Teaching critical literacy in the classroom: A comparison of CLIL and EFL across contexts

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Abstract

Critical reading (Fairclough, 1989, 1995; Kress, 1985; Wallace, 2003) is considered to be one of the instruments that gives the necessary resources to construct meaning in discourse. This paper presents the results of a quasi-experimental study with a pre-test post-test design on students in the 6th year of primary education (10-11 years old) enrolled in two schools in Spain, one school located in the Basque Country (CLIL group) and the other in Cantabria (EFL group). Altogether four groups were selected: CLIL-experimental, CLIL-control, EFL-experimental and EFL-control. The experimental groups received critical reading strategy instruction for seven weeks while the control groups continued with regular classes. The one-way ANCOVA results showed that students in both the CLIL and EFL programmes developed greater mastery in critical reading after the teaching protocol. However, and contrary to our initial hypothesis, experimental students from the EFL context outperformed the CLIL learners. The novelty of the critical reading awareness protocol and motivation seemed to have a greater influence on the EFL students, who, unlike the CLIL students, were not so familiar with strategy learning. The new training procedure helped them to promote higher order critical reading skills, taking more advantage of the whole strategy learning protocol.

Keywords: critical reading, reading instruction, CLIL, EFL, learning strategies.

Resumen

La lectura crítica (Fairclough, 1989, 1995; Kress, 1985; Wallace, 2003) se considera uno de los instrumentos que proporciona los recursos necesarios para construir significado en el discurso. En este trabajo se presentan los resultados de
un estudio cuasi-experimental con un diseño pre-test post-test con alumnado de 6º curso de educación primaria (10-11 años) matriculado en dos colegios de España, uno situado en el País Vasco (grupo AICLE) y otro en Cantabria (grupo EFL). En total se seleccionaron cuatro grupos: AICLE-experimental, AICLE-control, EFL-experimental y EFL-control. Los grupos experimentales recibieron instrucción en estrategias de lectura crítica durante siete semanas, mientras que los grupos de control continuaron con las clases regulares. Los resultados del ANCOVA unidireccional mostraron que los alumnos de los programas AICLE y EFL desarrollaron un mayor dominio de la lectura crítica tras el protocolo de enseñanza. Sin embargo, y contrariamente a nuestra hipótesis inicial, los alumnos experimentales del contexto EFL superaron a los alumnos del programa CLIL. La novedad del protocolo de sensibilización a la lectura crítica y la motivación tuvieron una mayor influencia en los alumnos de EFL, quienes, a diferencia de los alumnos de AICLE, no estaban tan familiarizados con el aprendizaje de estrategias. El nuevo procedimiento de formación les ayudó a fomentar las destrezas de lectura crítica de orden superior, sacando más partido de todo el protocolo de aprendizaje de estrategias.

Palabras clave: lectura crítica, enseñanza de la lectura, AICLE, EFL, aprendizaje de estrategias.

1. Introduction

Critical literacy (Fairclough, 1989, 1995; Kress, 1985; Wallace, 2003) refers to a higher order thinking skill which considers the different mechanisms that are used by authors in order to influence readers. Researchers such as McLaughlin and DeVoogd (2004a) or Molden (2007) claim that critical reading is a constituent of critical literacy. Critical literacy begins with reading itself by helping learners of all ages to read in a more meaningful way and to become more actively involved in the process. This implies engaging the reader by making them ask questions such as the author’s intention or the main argument that is being presented. It encourages the questioning of ideas by analysing and interpreting the texts, exercising their judgement about what they read and not taking anything at face value.

Reading from a critical perspective involves making connections between the text and the world, moving beyond the text itself to comprehend such issues as the author’s intentions or opinions. For some scholars (Dozier, Johnston & Rogers, 2006), this involves understanding literacy as a tool for social action. It further encourages the use of power to construct meaning, implying that communication is a social act that can lead to social change (Comber & Simpson, 2001). However, when we focus on critical reading, we must first acknowledge that it can actually involve many different concepts, which range from merely understanding the definitions of words or the
structure of sentences to a more metacognitive approach (Bosley, 2008; Hermida, 2009; Li, 2016; McLaughlin & DeVoogd, 2004a) in which readers are expected to contrast different viewpoints, solving problems in order to understand how meaning has been constructed and making their own judgements based on what they read. This requires a deep and active engagement with the text (Fleming, 2020; Vaseghi, Gholami & Barjestech, 2012).

This article deals with critical reading in the case of second or foreign language learning. As Wallace (2003, p. 49) argues, “any educational activity must address the issue of what kind of knowledge is being transmitted or constructed in classroom settings”. In relation to this, critical literacy does not consider language just as a set of explicit messages, but takes into account those hidden, where the critical reader takes an active role by questioning both the implicit and explicit information and reflecting on the content or processes involved (Endres, 2001; Palincsar & David, 1991). Thus, in the case of a foreign language, the reader may be more likely to be easily manipulated because of their lower language level or partial and/or total lack of cultural skills. In our study not only do we analyse the effect of a critical reading intervention on students learning English as a foreign language (EFL), but we also compare them with another cohort of learners following a content and language integrated learning (CLIL) approach in the learning of English with the aim of looking at the similarities and differences between them. As is well known, CLIL refers to those programmes that use a foreign or additional language in the teaching of content subjects (see Ruiz de Zarobe, 2016).

Before presenting the study, we will devote the following section to previous research that has addressed the importance of teaching critical reading in the L2 classroom and the different approaches to critical reading. We will then present the study, its objectives, research questions and hypotheses, as well as the methodology used. This is followed by a discussion of the results and the conclusions drawn from them. The article concludes with future lines of research, a description of some of the limitations and the pedagogical implications of the study.

2. Literature review

2.1. Critical reading research in the classroom

In this section we will describe some of the research that has been conducted on EFL reading from a critical stance. These studies can help us to understand some of the mechanisms and challenges of critical reading. Zabihi and Pordel (2011) analysed whether three popular reading textbooks designed for EFL intermediate (B2) and advanced (C1) learners promoted critical reading. In order to do so, three criteria
were considered: critical thinking items, the use of appropriate tasks, and strategic instruction. Their results showed that the three textbooks met the first criterion to some extent, but seriously lacked the other two.

A year later, Fahim, Barjesteh and Vaseghi (2012) analysed the effect of critical thinking strategy training on reading comprehension at university. In order to do so, 240 EFL students were selected and divided into two proficiency levels based on their TOEFL results. Each proficiency group was further subdivided into two cohorts: a critical and a non-critical group. The results suggested that critical thinking skills significantly affected EFL learners’ reading comprehension performance. However, no effect of the critical thinking strategy training was found across proficiency levels. As the authors argue, these findings provide empirical support for the facilitative effect of critical thinking strategy training on the reading comprehension performance of EFL learners.

In a university context as well, Zin, Eng and Rafik-Galea (2014) conducted research on critical reading practices on learners of English from various disciplines in a Malaysian university. Their study analysed learners’ ability to identify the author’s purpose and the main idea of the text by asking critical reading questions. The outcomes showed that 66% of the students failed to identify the author’s intention with the text and only 34% of the participants could correctly identify the main ideas. These results indicate that students lacked analytical and inference skills, implying problems with critical reading strategies.

To illustrate the effectiveness of the instructional approach on critical reading, argument analysis and metacognitive monitoring skills, Bensley and Spero (2014) compared three groups of university students who received different types of instruction: direct and explicit teaching of critical thinking through rule application, critical reading infused into the course and content knowledge acquisition. Compared to the other two groups, the first group showed significantly better results in the tests that measured argument analysis and critical reading skills, as well as improved metacognition. These results suggest that direct and explicit teaching of critical thinking skills can improve both critical reading and metacognitive knowledge.

Much of the research examining critical reading has been conducted in university settings and much of it also portrays a lack of critical reading skills on the part of students unless they are explicitly taught. In that respect, Azizi-Fini et al. (2015) arrived at similar results to those of Bensley and Spero (2014) in their study of critical thinking skills when they compared first-year students (a freshman at the university) and senior nursing students at Kashan University of Medical Sciences in Iran. Their results showed that both the freshmen and senior nursing students had low critical thinking
skills, and those skills did not change during their nursing degree. Furthermore, no correlation was found between their critical thinking skills and their age, gender, high school grade point average (GPA), rank in university entrance examination or interest in the nursing profession, which shows that no change is expected unless critical thinking is tackled explicitly and directly in the classroom.

On the other hand, part of the research has been concerned with exploring teachers’ opinions and perceptions of critical reading. By way of illustration, Defianty and Wilson (2019) reported on the use of teacher questions to promote critical thinking in seven high school English classrooms in Indonesia. Their data showed that teachers often prompted thinking about the language (64% of questioning sequences) and through the language (36% of sequences) but they frequently missed the opportunity to promote higher order critical thinking skills.

More recently, Sutherland and Incera (2021) described faculty perceptions about critical reading skills and their usefulness for students. In general, faculty considered more complex skills (e.g., applying) as more useful, while simpler skills (e.g., skimming) were considered less useful. They also claimed to spend more time teaching the critical reading skills they considered to be more necessary. The authors acknowledge the importance of understanding the usefulness of teaching critical reading skills to improve learning in university settings.

The focus of the research and the context change completely in Díaz Iso et al. (2022), who, on a more general level, conducted a systematic review to analyse the wide range of interventions to improve reading literacy in primary school students. The following characteristics of the interventions were identified: (1) they were remedial, (2) they targeted students in disadvantaged situations, and (3) they focused on executive functions. However, this review was based on reading literacy, without a specific focus on critical reading, the basis of this study.

In general, research related to critical reading in the classroom defends the need for students to engage actively with the text and to be explicitly taught how to do so in order to become progressively more critical and autonomous when reading. However, much of the research conducted has been undertaken at university level, rather than in school settings, and in relation to EFL contexts. In fact, while there is little research analysing critical reading, even less has been conducted in CLIL settings comparing CLIL and EFL contexts. One of those studies was carried out by Nieto Moreno de Diezmas (2017), who examined how CLIL programmes affect the development of reading comprehension in the mother tongue, Spanish. In order to do so, she selected two groups of students, CLIL and EFL in secondary education (13-14 years old). The results showed that the acquisition of literal reading comprehension
and inferential reading comprehension in Spanish significantly benefitted from CLIL. Apart from that, global comprehension, lexical comprehension, understanding of space-time relationships, integration of extra-textual information and identification of extra-textual relations were the skills that benefitted the most. However, no significant differences were found in critical reading comprehension. The author attributes the positive results of the CLIL group to the potential transfer of reading strategies across languages and the importance of reading in CLIL settings. One year later, Nieto Moreno de Diezmas (2018) analysed the effect of CLIL on the provision of reading proficiency in Spanish as L1 in primary school. She also compared reading comprehension in two different cohorts, a CLIL group (bilingual group) and a non-CLIL group. The overall results indicated that the bilingual programme did not negatively affect the acquisition of reading proficiency in Spanish as L1, suggesting the transfer of strategies between languages. There were also no differences between the two groups in the acquisition of literal and inferential reading, although there were significant differences in favour of the non-CLIL group in the level of critical reading. This could be explained by the difficulty of reading in an L2, which may result in teachers paying more attention to the literal than to the critical comprehension of academic texts.

Finally, Ruiz de Zarobe and Zenotz (2018) report on an intervention in reading comprehension among learners of English as a third language (L3) in a multilingual (Spanish-Basque-English) context in the Basque Country. The study involved a pre-test post-test design, with an intervention of 7 weeks using two intact groups of participants that served as experimental and control groups in CLIL classrooms, where a number of subjects are taught through the L3: English. Findings indicated that reading awareness, reading comprehension, which included critical reading, and strategy use were enhanced following the training. While both the control and the experimental group improved over time, the experimental group showed statistically significant gains in reading comprehension. Furthermore, this difference was maintained over a two-year period, with the experimental group showing a marked improvement in reading competence. That study supported previous research (Ruiz de Zarobe & Zenotz, 2014), that examined if and how strategic instruction could provide the specific techniques needed for successful language learning in CLIL settings. More precisely, it analysed how reading strategic instruction could increase metalinguistic awareness through the teaching of critical reading strategies to plurilingual students of primary education in the Basque Country.

In sum, the literature on critical reading underscores the importance of engagement in order to enhance critical reading. This may be achieved through strategy instruction, which can be explicitly taught and learned in the classroom, as we will see later on.
2.2. Reading from a critical stance

In the previous sections we have seen how critical reading involves reflecting on the content of a text, scrutinising the author’s opinion and interpreting the points of view they may have. In this respect, different authors give an account of approaching the reading process in different ways. For instance, in her framework for critical literacy, Janks (2010) follows three perspectives: (1) decoding, (2) reading with the text and (3) reading against the text. As the author claims, as critical readers we should be able first to understand the text, taking notes and paraphrasing the key points, in brief, “decoding” the text. “Reading with the text” involves interpreting it, giving a meaning to the text and interpreting and attaching our ideas and values to it. Lastly, “reading against the text” relates to the critical slant of the text, combining individual and social experiences to understand and challenge the ideologies behind it. In short, reading critically involves engaging with the text as an indispensable tool for success. “Essentially, critical literacy is about enabling young people to read both the word and the world in relation to power, identity, difference and access to knowledge, skills, tools and resources”, according to Janks (2013, p. 227).

Hughes’s model (2014), which is to some extent related to that of Anderson and Krathwohl’s (2001), uses the image of a staircase to represent the five linear sub-skills that progress upwards in terms of difficulty in critical reading. The five sub-skills are as follows: (1) “understanding”, which may be easier in the mother tongue but more difficult and time consuming in a foreign language, (2) “Applying” refers to the need to apply what has already been learned to new information. In language learning, it may refer to task completion using the information already gathered. The next three stages relate more directly to key higher-order critical thinking skills. The third step is (3) “analysing”, where we study the text to understand how the author’s information is presented, without taking it at face value. The following stage is (4) “evaluating”, which refers to the ability to evaluate the relevance and validity of the author’s opinions and views, differentiating fact and opinion. The final stage (5) “creating” involves applying your knowledge to create something new in new situations and contexts.

Both models are helpful to develop our students’ ability to read critically. In this study, we share the ways they approach critical reading, in our case for young children. The next section will discuss our research for the improvement of critical reading which as Raman, Sharma and Collins (2013) claim, can be mainly achieved through the effective and regular application of reading strategies.
3. The present study

3.1. Objectives, research questions and hypotheses

The main objective of this paper is to investigate whether there is a connection between the teaching of critical reading strategies in the classroom and the improvement of critical reading skills in EFL and CLIL contexts. Apart from the effect of the teaching protocol, we are also interested in studying the differences between both learning contexts (EFL and CLIL).

Based on the objectives mentioned above, the following research questions were considered:

1. To what extent do students in a CLIL and in an EFL programmes develop a greater mastery in critical reading in L2 after an intervention on critical reading strategies?

A significant relationship between the critical reading intervention and the development of critical reading is expected, following previous research (Ruiz de Zarobe & Zenotz, 2014, 2018, 2019; Bensley & Spero, 2014; Fahim, Barjesteh & Vaseghi, 2012), so that experimental students, regardless of the context, would outperform their control peers.

2. Do CLIL experimental students show a greater mastery of critical reading competence than EFL experimental students?

Our hypothesis is that CLIL may have some positive effects on the acquisition of critical reading skills when compared to EFL. In other words, it is reasonable to expect that CLIL students would benefit more from the critical reading intervention than EFL students. There are different arguments that may support our hypothesis: firstly, in the case of CLIL settings, the integration of content goes hand in hand with the integration of the language of the discipline, which involves the activation of different cognitive and metacognitive processes (Ruiz de Zarobe & Smala, 2020). The cognitive effort that students need to make to learn the content and the language in CLIL settings may eventually enable them to take more advantage of the teaching protocol. Furthermore, CLIL is often associated with active and student-centred teaching methodologies (van Kampen et al., 2018).
3.2 Methodology

3.2.1. Participants and context of the study

The data in this study correspond to students in Year 6 of primary education (10-11 years old) enrolled in two schools in Spain. One of the schools, from now on “CLIL school”, was located in the Basque Autonomous Community (BAC). The Basque Country is one of the smallest autonomous communities in Spain but, with a population of over 2,000,000 inhabitants, it ranks eighth in terms of population. It is a bilingual community with two official languages, Basque, a pre-Indo-European language unrelated to any of the language families existing in Europe today, and Spanish. Both are official languages, but while Spanish is the majority language, Basque is the minority language of the community. However, Basque is widely spoken and taught in schools, and has a strong presence in the media and public institutions (Ruiz de Zarobe, 2015).

The other school, from now on “EFL school”, was located in Cantabria, an adjoining region to the Basque Country in the north of Spain. Cantabria is a monolingual community, with Spanish as their official language.

Our study had a quasi-experimental pre-test post-test design with four groups: CLIL-experimental, CLIL-control, EFL-experimental and EFL-control. In Table 1 we can find the total number of participants for each of the groups. The total study sample included a percentage of 46.3 boys and 53.7 girls.

Table 1: Total number of participants

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>52</td>
<td>25%</td>
</tr>
<tr>
<td>Control</td>
<td>75</td>
<td>36%</td>
</tr>
<tr>
<td>EFL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>54</td>
<td>26%</td>
</tr>
<tr>
<td>Control</td>
<td>26</td>
<td>13%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>207</td>
<td>100%</td>
</tr>
</tbody>
</table>

1 In Spain there are 17 autonomous communities which have authority on education. In the case of our two schools in both communities, all primary school students followed the same educational protocol, without any selection for CLIL groups. This is not always the case in secondary education.
The basic level of English in Year 6 both in the Basque Country and Cantabria is A2 according to the Common European Framework of Reference for Languages (CEFR). This level implies that students can deal with everyday situations, use common phrases and talk about familiar subjects. No placement test was conducted prior to the intervention but, as we will see in the data analysis section, the pre-test score was included in the analysis as a covariate to control for possible initial differences.

In both schools, the students filled out a biographical questionnaire (see Appendix 1) which, among other questions, collected information about parents’ studies as well as about their work, in order to find out about the social context from which the participants came.

The CLIL school was a private school partly subsidised by the Government. The social background of the students at the school can be said to be middle class. It was noted that 71% of the participants’ fathers and 73% of the mothers had university degrees.

Table 2: Level of education of the participants’ parents from CLIL school

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary/Secondary</td>
<td>9</td>
<td>6.5%</td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>25</td>
<td>18%</td>
</tr>
<tr>
<td>University</td>
<td>105</td>
<td>75.5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>139</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mothers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary/Secondary</td>
<td>5</td>
<td>3.5%</td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>26</td>
<td>18.5%</td>
</tr>
<tr>
<td>University</td>
<td>110</td>
<td>78%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>139</td>
<td>100%</td>
</tr>
</tbody>
</table>

The EFL school was also a private school partly subsidised by the Government. With regard to the socio-economic level of the participants’ families, we can see that it is also medium, as most of the parents have completed higher education or baccalaureate studies. There is a slight difference between the contexts of Cantabria and the Basque Country: while in Cantabria the fathers have higher levels of education, in the Basque Country it is the mothers who have a higher level.
Table 3: Level of education of the participants’ parents from EFL school

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary/Secondary</td>
<td>12</td>
<td>8.3%</td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>44</td>
<td>30.3%</td>
</tr>
<tr>
<td>University</td>
<td>89</td>
<td>61.4%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>145</td>
<td>100%</td>
</tr>
<tr>
<td>Mothers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary/Secondary</td>
<td>23</td>
<td>16.1%</td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>42</td>
<td>29.4%</td>
</tr>
<tr>
<td>University</td>
<td>78</td>
<td>54.5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>143</td>
<td>100%</td>
</tr>
</tbody>
</table>

In the case of the CLIL school, the students’ L1 was mainly Spanish in terms of general proficiency, but a high percentage of them used both Spanish and Basque in the school context (both in and outside the classroom). Furthermore, pupils had all been learning English formally at school since they were 4 years of age. In fact, students learned each of the three languages: Basque, Spanish and English for at least 20% of the teaching hours (6 hours per week). Our sample received 3 hours per week of EFL, and science, physical education and arts and crafts were also taught through English. Basque, music, religion, and tutorials were carried out in Basque, and all other subjects (Spanish and mathematics) were undertaken in Spanish.

In the EFL school, formal instruction only involved EFL 3 times a week. Table 4 shows the time of instruction in each context.

Table 4: Level of education of the participants’ parents from EFL school

<table>
<thead>
<tr>
<th>Group</th>
<th>CLIL school(^2) Hours per week</th>
<th>EFL school Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-primary</td>
<td>9 hours EFL/CLIL</td>
<td>1 hour EFL</td>
</tr>
<tr>
<td>Primary Education</td>
<td>4 hours EFL</td>
<td>2.5 hours EFL</td>
</tr>
<tr>
<td>Grades 1-2</td>
<td>4.5 hours CLIL</td>
<td></td>
</tr>
</tbody>
</table>

\(^2\) As can be seen, the “CLIL group” not only learns English in the content classes, but also receives more formal EFL classes. In fact, we could have called this group “CLIL+EFL group”. However, we have limited ourselves to calling it “CLIL group” for the sake of simplicity.
3.2.2. Treatment procedure

In each context, intact classes of Year 6 of primary education were selected. These classes were randomly assigned to the experimental groups and to the control groups. The experimental groups received instruction on critical reading strategies in English during EFL classes for 7 weeks (1 hour per week), and the control groups continued with regular classes.

The critical reading programme was developed by the research team following the Cognitive Academic Language Learning Approach (CALLA), a model that has been widely used for strategy instruction (see, for instance, Chamot & Harris, 2019). This model has different phases: preparation/awareness raising, presentation/modelling, practice, evaluation and expansion/transfer, which allow for both content and language learning. The aim of this model is for the teacher to gradually shift the responsibility towards the student.

The strategies were selected because they focus specifically on understanding and properly evaluating the information read. These strategies help students to have a clearer understanding of what the text says and what it really means. As a result, when students know more about how to interpret a text, they become critical readers and thinkers. The strategies that were selected were:

- Strategy 1. Distinguish true from false: The aim of this strategy is to help students to discern authentic from biased information. It involves evaluating the validity of the information presented in a text, identifying the contradictions. It helps learners to avoid being misled by false content.

- Strategy 2. Identify the main ideas: Students discover the most important ideas, finding the relevant points. It requires using keywords to express central ideas. It helps learners to understand the purpose and organization of the text.
• Strategy 3. Distinguish facts from opinions: Students distinguish factual and objective information from subjective statements. It helps readers to recognise the relevance of a statement.

• Strategy 4. Discover the author’s intentions: Students come to understand what the writer intended when creating a text. It helps learners to comprehend the implications of the author’s message.

Strategy instruction followed a similar pattern for the seven sessions. Firstly, the strategies were worked on individually and, during the last sessions, combined to make the training more effective (Wharton-McDonald & Swiger, 2009). The pattern for strategy instruction included:

1. Awareness raising of strategies and strategy use, which involved explicit information on why it is important to use strategies and the advantages of their use for students.\(^3\)

2. Modelling by the researcher with explicit information on how, when and why to use the strategy.

3. Practice that included individual, pair or group work through different tasks and games in which learners initially practised the strategies with scaffolding support before the scaffolding was gradually removed under the supervision of the researcher.

4. Finally, an assessment of the effectiveness of the strategy that incorporated a self-assessment learning diary of each of the seven training sessions.

The intervention was carried out by the researchers in English, although Spanish was used in some cases to clarify comprehension. The teaching sessions took place during the EFL lessons for the experimental groups. Meanwhile, the CG continued with their regular classes and were in no way aware of any kind of strategic intervention.

Although this intervention took place in Year 6 of primary education, learners had already worked with reading strategies in English the year before with the same students (see Ruiz de Zarobe & Zenotz, 2018, for a review of the intervention protocol in Year 5). However, we believed it was a suitable moment now to begin with critical reading strategies once they had already learned other reading strategies.

\(^3\) Explicit presentation and practice of critical reading skills has been shown to be beneficial for students’ development of critical thinking (Abrami et al., 2008).
In order to show how critical reading interventions were undertaken in Year 6, we present an example using one of the strategies: “Discover the author’s intentions”. Students were told that authors can sometimes show their values and intentions in a very obvious way, but other times they are ironic and say one thing and mean the opposite. This can become a more effective tool to attract the reader’s attention. Some examples were presented to the students, as shown below:

A picture shows a brother and a sister fighting inside a car and the mother replies to the children:

Apparent intention: Congratulate children for fighting.

- That’s very nice. You’re behaving like a big girl and a big boy. Fantastic!!
- Continue like this and you will go to Disneyland in summer.

Real intention: Make children stop fighting.

- That’s wrong. Stop behaving like this, kids!!
- Continue like this and you will not go to Disneyland in summer.

Figure 1: Example of a strategy: “Discover the author’s intentions”

Junk food is wonderful, children love it. You can save money because it is cheap and because your children need to eat less quantity to get fat.

- Ironic or real?
After raising the students’ awareness of the strategy, which involved explicit information on the benefits of strategy use, students worked with several ironic texts (see Appendix 2 for an example) where they had to discover the real intention of the author and what he or she initially seemed to stand for. The possibility to engage actively in what they read, analysing the author’s intentions, evaluating what is being said, and even questioning and challenging the arguments that were being presented made students take a critical stance, contributing to effective reading comprehension. In our view, this engagement with the text is a way to encourage critical reading strategies, to promote a critical approach and turn young readers into critical readers.

Furthermore, in order to avoid any instructional effect, the researchers followed a didactic protocol so that both the EFL and CLIL experimental groups received the same explicit, systematic and scaffolded instruction on critical reading skills. This instructional protocol involved the group’s perception of the relevance, usefulness and applicability of critical reading skills.

3.2.3. Materials and procedure

In order to answer our research questions, a critical reading test (see Appendix 3) was administered before and after the strategy intervention. The test was administered by one of the researchers in the classroom during normal lessons. Both the control and the experimental groups completed the test in the pre- and post-test phases, which took place a week before and after the intervention, and otherwise received the usual curriculum for 6th year of primary education. The experimental group, however, also followed a strategy intervention, spanning three months a year. The strategy intervention consisted of seven sessions in which the students learned and practiced the critical reading strategies.

Week 1 and 2. Distinguish true from false.
Week 3. Identify the main ideas.
Week 4 and 5. Distinguish facts from opinions.
Week 6 and 7. Discover the author’s intentions.

The critical reading test consisted of the reading of a text about child soldiers. The title was: Welcome to the web site of the coalition to promote the use of child soldiers. The text advocated the use of children as soldiers, but it was obviously a hoax. The test had two parts: the first part had seven open-ended questions that students had to answer using only the information from the text. Two examples are:

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4 All tests had been piloted by the research team prior to the intervention in order to suit the level of language proficiency and prior knowledge of the learners.
• Write two key words to summarize the text.
• Where has this idea (the idea to recruit children under the age of 18 as soldiers) been applied?

The second part consisted of nine open-ended questions that students had to answer using information from the text and about the text. Some examples include:

• Who has written the text?
• What is the author’s intention?
• Can you trust this information? Are there any elements to distrust this text?

Instructions were given in English and participants had 22 minutes to answer both parts, dividing the time as they preferred. Each question was given 1 point so that the maximum score they could obtain was 16.

As can be seen, the protocol undertaken approaches reading practices in a similar way as that presented, for instance, by Janks (2010), and discussed in the introduction to the study. Students needed to be able to “decode” information, which requires linguistic knowledge and proficiency, they needed to “read with the text”, interpreting the written word and, quite significantly, they needed to “read against the text”, providing a deeper critique of the text, challenging what is said.

3.2.4. Data analysis

Once the data were collected, they were analysed using SPSS (Statistical Package for Social Sciences). For reliability index, Cronbach’s alpha was used. The reliability index was 0.862 and, therefore, the internal consistency and reliability of the test were high (Larson-Hall, 2015).

Normal distribution was also studied to best decide on the statistical model for the analysis. The values of skewness and kurtosis were explored to consider the normality of the sample. As the values of these two measures were between 1 and -1, we considered that our sample was normally distributed (George & Mallery, 2010; Paltridge & Phatiki, 2015) and, therefore, it was possible to conduct parametric tests.

To analyse the data, a one-way ANCOVA was conducted to determine statistical differences. The independent variable was the group (EFL-experimental, EFL-control, CLIL-experimental and CLIL-control) and the dependent variable was the score on the critical reading post-test. The score of the pre-test was included in the analysis as a covariate to control for possible initial differences. The fact that the pre-test was used as a covariate removes variability. That is, in ANCOVA, the dependent variable is the post-test measure. The pre-test measure is not an outcome, but a covariate. Therefore, this model assesses the differences in the post-test means after accounting for pre-test values.
To meaningfully interpret the univariate F test for the different groups, we determined whether any statistical assumptions underlying the use of the ANCOVA were violated in the dataset. An examination of Levenne’s Test of equality of error of variance of the score was carried out, and the assumptions of the ANCOVA were met. Results are discussed in the following section.

4. Results

4.1. Research Question 1: To what extent do students in a CLIL and in an EFL programmes develop a greater mastery in critical reading in L2 after an intervention on critical reading strategies?

In answer to this question, the results of CLIL and EFL programmes were studied independently. Firstly, we are going to consider the CLIL context. CLIL experimental students scored a marginal mean of 7.8 out of 16 possible points, whereas the control students obtained a marginal mean of 5.4 (see Figure 2). The marginal mean is the mean adjusted for the covariate. As a result, CLIL experimental students scored higher than their peers in the critical reading post-test, and the difference of 2.4 points was considered significant (p<0.000).

Figure 2: Example of a strategy: “Discover the author’s intentions”

Critical reading post-test. CLIL context

On the other hand, focusing on the EFL context, experimental students scored a marginal mean of 13.3 and the control group obtained 3.9 (see Figure 3). This difference was considered significant (p<0.000).

Figure 3: Results of the critical reading post-test. EFL context

Critical reading post-test. EFL context
In sum, the results of the analyses related to the first research question indicate that the groups (CLIL and EFL) receiving instruction on critical reading outperformed control groups on the post-test.

The next research question considers differences between experimental groups to study whether the treatment is more effective for one group of students.

4.2. **Research question 2: Do CLIL experimental students show a greater acquisition of critical reading competence than EFL experimental students?**

In order to answer this question, we compared the results of the CLIL-experimental and the EFL-experimental groups. Our hypothesis suggested that CLIL experimental students would outperform EFL-experimental students.

If we compare the marginal means of CLIL-experimental and EFL-experimental groups, we see that the former scored 7.8 and the latter 13.3 (see Figure 4). This difference was found to be significant ($p<0.000$) in favour of EFL experimental students. Therefore, our hypothesis was not confirmed as, unexpectedly, experimental students from the EFL context outperformed CLIL learners. Several reasons for this result are suggested in the next section.

**Figure 4:** Results of the critical reading post-test. Experimental groups

![Critical reading post-test. EFL context](image)

Finally, if we compare the results of the control groups, CLIL and EFL, there were no statistically significant differences between them ($p<0.088$).

5. **Discussion**

From the analysis of the data of this study, it can be inferred that the critical reading strategic intervention is an effective tool to improve critical reading both in EFL and CLIL contexts (research question 1). Our results show statistically significant differences between experimental and control groups in CLIL and EFL, which indicates that the intervention has been successful in both contexts.\(^5\) This positive

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\(^5\) Although no placement test was performed, the fact that the pre-test score was included in the analysis as a covariate controlled for possible initial differences.
result is consistent with previous findings (Ruiz de Zarobe & Zenotz, 2014, 2019; Azizi-Fini et al., 2015; Bensley & Spero, 2014; Fahim, Barjesteh & Vaseghi, 2012), which have demonstrated the importance of teaching explicitly critical thinking and critical reading strategies.

This study also shows the importance of supporting students in the learning process by providing them with appropriate scaffolding. As Wilson and Devereux (2014, p. 98) argue, “scaffolding is not merely a synonym for support, and that while scaffolding involves support, it is the nature of that support that is crucial. Rather than ‘dumbing down’ the curriculum, we maintain that scaffolding involves challenging students to make leaps forward into their ZPD. Intellectual challenge must be high, while explanations must be explicit in terms of what is expected, how to achieve it and why it is important”.6 As Wilson and Devereux (2014) claim, scaffolded tasks require high challenge and high support, with practice in the skills, with the necessary feedback from the teacher and with support in their mother tongue, if necessary. In brief, this is the protocol we have followed in our study, which has provided positive outcomes irrespective of the pedagogical approach.

In addition, the results indicate that EFL experimental students benefitted significantly more than their CLIL peers (research question 2). When the two experimental groups were compared, we found out that there were also statistically significant differences between CLIL-experimental and EFL-experimental, in favour of the latter. It seems that our teaching protocol was more effective in the EFL context. In general, as commented above, studies show that CLIL students have better metacognitive awareness (Ruiz de Zarobe & Zenotz, 2018; Coyle, Hood & Marsh, 2010; Meyer et al., 2015). In fact, the European Commission (2014) claims that “CLIL students may also gain in cognitional development and other aptitudes. CLIL presents an opportunity to students for using knowledge learned in one context as a knowledge base in other contexts because it helps learners to apply, integrate and transfer knowledge while fostering critical thinking (Duverger, 1995 cited in Gravé-Rousseau, 2011)”. Furthermore, Meyer (2010), when dealing with quality CLIL methodology, claims that learning skills and strategies “(...) are the pillars of CLIL learning and their potential for promoting language as well as higher order and critical thinking skills has long been neglected” (p. 16).

However, our study presents a different scenario: while it is true that in the CLIL context there was significant improvement in the experimental group, our results indicate that EFL students benefitted significantly more. This unexpected and somewhat surprising outcome could be attributed to the “novelty effect” (Marek,

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6 ZPD stands for “Zones of Proximal Development” (Vygotsky, 1978), whereby Vygotsky addresses the potential of a learner, how much they can do, with the assistance from others.
2019; Marek & Wu, 2021), whereby the results may to some extent be a consequence of the introduction of something new in the process. The reason might lie in the fact that this teaching protocol was a completely new way of working for this group of EFL learners, who were not so familiar with strategy learning or critical reading strategies. That is, the EFL group may have been more motivated and interested by the new intervention, which involved a more systematic and scaffolded teaching of critical reading skills. Therefore, the students became more engaged in the tasks, improving their attention and retention of critical reading skills. The novelty effect may have also triggered more curiosity and feedback-seeking behaviours in the EFL group, which may have facilitated their metacognitive and self-regulatory processes.

Apart from the novelty effect, other factors may have played a role in these results, especially motivation. Previous research in this field had successfully linked motivation level and strategy use in second languages (Schmidt & Watanabe, 2001; Gutiérrez & Ruiz de Zarobe, 2019). In fact, Gutiérrez and Ruiz de Zarobe (2019) demonstrated that the level of motivation played a significant role in improving students’ performance when they underwent metacognitive reading instruction. Those students who reported higher levels of motivation obtained significantly better results than those with lower levels of motivation. This suggests that motivation is an important factor for the success of students who undergo this type of instruction. In addition, students’ motivation to learn languages increased when topics to which they could relate were addressed and when adequate scaffolding was provided. This is also the case for the experimental groups in this study, whose teaching protocol was also effective.

This can also be connected with the conclusions drawn from Meyer (2010) and Tedick and Lyster (2020), who suggest that students can greatly benefit from scaffolding, even in the case of students with low proficiency. Furthermore, it seems that their motivation increases as they understand better how and in which order to proceed, which could also explain how our EFL sample improved so much. As the reading process was explicitly handled, techniques on how to approach texts were explained, modelled, taught, and feedback was given, EFL learners, despite having fewer hours of instruction than their CLIL peers, made the most of the teaching protocol, practising these newly-learned strategies and applying them to new activities.

6. Conclusion

This study points to the effectiveness of a reading intervention in improving critical reading regardless of the pedagogical approach followed, both in EFL and CLIL contexts. The seven-week intervention followed by both cohorts proved to be effective in improving critical reading. Furthermore, our results showed that, even though students may sometimes have had fewer hours of foreign language instruction,
the results can still be positive in their use of critical strategies. Factors such as the novelty effect and motivation may account for some of these results.

Apart from this, these results relate to models such as those of Janks (2010) or Hughes (2014), discussed above, which uses the image of a staircase to represent the different stages that progress in terms of difficulty in critical reading and thinking. To progress, teachers must engage students in activities that can turn them into “open-minded, active, strategic readers who are capable of viewing text from a critical perspective” (McLaughlin & DeVoogd, 2004b, p. 56). In sum, teachers can help students to develop their capacity to read critically. When students are encouraged to learn from a critical stance, they will end up reading critically.

Therefore, these results have an important pedagogical implication. It shows how it may be interesting for teachers to become aware of the relevance of this type of interventions, in which explicit and scaffolded strategy instruction should be part of the protocol. The steps to be followed move from the presentation and explanation of the new strategy, the demonstration of its effectiveness, individual or group practice of the new strategy by the students and a final evaluation of the effectiveness of the strategy. This study suggests that it may be worth allocating some time to teaching strategies in the classroom if it leads to significant outcomes in the learning process.

However, this research suffers from some limitations, which should be pointed out. The first is the difficulty involved in developing research in the classroom in two different geographical contexts. Although the schools were located in similar socio-economic areas in both geographical contexts, the Basque Country and Cantabria, it is possible that some conditioning factors beyond the location itself may have had an impact. In order to avoid these, a fixed teaching protocol was designed and followed for both cohorts, piloting the tests in order to reduce the differences, but other factors may have had an effect on these results. The second limitation relates to the fact that, although both cohorts were in the same school year, no placement test was conducted in both contexts, which did not allow us to control for proficiency level as such. Other factors not taken into consideration include, for example, the gender of the students, which was outside the scope of this study. These are two of the main limitations of this study that could be addressed in future research.

Needless to say, there is still much that needs to be done in the teaching and learning of reading and thinking critically. The study presented here is just a small sample of the type of interventions that can be carried out to foster critical reading, and by extension, critical thinking in the classroom. We have seen how critical reading involves engaging in the text without taking what we read at face value. Both critical reading and critical thinking provide the foundations of what sound learning is and
should therefore be encouraged from a very early age. Future research on the subject will help us to delimit with greater clarity the paths to follow in order to proceed in the learning and teaching of reading, and more precisely, of reading with a critical stance, a domain that undoubtedly deserves to be investigated in today’s world.

**Acknowledgments**

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Appendix 1: Bibliographical questionnaire.

POR FAVOR, CONTESTA A ESTAS PREGUNTAS

1. NOMBRE: ____________________________ 2. CURSO: _____________

3. CHICA ☐ CHICO ☐ 4. EDAD: ______________

5. ¿VIVES EN SANTANDER/VITORIA?
   SÍ ☐ NO ☐ ¿DÓNDE VIVES? __________________________

6. ¿CUÁL ES EL TRABAJO DE TUS PADRES?
   PADRE: ____________________________________________
   MADRE: __________________________________________

7. ¿QUÉ ESTUDIOS TIENEN TUS PADRES? PON UNA ‘X’ EN LA CASILLA QUE CORRESPONDA

<table>
<thead>
<tr>
<th>PRIMARIOS</th>
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<td>MADRE</td>
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8. ¿HAS PARTICIPADO EN UN CAMPAMENTO DE INGLÉS EN LOS ÚLTIMOS AÑOS?
   SÍ ☐ NO ☐ ¿DÓNDE? ____________________________
   ¿CUÁNDO? __________________________________________

9. ¿HAS ESTADO ALGUNA VEZ EN UN PAÍS DE HABLA INGLESA?
   SÍ ☐ NO ☐ ¿DÓNDE? ____________________________
   ¿CUÁNDO? __________________________________________
   POR FAVOR, EXPLICA CUÁNTO TIEMPO TE QUEDASTE EN ESOS PAÍSES Y SI FUiste A CLASES DE INGLÉS ____________________________

10. ¿VAS A CLASES EXTRAESCOLARES DE INGLÉS?
    SÍ ☐ NO ☐ ¿DÓNDE? ____________________________
    ¿CUÁNDO? __________________________________________
    POR FAVOR, EXPLICA CUÁNTAS HORAS A LA SEMANA HAS DADO O DAS INGLÉS FUERA DEL COLEGIO: ____________________________
Appendix 2: Example of a strategy. “Discover the author’s intentions”.

My visit to Honduras

Source: www.pbs.org/now/shows/309/pericles-students.html

The first week in Honduras was eye-opening for me. They say that the poverty is impressive since Honduras is the second poorest nation in Central America, but this was not important for me because I stayed in an expensive area.

It is true most houses are in bad condition, rubbish covers the ground, and people’s appearances don’t take a top priority, but we also saw a few very nice houses, which are hidden behind huge walls. Crime rates are high and security guards are everywhere, therefore this is not a problem if you can pay security. It is common for both men and women to be visibly armed with a weapon. At first I was impressed when I saw a mother walking along the street with her children, carrying a rifle. By the end of the trip, it didn’t surprise me, it was a fantastic opportunity to practise with arms, I would like to do that in my country.

Hospital conditions in Honduras were far worse than any I’d ever seen. The emergency room was one large, open room, over-crowded with hospital beds and people. The patients were given just two meals per day and often ate nothing for over 12 hours. Fortunately, this only happens in public hospitals. If something happened to me, I would go to a private clinic as they have very good services and real luxury!!

When I heard how high malnutrition is in Honduras, I was surprised to see so many adults who looked healthy or even fat. I saw some children who looked thin sitting beside parents who looked like they hadn’t been hungry a day in their lives. I discovered that one of the main causes of malnutrition is not eating a healthy diet. Many Hondurans don’t receive the proper nutrients they need because they only consume soda and junk food.

From failure to eat a healthy, balanced diet, many of the people are dying. I think this is not really serious because they do not look thin. Malnutrition is also the reason children looked so much younger than they actually were. Predicting a child’s age was impossible—most four-year-olds were equivalent to the size of a baby in Europe. In my opinion this is not a real problem because looking younger is fantastic!
1. Write the key words for each paragraph.

2. Write the key words for the whole text.

3. What is the main idea in the text?

4. Who has written the text?

5. Where was the text published?

6. What type of text is it?

7. Can you trust this information? Are there any elements to distrust this text?

8. Apparently what are the author’s values? (Find sentences with his/her opinion)

9. In reality what are the author’s values?

10. Apparently what is the author’s intention?

11. In reality what is the author’s intention?
Appendix 3: Critical reading test.

Welcome to the web site of the Coalition to Promote the Use of Child Soldiers

Source: http://www.boring.ch/childsoldiers/why.html

We are a not for profit organization dedicated to helping humanity by encouraging countries around the world to use children between the ages of 0 and 18 as soldiers.

Our primary objectives are to educate the citizens and governments of the world that the use of child soldiers can be a benefit to societies everywhere, by helping children to help their communities - and giving them food, education, practical skills, an income, and maturity at the same time.

Around the world the citizens of developing countries face a life of poverty and oppression. Many of these citizens are children. The world’s population is growing at exponential rates, meaning that every day there are more and more hungry mouths to feed.

What can be done?

The answer is simple: Recruit children under the age of 18 as soldiers.

Already, around the world, children and their governments are taking an active role in solving these problems by volunteering or recruiting children into the army. By doing so, not only does the country’s army have the added benefit of thousands of little hands helping fight for the good of the citizens, but the children themselves learn valuable lessons, and the population is reduced in an efficient way.

This group of children in Nicaragua are having lots of fun, and learning too, by participating in the ongoing war in their nation.
PART 1 QUESTIONS IN THE TEXT: Preguntas EN el texto
(IN THE FOLLOWING QUESTIONS USE ONLY THE
INFORMATION IN THE TEXT) (EN LAS PREGUNTAS
SIGUIENTES USA SÓLO LA INFORMACIÓN DEL TEXTO)

1. What does this organization propose? ¿Qué propone la organización?

2. What are the advantages of the proposal for the children? ¿Cuáles son las ventajas de la propuesta para los/las niños/as?

3. Does the proposal have any disadvantage? Which? ¿Tiene la propuesta alguna desventaja? ¿Cuál?

4. Why are there so many hungry people? ¿Por qué hay tanta gente hambrienta?

5. Where has this idea been applied? ¿Dónde se ha puesto en marcha esta idea?

6. What does “the population is reduced in an efficient way” mean? ¿Qué quiere decir “the population is reduced in an efficient way”?

7. Write 2 key words to summarise the text. Escribe 2 palabras clave que resuman el texto:
THE FOLLOWING QUESTIONS USE MORE THAN WHAT APPEARS IN THE TEXT) (EN LAS PREGUNTAS SIGUIENTES UTILIZA MÁS INFORMACIÓN ADEMÁS DE LA QUE APARECE EN EL TEXTO)

1. Who has written the text?

2. Some of the protagonists’ voices are not heard. Whose?

3. Where was the text published?

4. What type of text is it?

5. Can you trust this information? Are there any elements to distrust this text?

6. Apparently what are the author’s values?

7. In reality what are the author’s values?

8. Apparently what is the author’s intention?

9. In reality what is the author’s intention?