I've been on it. I think it's been only a few minutes, but when I look at my watch it's been hours, not minutes! Sometimes I'm on the site until the morning and then I have to go to school and I feel terrible. I try to concentrate on my lessons, but all I really want to do is get back on *My Space*! I now get very bad marks for my work, so I realize I've got a problem.
2. **Andrew:** I spend every spare minute on *You Tube*, I love music, and it's the best way to watch concerts of my favourite bands and singers. There are some amazing videos of bands from the past too, that are fun to watch. I also enjoy reading the comments that people make about videos. *You Tube* is not just music, of course. There are serious interviews, funny films of animals, dance, sport, and lots of more.
3. **Anabelle:** I love *Facebook* because it's the best way to stay in touch with friends and family. They don't complain that I don't email them very often these days: they can see my photos, my videos and who my friends are. *Facebook* also tells me whose birthdays are coming up, so I always remember to send a card- an e-card of course! The only problem is the amount of time I spend on *Facebook*. I sometimes spend more time on it than I do studying.
4. **Sae Ju:** I became hooked on gaming when I was a student. I played games all day long, and I only stopped to eat or sleep. However it soon affected my studies, and I stopped going to classes. I said to myself, "You won't get a degree and become successful in the real world if you continue playing games". So I decided to give up games. It was very difficult at first, but it was the right thing to do.

Vocabulary

To take over: to take control of something	Spare time: tiempo libre
Site: website	To enjoy: disfrutar
Amazing: incredible	Whose: de quién
Amount: quantity	To stay in touch: to keep in contact, estar en contacto
Hooked: addicted	Coming up: imminent, a la vuelta de la esquina
To give up: to stop	Degree: Título, diploma

COMPREHENSION EXERCISES

1- Complete the table (1,5 points)

Student	Site	What do they use the site for?	Does it affect their studies?
Ahmed		It doesn't say	
Andrew			
Annabelle			
Sae Ju	games		Yes, he stopped going to classes

2- Answer the following questions. (2 points)

a) What happens to Ahmed when he is on *My Space*?

.....

b) Why does Andrew like *You Tube*?

.....

c) What does Annabelle like about *Facebook*?

.....

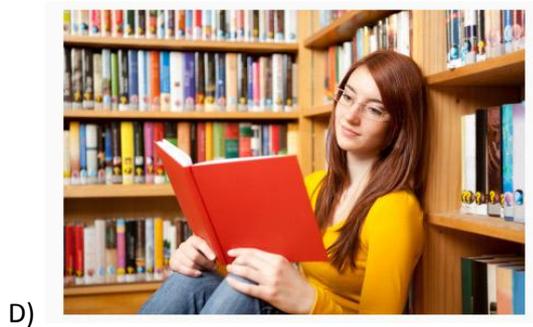
d) Why did Sae Ju give up games?

.....

3- Find the words in the text that can match these definitions. (6 points)

- _____ : to look at or observe closely or attentively
- _____ : horrible, very bad
- _____ :classes
- _____ : written or printed sign or symbol, as for punctuation. Scores
- _____ : a group of musicians
- _____ :movie
- _____ : to express an objection
- _____ : all the time
- _____ : to pass time
- _____ : but
- _____ : prosperous, famous
- _____ : correct

4- Match these pictures with each experience. Be careful because there are 3 that don't match any of the stories. (2 points)



Ahmed: picture

Annabelle: picture

Andrew: picture

Sae Ju: picture

5- Write three examples of connectors that appear in the text. (1,5 points)

..... , and

6- Say if the following sentences are true or false and why. (5 points)

- Ahmed thinks it is ok to spend all the time on My Space. T / F
Because.....
.....
- Sae Ju is still playing games these days. T / F
Because.....
.....
- Annabelle checks Facebook to remember birthdays. T / F
Because.....
.....
- Andrew only watches music videos. T / F
Because.....
.....
- You can use You Tube to watch all kind of videos. T / F
Because.....
.....

7- Here you have 5 sentences, match them with each student. There is a spare one.
(2 points)

- a) I make friends from all over the world!
- b) My parents are not very happy with my school results.
- c) I can design my own website.
- d) I played the hero who saves the girl.
- e) This site is great!

- 1- Ahmed letter
- 2- Andrew  letter
- 3- Annabelle  letter
- 4- Sae Ju  letter
- 

