A Content and Language Integrated Learning (CLIL) Project: Opportunities and Challenges in the Context of Heritage Language Education

Marina Charalampidi, University of Warwick | Cyprus Educational Mission, United Kingdom
Michael Hammond, University of Warwick, United Kingdom
Nicoletta Hadjipavlou, Cyprus Educational Mission, United Kingdom
Neophytos Lophitis, Coventry University, United Kingdom

The European Conference on Language Learning 2017
Official Conference Proceedings

Abstract
Content and Language Integrated Learning (CLIL) is gaining momentum in the European field of language education. However, to date, research seems to be dominated by studies into English. Further, in the UK, CLIL initiatives in general have been limited, and this is particularly so in respect to community or heritage languages. This paper reports on a CLIL project on environmental pollution and the science of climate change with a community/heritage language, namely Greek, as the vehicular language. The project was implemented in the Greek supplementary school of Leicester, UK, and aimed at teaching students aged 11 to 17 scientific concepts (including those relating to the greenhouse effect, carbon cycle, climate change) while at the same time advancing language acquisition. It included various in-class activities and a visit to the Science Museum in London. Data collection included questionnaires, interviews, materials used in the activities and field notes to investigate the perceived impact of the project on heritage language learners. The ultimate aim of the research was to examine whether CLIL had a role to play in heritage language education, a field with distinct challenges. Gains were reported across language and content learning, cognition and attitudes. Perhaps the most significant finding was that the approach facilitated the building of linguistic and cognitive bridges between the students' linguistic heritage and their mainstream education. The article links classroom practice to research and argues for the inclusion of CLIL in supplementary schools, as an effective pedagogy for the teaching and learning of heritage languages.

Keywords: Content and Language Integrated Learning (CLIL), heritage language learning, community/heritage languages, heritage language learners, interdisciplinary, supplementary education, supplementary schools

1. Introduction

The Content and Language Integrated Learning (CLIL) approach is gaining momentum in the European field of language education. However, although any language other than the students' first one can be used as the medium of instruction, research seems to be dominated by studies into English language learning (Dalton-Puffer, 2011). In the UK context, while bilingual education programmes in Wales, Scotland and Ireland have attracted growing interest, there has been little work undertaken involving other languages, especially as far as community/heritage languages are concerned.

Teaching community/heritage languages has been one of the primary roles of supplementary schools (Maylor et al., 2010). These schools are set up in response to concerns from newly arrived immigrants that their children are losing the active use of the home language as they begin schooling, creating worries about a weakening of cultural identity. The National Resource Centre for Supplementary Education (2017) estimates that currently there are 3,000 – 5,000 such schools in England, run by communities of different ethnic backgrounds. The terms *complementary schools*, *heritage language schools*, *community language* or *ethnic schools* can also be found in the international literature (Creese, 2009).

This paper reports on a project carried out in the Greek supplementary school of Leicester, UK, in which a heritage language, namely Greek, was employed within a CLIL science project. The study provides insight into the learners' experience, and draws conclusions as to whether CLIL has a role to play in heritage language teaching and learning. Apart from contributing to the broader body of UK research on CLIL, which is currently limited (Pérez-Cañado, 2012), it places the approach in a largely unexplored context (Strand, 2007), that is heritage language learning in supplementary schools.

2. Heritage Language Learning in Supplementary Schools

According to Minty et al. (2008), the first Greek Cypriot supplementary school was opened in London in the 1950s by the Greek Orthodox Church and the Greek Embassy. The Leicester Greek School is now one of the 74 supplementary schools in Great Britain that provide Greek language classes. It is managed by the local Greek community. The school is housed in the community centre (a converted house that shares a yard with a church) and offers classes to students aged 4 to 17 years old as well as separate classes for adults. The students are grouped broadly based on language skills and age. Students attend the school approximately 4 hours per week.

The Greek language taught in the school is defined as a heritage language (HL) and the students attending the school are viewed as heritage language learners (HLLs). It has been shown that HLLs compose a truly diverse range of learners (e.g. Anderson, 2008; Lee, 2005; Valdés, 2005). Carreira (2004) discussed three criteria with which HLLs have been identified and concluded that HLLs are not "a homogeneous cluster of learners, but a collection of different types of learners who share the characteristic of having identity and linguistic needs that relate to their family background. These needs arise from having had insufficient exposure to their heritage language and heritage culture during their formative years. Satisfying these needs provides a

primary impetus for pursuing language learning" (p. 21). The participants of our study fitted this description.

There is consensus among scholars in the field on the need to find appropriate pedagogical methods to teach HLLs (e.g. Anderson, 2011, 2008; Polinsky and Kagan, 2007; Lynch, 2003), an endeavour that is not straightforward. The diversity of students constitutes one of the major challenges for heritage language teachers. As Charitonos and Charalampidi (2015) noted, students' language skills can vary to a great extent, for instance some may speak the language fluently and others may not speak it at all. Further, community languages have often undergone extensive changes through contact with dominant languages and pose special instructional challenges (Valdés, 2005). In the context of supplementary education, limited resources (e.g. funding, premises, equipment) create further challenges in accommodating student needs (Maylor et al., 2010). Issues of motivation have implications too for the classroom. In the UK, demotivation has been connected to the marginalisation of community languages from mainstream education, with a lower language status than French, German and Spanish (Handley, 2011). Demotivation also occurs from gaps between course objectives and content taught, and the learners' personal aims (Berardi-Wiltshire, 2009). As for supplementary school students, who attend the school voluntarily, dissatisfaction with educational provision, often leads them to the decision to drop out (Sneddon, 2017).

3. Content and Language Integrated Learning (CLIL)

CLIL has been defined by Marsh (2002) as an educational approach in which an additional language (i.e. foreign, second or minority language) is used for the teaching and learning of a non-language subject. The approach is dual-focused in that it draws attention to both language and content learning, albeit having a flexible content-language focus ratio (Marsh, 2002). The novelty of the approach lies in the fact that academic content is taught and this is unusual in the European context of language education (Cenoz et al., 2014). The importance of the subject component has been stressed by, among others, Ball et al. (2016) who talked about meaningful incorporation and assessment of content or else "students sense very quickly that the topics themselves are mere slaves to the linguistic objectives, and motivation and interest levels drop accordingly" (p. 27). The subject – language blend, while being one of the ingredients – if not the most important – of the success of CLIL, has also caused tensions. For instance, there have been concerns regarding reduced subject outcomes (Dalton-Puffer, 2008), effective target language development (de Graaff et al., 2007), and disagreement as to whether subject or language experts should deliver such programmes (Coyle, 2008).

Yet, the reported outcomes are, by and large, positive and numerous (see for example discussions in Pérez-Cañado, 2012; Marsh, 2012; Dalton-Puffer, 2008). Positive effects of particular relevance to our study's objectives are; improving learners' overall target language competence, increasing learners' motivation, developing their plurilingual interests and attitudes, and accessing subject-specific target language terminology. The latter has its own intrinsic value and is at the same time connected to "tak[ing] students beyond 'reductive' foreign language topics" (Coyle, 2008, p. 104). Given the diversity of HLLs, of importance is that CLIL can benefit not only more able learners but all students across the ability spectrum (Coyle, 2006).

Indeed, over the past decade, albeit the scarcity of projects documented, a few supplementary school studies that integrated language with other subjects pointed to the potential of the approach to providing greater stimulus and cognitive engagement (Anderson, 2017, 2009;), enhancing students' interest and motivation in language learning (Charalambous & Yerosimou, 2015), and increasing students' understanding of academic concepts as well as boosting their confidence (Issa, 2009).

4. The Study

The present study reports on a science CLIL project with Greek as the vehicular language, and examines the potential of the approach as appropriate for the teaching of HLLs in the context of supplementary education. It was developed as a product of reflection on teaching practices and content taught at the school. Specifically, the authors believed that by extending the school's curriculum (i.e. covering the generic content areas specified by the Cyprus High Commission in the UK and the UK language examinations board) and complementing teaching with more creative approaches, the learners' needs would be better catered for. As Pladevall-Ballester (2015) noted, participants' perceptions are important if we are to make claims on the effectiveness of CLIL. The paper thus draws mainly on qualitative data and provides an account of the learners' experience in an attempt to delineate the value of such projects for the teaching and learning of a heritage language.

4.1. Overview of the project

The school has been implementing science – language projects since 2014 (for a description of last year's project see Charalampidi, 2016). This was made possible, to a large extent, due to successful grant applications to the British Science Association (BSA) and the Institute of Physics (IOP). This was the main reason why part of the projects was scheduled for British Science Week, an annual event organised by the BSA.

Each year, the BSA defined the broad theme of the event, and the projects were designed around it. This year, the theme was 'Change' and thus the project "GGG: Going Green in Greek" explored environmental pollution and climate change. Though the whole school was involved, this article presents the experience of 13 students, aged 11 to 17, attending Year 5, Pre-GCSE/GCSE and A level classes. The objectives, shown in Tables 1 and 2, following Coyle's (2005) four-dimensional framework (4Cs), spanned content, communication, cognition and culture. Content-specific vocabulary and scientific terminology was at the core of all dimensions.

Table 1. The content dimension.

In class		Museum visit
Environmental pollution	Climate change	Climate change
What is the environment? Causes of pollution in general Effects of pollution Solutions to environmental pollution	Climate vs Weather The greenhouse gases The greenhouse effect What is climate change? Effects of climate change Solutions to climate change	How and when climate change started (Industrial revolution) Carbon cycle What is climate change? Effects of climate change Solutions to climate change

Table 2. The communication, cognition, culture dimensions.

Communication	▪ present (e.g. posters on causes of pollution)
	▪ define and describe (e.g. the greenhouse effect)
	▪ explain (e.g. causes and effects of climate change)
	▪ suggest (e.g. solutions to environmental pollution and climate change)
	▪ additional for A level students:
	  ▪ take a stand on climate change
	  ▪ defend their argument

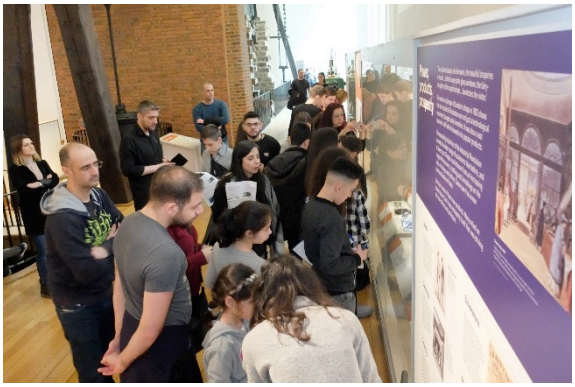
Cognition	▪ understand scientific processes (e.g. carbon cycle) ▪ logic of constructing arguments ▪ problem solving
Culture	▪ environmental consciousness ▪ sense of responsibility

The project lasted approximately 2 months (from end of February to end of April). It included various classroom activities and a visit to the British Science Museum in London (for examples see Figure 1). The museum visit took place in March, coinciding with British Science Week. Parents and relatives were also invited to join the students. Prior to the museum visit, fundamental concepts and principles were taught. The museum visit included enrichment and extension activities. Activity handouts with instructions in Greek were given to students, along with a bilingual glossary (Greek – English) to use, if needed, during the visit. After the museum visit, lessons included follow up activities and assessments.

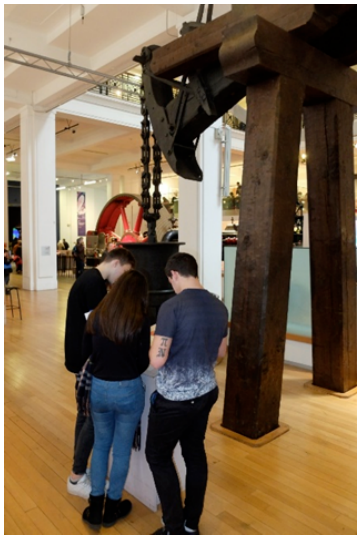
Central to the design of the project was the comprehensive and continuous integration of language and content driven activities. For this, a language specialist and a subject specialist, both Greek native speakers, collaborated. It should be stated that the activities and the materials used could not be distinguished as purely subject oriented or purely language oriented, but rather as an overlap and blending of both.

Vocabulary exercise: Matching pictures to words.

Building a model of an ecological house.



Museum activity: At display there were forerunners of contemporary products, manufactured for the first time during the industrial revolution. Students took pictures of the ones they could recognise.



Museum activity: Understanding how the industrial revolution accelerated the use of fossil fuels.

Figure 1. Examples of in-class and museum activities.

4.2. Methods and data

Data collection included materials used in the activities, questionnaires, interviews and field notes. During the first lesson of each of the main topics (for example environmental pollution and climate change) the participants' prior subject knowledge was assessed through concept maps (e.g. around the word 'environment') and questioning (e.g. Are you aware of climate change? Can you explain or describe it?) for which answers were recorded. The students were encouraged to answer, whenever possible, in the target language. This enabled us to understand both what the students knew and how able they were to articulate their knowledge in Greek. Additional short vocabulary tests were administered to check students' knowledge of basic terms. At the end of the project, materials used (e.g. worksheets, essays, posters, post-tests) were collected for the purposes of the research.

The questionnaires were administered after the museum visit. One student who did not attend the museum visit was given the survey to complete at home but did not return it. Broadly speaking, questionnaires were divided into two sections: the first one asked about the museum visit and the second one asked about the project as a whole. In total, the survey included eight (8) closed and five (5) open ended questions on perceived language and content learning, the value of the project, and changes in attitudes towards the environment and climate change.

Four semi-structured focus group interviews with ten students were also conducted about two months after the completion of the project. These lasted approximately one hour each and allowed for in-depth investigation of several issues. The three main themes explored were students' experiences and views of the school (e.g. Why do you attend? How do you feel about coming to the school?), of the project, and of CLIL projects in general. Several questions were asked about the project's topic (significance, appeal), the types of activities (preferences, perceived usefulness), the museum visit (its contribution to the project, what they liked most and least, clarification of some survey questions), learning or conceptual challenges faced,

perceived benefits obtained from interdisciplinary projects, suggestions for future projects. Interviews were analysed thematically and this enabled us to understand how learners themselves experienced the project and the value put on it.

4.3. Findings

Findings are organised and presented around the project's perceived impact on students' (1) Language learning (analogous to 'Communication' in Coyle's framework) (2) Content learning (3) Cognition (4) Change in attitudes (analogous to 'Culture' in Coyle's framework). The perceived gains common to all participants, as well as main variations in their interpretations of their experience are shown below.

4.3.1. Language learning

The survey indicated that, overall, students perceived the project as being helpful in respect to language learning. The majority described it as very helpful (n = 8), two of them as extremely helpful and two others as somewhat helpful. The three main areas of language improvement specified by the students were their vocabulary (n = 9), listening (n = 7) and teamwork skills (n = 9).

Participants' language acquisition was evident in their assignments and the battery of tests used to assess their proficiency in receptive and productive skills. For instance, in the final speaking test students were asked to give a definition of the 'environment'. A student described it as "*Everything that is around us, artificial and natural, that is whatever is made by man or whatever is formed by nature, such as trees and homes.*" (Translation from Greek) and another student used the etymology of the word and explained that the 'environment' ('περιβάλλον' in Greek) has its origins in the word 'I surround' ('περιβάλλω' in Greek). In an essay that asked students to inform people about climate change one student wrote: "*People produce carbon dioxide that traps solar radiation and the temperature increases. This causes climate change.*" (Translation from Greek). This points to her ability to articulate complex ideas in Greek. Figure 2 shows a poster on the causes of environmental pollution created by another student. The use of high level appropriate scientific vocabulary (e.g. 'deforestation', 'pesticides') is evident. However, it should be clarified that although all students showed developments in all areas, some (n = 4) progressed more in terms of receptive than productive skills. Further, regarding the latter, it appeared easier for students to communicate their knowledge in writing than orally.

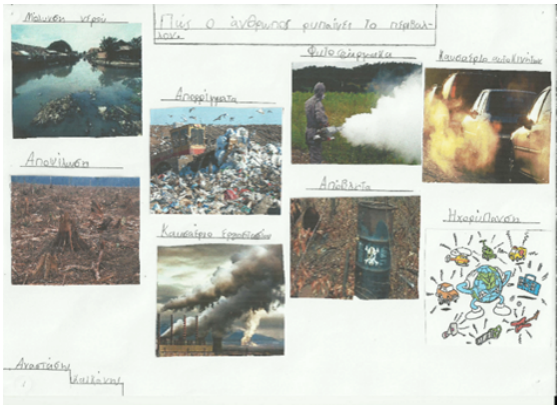


Figure 2. Poster on the causes of environmental pollution.

Communicative gains were expressed by all students. Arguably, this was one of the most significant findings, especially in view of the fact that climate change has not been a topic usually taught or discussed among second/foreign language learners. For our learners, being able to understand and discuss this topic with other Greek speakers, either in the UK or in the origin country, was important. As one of the interviewees stated:

"*It's useful because if you go to Greece or Cyprus and they ask you a question about the environment, if you went to Greek school it would help you answer. If you remember the vocabulary, it will help you with the speaking. The English is the easiest language to learn but Greek is hard. If you learn the vocabulary, it gets easier.*"

Another student mentioned that the project triggered a discussion with his parents:

"*I had a conversation with my parents. When we had the speaking test I kind of searched for more information online and my mum started asking questions and we had a conversation on the topic. She was surprised that I could remember all this.*"

Students' appreciation of the project as enabling communication can be linked to their views of the school. They considered communicative competence as one of the chief reasons for coming to the school. To them, "*it's not just a school that you come to attend lessons, it's more than that"*. They described it as a space where they could meet "*people from [their] country, communicate better for the things that are happening in [their] country and then have more reasons to talk about, [they] get closer with the people.*"

4.3.2. Content learning

The survey responses revealed that participants believed they had developed their subject knowledge. Eight of them felt the project was very helpful in terms of learning about the environment and climate change, three of them viewed it as extremely helpful and one as somewhat helpful.

Materials used in the activities also pointed to content acquisition. For younger students (11 – 13), this was evident for both subjects, i.e. environmental pollution and climate change. For older students (14 – 17), content learning was mainly related to climate change. In the pre-tests administered, only those students (n = 3) who had been previously taught about climate change at their English schools exhibited subject knowledge. The rest either acknowledged their lack of knowledge or tried to guess the meaning (e.g. some students associated climate change with seasonal changes in weather). Tasks shown in Figures 3 and 4 were selected as they depicted in a clearer way than other activities understanding of the subject, separate from language development.

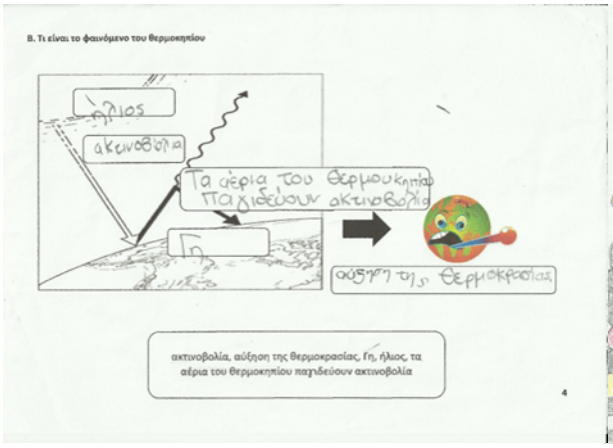


Figure 3. Diagram: What is the greenhouse effect.

Figure 4. Drawing. Climate change.

Interview data suggested that the value students put on the project was influenced by their views of the subject. The majority of participants talked about how the topic had real-world connections and was relevant to their lives, hence it was meaningful and significant.

"*It's important because it makes you think about the activities that you do every day, that you can help the planet by not doing them. Like when you use the car, everyone uses the car and not many people go on the bus or on trains so the air gets polluted.*"

"*It's a really interesting topic because it's climate change and that can affect us in different ways as in drought or flooding and destroying all our resources which leaves us to the point where we don't have enough food or water to leave properly.*"

Some students, even though they acknowledged the topic's importance, expressed their preference for other topics, as in the case of the following student:

"*Although I didn't find it that interesting, I think is something worth knowing but not as important as other things in the world such as like the politics in your country or like poverty in other countries. You should learn about that and how to stop that … They could be trying to fix issues in like poor countries rather than just spending all their money trying to stop carbon dioxide getting in the environment.*"

Content, Language or Both?

There were differences in the way students experienced the project's interdisciplinarity. The majority of the students thought of the project as a pluralistic educational experience. As can be seen in the extract below, content and language knowledge developed concurrently and were both valued:

"*It is about our environment and it helps us to like as well as learning everything and how to write it in Greek and everything, it is also about how to help our environment. So, it's like we gain two ways of learning.*"

In contrast, three A level students placed greater emphasis on the project's language focus. This could be attributed to two reasons; one, they had previously acquired

some relevant knowledge of the topic at their English schools through subjects like Chemistry and Geography and two, they were concerned about their upcoming A level Greek exams. Thus, to them the value of the project lied mainly in linguistic gains such as expanding their vocabulary and learning how to "*explain it* [climate change] *with scientific words, with the right vocabulary*". Finally, two students were more interested in content learning rather than language learning. This was noticeable both in the classroom and in the museum. For instance, while at the museum, they preferred walking around on their own and looking at the exhibits of their choice than joining the group activities and the discussions.

4.3.3. Cognition

The project was unanimously viewed as cognitively demanding, with the majority of students reporting that this was the most challenging topic taught so far.

The extracts below show two students' ability not only to remember but also to analyse and combine or associate concepts to communicate in full what the greenhouse effect is. It can also be inferred that the students learned to think in an elaborate way and simultaneously about the content and the language:

"*When someone asked me "What is the greenhouse effect?" I couldn't answer straight away and with exact words, I had to think about it for a while and then take it in steps for example start with the carbon dioxide, διοξείδιο του άνθρακα* (speaks in Greek)*, and say it's been released and it traps sun rays, παγιδεύει την ακτινοβολία* (speaks in Greek)*.*"

"*I understand that the fact to explain the greenhouse effect can be quite easy when you think about it but when you have to explain it you can't say all in one sentence, you have to do several, you have to explain the whole thing cause otherwise, the other person you explain it to, won't fully understand what you are trying to say.*"

For two students it was observed that difficulties in conceptual understanding hindered language development. For these students, greater use of English throughout the project was necessary to ensure understanding, resulting in having less time for practice in the target language. This was also realised by the students. As one explained:

"*Well, I think it was the most difficult part of the project, but I think eventually when the teacher explained it to me in English and it made more sense of what it is, then learning it all in Greek made it easier for me.*"

Knowledge transfer

One of the most noteworthy findings that emerged from the interviews was the project's contribution in facilitating knowledge transfer between the Greek school and the English school. Apart from the three students who had some previous subject knowledge, the rest reported that the project was either the only time they were taught about the topic, was taking place at the same time students were being taught at the mainstream school, or preceded mainstream school lessons.

Students stressed how the project supported their performance at their English school, as in the case of this student who stated that "*In Geography we did about climate change and in Science we did about the greenhouse effect and I got really good grades on both.*"

When asked to provide further details on how the project reinforced their learning, they pointed to both cognitive and affective gains. In respect to the former, it appeared that a deepening understanding of the subject was achieved through multilingualism and code switching, repetition, and considerable subject engagement time. Below are quotes that demonstrate this:

"*We can use the Greek vocabulary to then remember what the word means in English and then use that to participate in the classroom and point out the different things.*"

"*It helped me a lot because I knew a lot of information from the Greek school so it was easy for me to concentrate and understand even more in my English school.*"

"*We did not spend a lot of time revising that topic, we had to move on as time was running out. So the project at the Greek school helped me to remember it.*"

In respect to the latter, students' confidence was developed as shown in this student's reaction when the teachers announced they are learning about climate change and the greenhouse effect:

"*I was like "Oh, yeah, I've already done this" and it was like super easy. My teacher was really impressed!*"

4.3.4. Change in attitudes

Changes in student attitudes regarding the environment were examined through the questionnaire, the interviews and the field notes. In the survey, all but one students reported that their interest on the issue of climate change increased, either a lot (n = 6) or slightly (n = 5).

When asked for clarifications during the interviews, students explained that they were generally more conscious of their activities and how they affected the environment, as in the case of this student:

"*I recycle at home because we use a lot of paper and I don't like throwing it in the normal bin, if by accident I throw something in that bin I'll take it afterwards and throw it in the recycling bin, I try to have a shorter shower and when I leave the room I switch off the lights whereas before I used to forget sometimes but now I pay more attention.*"

The same attitudes were also observed at the school. Students were more considerate when switching on and off the lights, closed the doors when the heating was on, and recycled systematically (the school acquired a recycling bin as part of the project).

5. Discussion and Conclusion

This paper presents how CLIL pedagogy was carried out and how it was perceived by heritage language learners. Overall, students expressed satisfaction with the project and recognised it as educational and beneficial. Gains were reported across language and content learning, cognition and attitudes.

Although students put different values on language and content knowledge acquisition,they all recognised improvements in both. Pladevall-Ballester (2015), who also studied science school students' views of CLIL, concluded that children's perceptions of outcomes were related to the explicit focus of teaching, i.e. on content or language. This study's findings indicate that, for our students, who attend the school having language conservation and development in mind, a clear teaching focus on both language and content serves their needs better.

Previous research showed that cognitively demanding CLIL projects may cause anxiety (Doiz, 2014) or negative effects on students' self-esteem as language learners (Seikkula-Leino, 2007). In our case, cognitive challenge was viewed positively, even for those students who had difficulties in conceptual understanding. From a design perspective, we would suggest that carefully sequenced lessons with gradual progression of challenge, running alongside variation in activities, can contribute to positive student responses. In addition, for those students who struggle, switching from one language to another repeatedly may be helpful for progression.

Perhaps the most significant finding of the study is that the CLIL approach can have an impact that goes beyond language and subject matter acquisition. As illustrated, CLIL projects can build bridges between the students' linguistic heritage and their scholarly success in mainstream education and enable knowledge transfer. Creese et al. (2006) argued that supplementary schools produce opportunities that support students' identities as successful language learners. It is our belief that applying CLIL in supplementary schools can be seen as a strategy to enhance students' cognitive academic language proficiency (CALP), to use Cummins's (2008) terminology, and their self efficacy as learners.

In conclusion, though this is a small-scale study, it indicates the potential of CLIL as an effective pedagogy for the teaching and learning of heritage languages in supplementary schools. Learning science through the medium of their heritage language was seen by the students as a strength. By extension, a CLIL approach could contribute to increased value placed on the language and reinforce students' motivation in language learning, even in a country whose language is Europe's lingua franca. Bearing in mind the distinct challenges of supplementary education, what we advocate is a combination of approaches and topics, the latter being academic or 'real' (Cook, 1983) and non-academic, to cover the range of HLLs' diverse needs and abilities.

Acknowledgments

The authors wish to thank the British Science Association (BSA) for providing the community grant that enabled the implementation of the project "GGG: Going Green in Greek", described in this paper.

References

Anderson, J. (2017). Engagement, multiliteracies and identity: developing pedagogies for heritage/community language learners within the UK school context. In O. E. Kagan, M. M. Carreira, & C. H. Chik (Eds), *The Routledge Handbook of Heritage Language Education: From Innovation to Program Building* (pp. 248-262). New York: Routledge.

Anderson, J. (2011). Reshaping pedagogies for a plurilingual agenda, *The Language Learning Journal*, *39* (2), 135-147.

Anderson, J. (2008). Towards an integrated second-language pedagogy for foreign and community/heritage languages in multilingual Britain. *The Language Learning Journal*, *36*(1), 79-89.

Anderson, J. (2009). Relevance of content and language integrated learning (CLIL) in developing pedagogies for minority language teaching. In D. Marsh, P. Mehisto, D. Wolff, R. Aliaga, T. Asikainen, & M. J. Frigols-Martin (Eds.), *CLIL Practice: Perspectives From The Field* (pp. 124-132). Jyväskylä: CCN: University of Jyväskylä.

Ball, P., Kelly, K., & Clegg, J. (2016). *Oxford Handbooks for Language Teachers: Putting CLIL into Practice*. Oxford: Oxford University Press.

Berardi-Wiltshire, A. (2009). *Italian Identity And Heritage Language Motivation: Five Stories Of Heritage Language Learning In Traditional Foreign Language Courses In Wellington*, New Zealand (Doctoral dissertation). Massey University. Retrieved from https://mro.massey.ac.nz/handle/10179/1170

Carreira, M. (2004). Seeking explanatory adequacy: a dual approach to understanding the term "Heritage Language Learner". *Heritage Language Journal*, *2*(1), 1-25.

Cenoz, J., Genesee, F., & Gorter, D. (2014). Critical analysis of CLIL: Taking stock and looking forward. *Applied Linguistics*, 35(3), 243-262.

Charalambous, C. & Yerosimou, M. (2015). Drama, music and media in heritage language learning. *Journal of Education Culture and Society*, *2*, 370-381.

Charalampidi, M. (2016). *Learning Greek through science - An interdisciplinary approach.* Paper presented at Language learning, technology and the arts: the power to engage, London: Goldsmiths, University of London.

Charitonos, K. & Charalampidi, M. (2015). Designs for heritage language learning: a photography project in the uk supplementary education. In T. H. Brown & H. J. van der Merwe (Eds.), *The Mobile Learning Voyage – From Small Ripples To Massive Open Waters*. Paper presented at the 14th World Conference on Mobile and Contextual Learning (mLearn 2015), Venice, Italy, (pp. 198-216).

Cook, V. (1983). What should language teaching be about? *English Language Teaching Journal*, *37*(3), 229-234.

Coyle, D. (2008). CLIL - A Pedagogical Approach from the European Perspective. In N. Van Deusen-Scholl & N. H. Hornberger (Eds.), *Encyclopedia of Language and Education, 2nd Edition, Volume 4: Second and Foreign Language Education* (pp. 97–111). New York: Springer Science+Business Media, LLC.

Coyle, D. (2006). Content and language integrated learning motivating learners and teachers. *Scottish Languages Review*, *13*, 1-18.

Coyle, D. (2005). *CLIL – Planning Tools for Teachers*. Nottingham: The University of Nottingham. Retrieved from https://www.unifg.it/sites/default/files/allegatiparagrafo/ 20-01-2014/coyle_clil_planningtool_kit.pdf

Creese, A. (2009). Building on young people's linguistic and cultural continuity: complementary schools in the United Kingdom. *Theory Into Practice*, *48*(4), 267-273.
Creese, A., Bhatt, A., Bhojani, N., & Martin, P. (2006). Multicultural, heritage and learner identities in complementary schools. *Language and Education*, *20*(1), 23-43.

Cummins, J., (2008). BICS and CALP: empirical and theoretical status of the distinction. In Street, B. & Hornberger, N. H. (Eds.). *Encyclopedia of Language and Education, 2nd Edition, Volume 2: Literacy* (pp. 71-83). New York: Springer Science + Business Media, LLC.

Dalton-Puffer, C. (2011) Content-and-Language integrated learning: from practice to principles? *Annual Review of Applied Linguistics*, *31*, 182-204.

Dalton-Puffer, C. (2008). Outcomes and processes in Content and Language Integrated Learning (CLIL): current research from Europe. In W. Delanoy & L. Volkmann, (Eds.) *Future Perspectives for English Language Teaching* (pp. 139-157). Heidelberg: Carl Winter.

de Graaff, R., Koopman, G. J., Anikina, Y. & Westhoff, G. (2007). An Observation Tool for Effective L2 Pedagogy in Content and Language Integrated Learning (CLIL). *International Journal of Bilingual Education and Bilingualism*, *10*(5), 603-624.

Doiz, A., Lasagabaster, D., & Sierra, J. M. (2014). CLIL and motivation: the effect of individual and contextual variables. *The Language Learning Journal*, *42*(2), 209-224.
Handley, S. (2011). Promoting community language learning in the United Kingdom. *The Language Learning Journal*, *39*(2), 149-162.

Issa, T. (2009). *Integrating curricular subjects and language learning in a UK secondary school: Accessing Maths (Curriculum) through a Bilingual Environment (AMBE) project.* Paper presented at *Semi-Immersio a Catalunya*, Barcelona, Spain.

Lee, J. S. (2005). Through the learners' eyes: Reconceptualizing the heritage and non-heritage learner of the less commonly taught languages. *Foreign Language Annals*, *38*(4), 554-567.

Lynch, A. (2003). The relationship between second and heritage language acquisition: notes on research and theory building. *Heritage Language Journal*, *1*, 26-43.

Marsh, D. (2002). *CLIL/EMILE the European Dimension: actions, trends and foresight potential.* Jyväskylä: University of Jyväskylä.

Marsh, D. (2012). *Content and Language Integrated Learning (CLIL) A Development Trajectory* (Doctoral dissertation). University of Córdoba.

Maylor, U., Glass, K., Issa, T., Kuyok, K. A., Minty, S., Rose, A., Ross, A., Tanner, E., Finch, S., Low, N., Taylor, E., Tipping, S., & Purdon, S. (2010). *The Impact Of Supplementary Schools On Pupils' Attainment: An investigation into what factors contribute to educational improvements*, London: Department for Children, Schools and Families.

Minty S., Maylor, U., Issa, T., Kuyok, K., & Ross, A. (2008). *Our Languages: Teachers in Supplementary Schools and their Aspirations to Teach Community Languages.* London: Institute for Policy Studies in Education, London Metropolitan University.

National Resource Centre for Supplementary Education (2017, July). *Supplementary Education*. Retrieved from http://www.supplementaryeducation.org.uk/supplementary-education-the-nrc/

Pérez-Cañado, M. L. (2012). CLIL research in Europe: past, present, and future. *International Journal of Bilingual Education and Bilingualism*, *15*(3), 315-341.

Pladevall-Ballester, E. (2015). Exploring primary school CLIL perceptions in Catalonia: students', teachers' and parents' opinions and expectations. *International Journal of Bilingual Education and Bilingualism*, *18*(1), 45-59.

Polinsky, M., & Kagan, O. (2007). Heritage Languages: In the 'Wild' and in the Classroom.
Language and Linguistics Compass, *1*(5), 368-395.

Seikkula-Leino, J. (2007). CLIL Learning: Achievement levels and affective factors. *Language and Education*, *21*(4), 328-341.

Sneddon, R. (2017). Sustainable approaches to complementary education in England. In O. E. Kagan, M. M. Carreira, & C. H. Chik (Eds), *The Routledge Handbook of Heritage Language Education: From Innovation to Program Building* (pp. 85-99). New York: Routledge.

Strand, S. (2007). Surveying the views of pupils attending supplementary schools in England. *Educational Research*, *49*(1), 1-19.

Valdés, G. (2005). Bilingualism, heritage language learners, and SLA research: Opportunities lost or seized? *The Modern Language Journal*, *89*(3), 410-426.

Contact email: m.charalampidi@warwick.ac.uk