Taking Advantage of Sustainable Development Goals in Project Based CLIL: An International Experience to Enhance Communication Among Primary Students

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Abstract

One of the educational challenges that European countries face nowadays is to include the United Nations Sustainable Development Goals (SDGs) into their curriculums so that they could be achieved in 2030. Currently, the Catalan government has incorporated them into the last updated basic education curriculum in 2022. Content and Language Integrated Learning (CLIL) and Project Based Learning (PBL) have shown their effectiveness to boost collaborative work and communicative competence. Furthermore, the inclusion of the SDGs in an international context could increase students' motivation towards the learning of English as a foreign language. This article presents the design, implementation and the students' outcomes of an international project that was carried out in English with primary students from Barcelona, Bogotá and Toronto. The results of Spanish students seem to suggest that they are motivated to participate in communicative situations when they are engaged in an international blended CLIL-PBL project on global issues related to SDGs. A welcoming and trusting environment is created in class so the engagement of most of the students rises, the feeling of belonging to a community is strengthened and their willingness of communicating in English is enhanced.

Introduction

The project method as a way of teaching has a long history stretching back to the first decades of the 20th century, if not earlier (Knoll, 1997). The first attempt at systematisation, defines project as a 'wholehearted purposeful activity' (Kilpatrick, 1918, p. 4) and claims it as the best way to guarantee success in education. Since then, and under different labels, being Project Based Learning (PBL) the most successful, this methodology has widely spread throughout the planet and used in an array of subjects.

PBL is currently living a time of growing interest as an educational methodology (Buck Institute of Education, 2022). There is, however, a certain lack of studies on its overall effects on learning and students' improvement, and more empirical evidence is needed (Thomas, 2000). A recent meta-analysis (Chen & Yang, 2019) suggests that PBL may have a growing positive impact on learning outcomes in different subjects, but, on the other hand, some shortcomings have been detected (Knoll, 2014). There is a consensus in recent research on this topic, however, about an increased motivation in students when applying PBL methodology, which seems to be directly related to the fact of dealing with real, relevant issues that have to do with students' interests, along with the degree of autonomy inherent to PBL (Harmer, 2014) and enhanced self-esteem (Stoller, 2006).

Implementation of PBL in the field of second language pedagogy is more recent (Fried-Booth, 1986; Hedge, 1993); for the last forty years, it has been claimed that this approach may be effective for second and foreign language learning (Stoller, 1997, 2006). It has also been advocated that the following traits of PBL are consistent with Content and Language Integrated Learning (CLIL) approach: learner-centred teaching (Hedge, 1993); authenticity of language experience and language (Stoller, 1997), promotion of cooperative learning (Alain & Stoller, 2005), among others. The importance of motivation among students as a factor that facilitates learning a foreign language is well known (Bernaus et al., 2009), and there are some studies that put the emphasis on motivation in the CLIL classroom. Lasagabaster (2017) claims that CLIL students in the Basque Country show an improved attitude towards English and even a better disposition to other languages in the curriculum.

The Sustainable Development Goals (SDGs) – or 2030 Agenda for Sustainable Development – were adopted in 2015 by the United Nations with the purpose of achieving a future of peace and prosperity for all people and countries of the world. The United Nations has urged the different nations to implement actions for the gradual achievement of these objectives. The Generalitat de Catalunya, the Catalan government, has assumed the responsibility of implementing certain measures in this sense, so a National Plan was approved in 2019. This plan not only considers actions undertaken by different departments in the Generalitat, but also incorporates initiatives from civil society organisations: the Department of Education coordinates objective number four that promotes an equitable education of quality and lifelong learning for all citizens. Among the adopted measures, the continuous reference to the SDGs throughout the Catalan basic education curriculum stands out, both for primary and secondary education.

The general scope of this article deals with the design and implementation of an international CLIL- & PBL-based project where intercultural interaction among primary students in Toronto, Bogotá and Barcelona is a key element. The article describes the collaboration, the communication, and the community relationships among the schools on issues related to the SDGs using new technologies. The specific goal of this article is to show how the project has helped to improve the attitude of students in Barcelona towards writing in English. Throughout the project, pieces of evidence were collected that demonstrate how the students gradually felt more confident to use their writing communicative skills in English as a foreign language.

The Community Project

Presentation

Both CLIL and PBL require students to act in an interdisciplinary manner, that means, to connect and use content and skills from different school subjects. Taking into account the international context of this project, the language of communication is English, and the content is related to other curricular subjects. Cates and Jacobs (2006) present good examples of implementing CLIL projects on global topics: the students develop language skills alongside global awareness and habits of citizen participation.

The issues of global interest that present the SDG affect not only our local communities but are the subject of concern on an international scale, which is why they fit well with projects that include schools from different countries. The topic that was chosen in the project we present in this article is related to the SDG 11.3: *enhancing inclusive and sustainable urbanisation and capacity for participatory, integrated and sustainable human settlement planning and management in all countries* (United Nations, 2022).

The teachers taking part in this project participated in a virtual meeting in November 2020: Global Design Experiment, *Saving the Planet, Saving Lives.* This meeting was organised by the Knowledge Building International (KBI) based on Knowledge Building Theory (Bereiter & Scardamalia, 2006). Knowledge Building International (KBI) is a non-for-profit membership-based corporation born in July 2012. Their purpose is to serve the knowledge building community of innovators and researchers in the field of education. Among their goals which is particularly relevant for this project is 'To designate and collaborate closely with schools and other organisations in various countries to establish "hubs of innovation" in education for knowledge creation.' (KBI, 2022).

Planning

During the school year 2021-2022, the team of teachers from the 3 involved schools had several meetings to decide how the project would develop. The first videoconference took place in September 2021. In this meeting, different decisions were taken: 1) the work would focus on the SDG 11: 'Sustainable cities and communities: Make cities and human settlements inclusive, safe, resilient and sustainable'; 2) some videoconferences with the students from the three schools would be planned throughout the school year to promote communication among the schools. The Zoom platform was selected for this purpose; and 3) a shared Google Drive folder was created for teachers' work. As a result of this first teachers' meeting, three objectives were established:

1. To strengthen the sense of belonging to a specific community.
2. To boost students' communication skills in L1 or L2, through the use of vocabulary and expressions related to the Community topic.
3. To initiate students into the concept of international collaboration and cultural awareness through virtual tools.

Outcomes from the students were gathered and recorded for a further analysis by the teaching team. They were anonymised in order to protect students' privacy.

Main Activities

The activities developed in this project are the following:

1. Students, in small groups, write a short text to answer the research question: 'What do you think a community is?'
2. Students decide the content for a video about their local community, record it and send it to students from Bogotá and Toronto (not analysed in this article).
3. Students participate in live videoconferences along with students from Bogotá and Toronto:
    a. Sharing the project work
    b. Choosing the questions they want to ask their international friends
    c. Answering the questions from their international friends
4. Students write personal postcards (Bogotá and Toronto) or emails (Barcelona) introducing themselves.

5. Students, in small groups, write a short text answering the question 'What do you like best about this project?'
6. Students, in small groups, analyse the videos sent in the first term to find similarities and differences between the three communities. They use a Venn diagram.
7. Students get ready for the last videoconference with Toronto:
    a. Students choose the questions they want to ask their international partners.

Method

Three schools participated in this project: a primary state-funded school in Barcelona; a private school in Bogotá, and a primary school associated with the University of Toronto. The students participating in Bogotá and Toronto were in grade 1 (6–7-year-old) while the students in Barcelona were in grade 4 (9–10-year-old). The language of communication was English, which students in Bogotá and Barcelona are learning as a foreign language. There were 94 students in total: 22 in Bogotá, 22 in Toronto, and 50 in Barcelona.

The teachers' team included two class teachers from Bogotá and Toronto and one English teacher from Barcelona along with a Singapore independent observer and a Catalan educational advisor. This advisor co-taught some activities with the Catalan English teacher and participated in the virtual meetings.

Although the project is international, for the purposes of this article, we only analysed the data collected in one class of 24 students from Barcelona who fully completed the project. All the material used in this article was obtained by the Catalan English teacher while developing the project who has given full permission to reproduce data and figures.

Results

As shown above, the project consisted of 7 stages which aimed to achieve the objectives agreed upon by all the participating teachers. For the purposes of this article, we have selected those activities that required students to write sentences in English, which allows us to collect evidence related to objective 2: *To boost students' communication skills in L1 or L2, through the use of vocabulary and expressions regarding the Community topic.*

Activity 1 (September 2021). Students, in small groups, answer the first research question: 'What do you think a community is?'

The first activity was dedicated to exploring students' ideas about what a community was. The students in Barcelona worked in groups of 3, they were given a blank paper with the question: 'What do you think a community is?' They wrote their ideas in English if they were able to, but the use of Catalan was allowed too. This activity was a co-teaching experience. Both co-teachers monitored the students' work and helped them with the English language. As this was the first activity of the year, most of the students wrote their texts in Catalan (see Figure 1) and only some of them used English.

Figure 1.

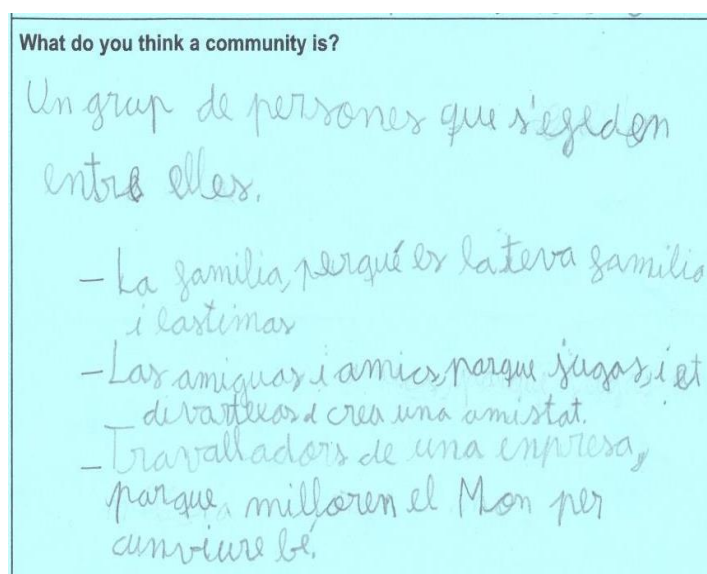*Students' answer in Catalan to 'What do you think a community is?[1]*

Table 1.

*Students' use of English in their written answers*

Students	Average words in English by sentence
1 group of 4 students	14
1 group of 4 students	9
4 groups of 4 students	0

[1] English translation: *A group of people helping each other. The family, because it is your family and you love it. Friends because you play, have fun and create a friendship. Workers of a company because they improve the world to live well.*

In particular, four groups of students wrote their answers completely in Catalan while two groups could do it in English because there were students with a high level of English. In other words, from a group class of 24 students, 16 students used Catalan while 8 students used English. From these 8 students, one group of 4 students used 12 words in the first sentence and 6 in the second and the other group of 4 students used 16 words in the first sentence and 11 words in the second.

Figure 2.

Students' answer in English to 'What do you think a community is?'
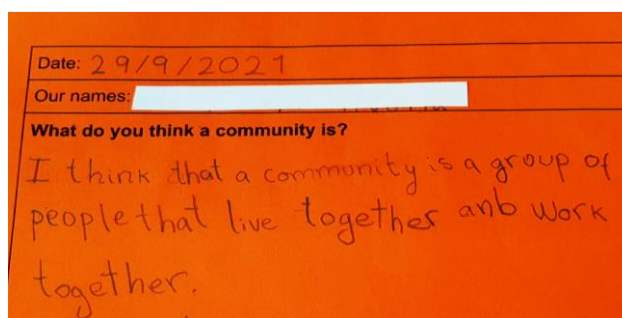
Once all small groups finished, a spokesperson in each group shared their ideas with the whole class in the same language used to answer the question; that is, Catalan or English. At the same time, the English teacher wrote them on a Google document that would be presented in the next teachers' meeting and shared with all the teachers taking part in this project.

Activity 3 (November 2021). Students' videoconference (1 class in Toronto, 1 class in Bogotá, 2 classes in Barcelona)

After the three videos which students prepared in Activity 2 were shared among the three schools, an international virtual meeting was scheduled. Before the first videoconference took place, students spend one lesson preparing for it. As it was agreed in the previous teachers' meeting, students worked on the open questions they wanted to ask students in Bogotá and Colombia. Once finished, these questions were distributed among the students that volunteered to ask them in the videoconference. Open questions from Barcelona students:

- Do you read in silence in the morning?
- Have you got a library at school?
- Do you do school trips for two or three days?

- ○ Do you use computers at school?
- ○ Do you play football or soccer?
- ○ Do you have extra-school activities?

The Zoom meeting lasted 25 minutes. The activity was divided into three parts (Table 2). Each part was developed by the teachers at each school. Each teacher guided their group to make the conversation fluent. All the students were seated in a semicircle facilitating attention and participation (Figure 3).

Table 2.

Structure of the Zoom meeting in November 2021

Time	Task	Participants
1 min each partner	Greetings & thanks for the interesting videos you've sent.	Teachers
3 min each partner	Students' open questions	Students
1 min each partner	Farewell	Teachers

Figure 3.

Students seated in a semicircle in the videoconference

During the videoconference, the students were focused and paying attention all time. The students in charge of reading the prepared questions pronounced the words properly and they were answered by the students from the other two schools. When it was our turn to answer the questions from the students in Toronto or Bogotá, only the students with a high level of English volunteered to do so. The others were too shy to participate or felt insecure even though the English teacher encouraged them to take part.

Activity 4 (January & February 2022). Students in Barcelona write personal emails

The purpose of this activity was to strengthen our sense of belonging to a community by communicating in writing. Barcelona students had to handwrite personal emails to introduce themselves to other participating students. This activity lasted six lessons.

We started the first lesson explaining the general structure of an email. Then, the students started writing in hand their individual paper emails to their partners in Bogotá and Toronto. Each lesson was devoted to writing a specific paragraph of the email. The different paragraphs were: first (name, age and place of living), second (hobbies and abilities), third (family), fourth (physical description) and in the last one each student could choose the content according to their interests and level of English.

The procedure of the next five lessons was similar. The English teacher paid special attention to new vocabulary and structures. Then, individually, each student wrote their sentences adapted to their circumstances and level of English. Therefore, students with a high level of English were encouraged to do longer and more complex sentences while students that showed difficulties with the English language were helped by the teacher or their classmates (see Figure 4 below).

Once all the sentences of the email were completed, the English teacher checked the spelling individually with each student. Next, the student typed his/her email on the computer. Being sensitive to the personal data protection of our young students, we decided to upload all the emails to a Google folder shared with the Colombian and Canadian teachers so they could distribute them among their students.

The students were motivated to write their personal emails to their friends in Toronto and Bogotá, some of them making a big effort to finish all the paragraphs. All in all, they enjoyed communicating with each other in English, the language had a real purpose for them. In their words, 'we liked writing emails because we could write on a paper, and we could speak English with our friends in Toronto and Bogotá' and 'we liked writing the emails to Bogotá and Toronto students on the computer because it was our first email in English.'

Figure 4.

A student's email

Activity 5 (March 2022). Students answer the second research question: 'What do you like best about this project?'

This activity aimed at to receiving some feedback from the students. In particular, what the students found more interesting about the project and the reasons for this. Getting this information would help to design the following activities based on their interests.

The students worked in groups of three or four to stimulate communication. On the blackboard they had the following question: 'What do you like best about this project?' The students were encouraged to write their answers in English even though they did not know the exact words or spelling. If needed, the use of Catalan was allowed too.

An analysis of the type of language chosen by the students to write their ideas shows

that the majority used English even though they knew they would make mistakes. Other students wrote some sentences in English and Catalan. Finally, some groups waited for the teacher to translate their ideas into English.

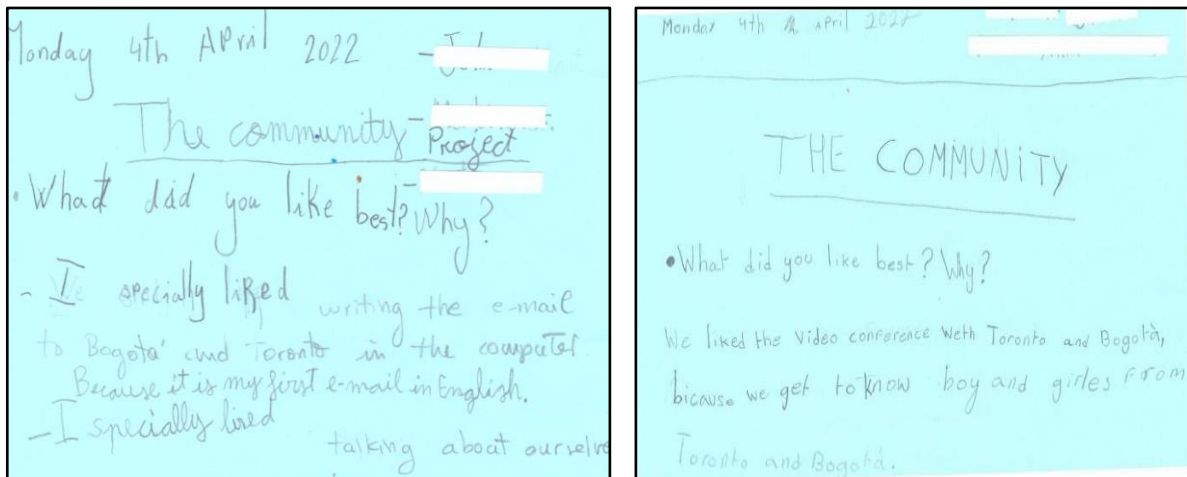Figure 5 and Figure 6.

Students writing their ideas in English

Table 3.

Students' use of English to answer "What do you like best about this project?

Students	Average words in English by sentence
1 group of 4 students	3
1 group of 3 students	5
1 group of 3 students	6
1 group of 4 students	6
1 group of 5 students	9
1 group of 3 students	10
1 group of 2 students	15

Two aspects from the data analysis can be highlighted. The first one is related to the number of students that were willing to write their ideas in English. In this specific activity which took place in March 2022, all twenty-four students wrote at least one sentence in English (see Figures 5 and 6 and Table 3). Back in September 2021, in Activity 1, only eight students were able to write at least one sentence in English while sixteen did it in Catalan. The second aspect is that the fear of making mistakes was not an obstacle for them to use the English language. From our point of view, this was a turning point in the way they approached their

English language learning; they understood that what was really important in this project was communication, not perfection.

Activity 6 (May 2022). Analyse the videos sent and received last October to find similarities and differences between the three communities: Bogotá, Toronto and Barcelona.

The purpose of this activity was to analyse the content of the three videos which each school sent in October 2021 in order to identify the similarities and differences of what a community meant for the students of the three schools. This activity was carried out in four stages where the students were working in groups of four or five all time.

1. Each group was given a selection of sentences taken from the three videos (Bogotá, Canada and Barcelona) in a random order. The students were asked to read them and try to guess to what community they belonged.

2. While the teacher played the first video from Toronto community, the students identified the sentences that came from that video (Figure 7). Then, they glued them into the corresponding places of the blank Venn Diagram (Figure 8). By doing so after watching each of the three videos, students had found the differences between the three communities.

3. The students were asked to identify the similarities. That is to say, to find one idea that was common to all three communities.

4. The spokesperson of each group shared with the whole class the idea they found that was common to all three communities. Once the class agreed with them, the students placed the three sentences, each belonging to one of the three communities, in the middle of the Venn Diagram (Figure 9).

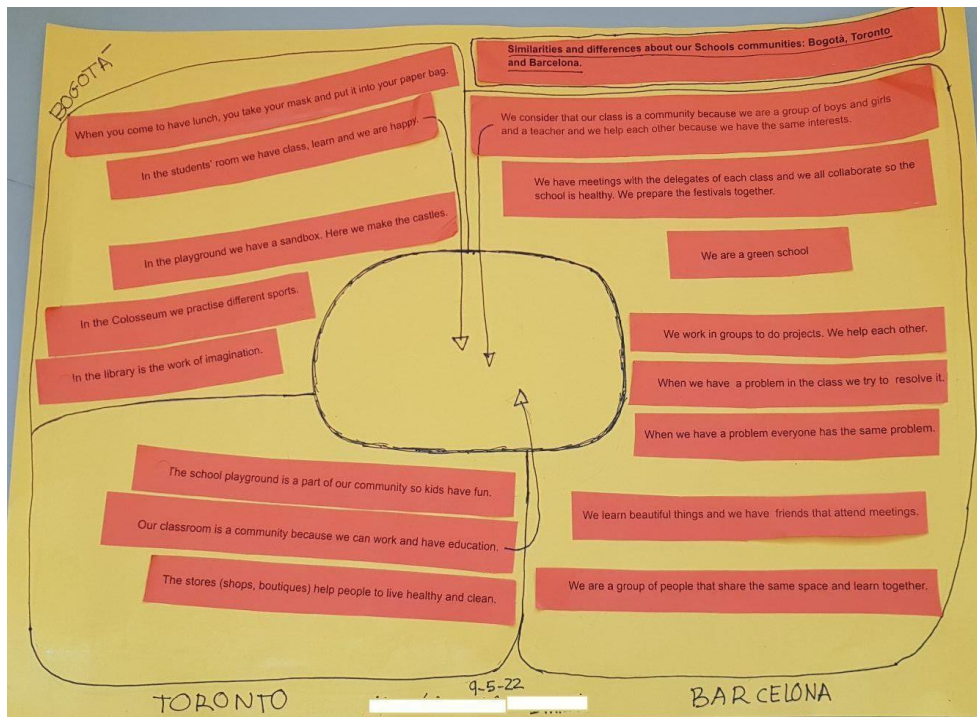Figure 7.

Students watching one video

Figure 8.

Students deciding where to place one sentence

Figure 9.

The completed Venn diagram

Even though the activity was challenging, the students were motivated to accomplish it. The students with difficulties in English chose short sentences to read in the whole class plenary, which showed that they definitely wanted to participate. All in all, it was an enriching activity because all the students practised their thinking skills when they had to find some similarities and differences, they made progress in reading in English, and they helped each other in the different stages of the activity.

Activity 7 (May 2022). Getting ready for the last students' videoconference with Toronto (1 class in Toronto, 1 class in Barcelona)

This activity was dedicated to preparing the content of the last videoconference with the students from Toronto. The students, working in groups of three or four, were given a paper to write the open questions they wanted to ask their friends in Toronto. It should be noted that in this activity all groups except one used English even though they knew there were grammar and spelling mistakes. This was an important piece of evidence that proved to us that when there is a real purpose in using a second/foreign language and students are motivated to participate, they take risks and find a way to communicate although their production is not perfect (Figure 10).

Figure 10.

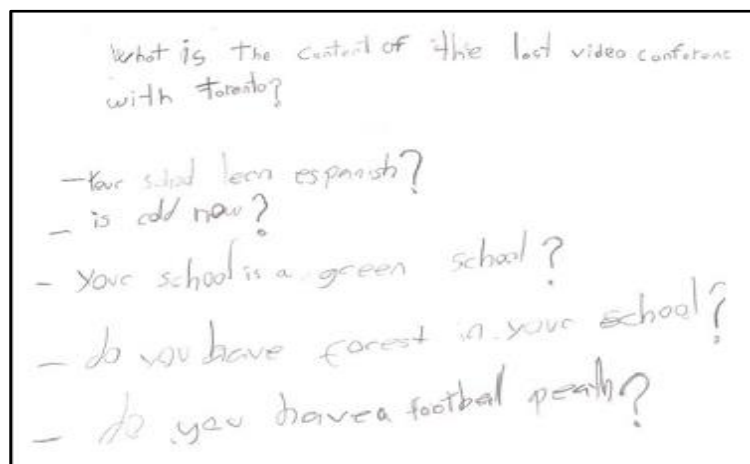*Students' open questions for the last videoconferenc*e

Table 4.

Students' use of English in activity 7

Students	Sentences in English and average of words
1 group of 3 students	1 of 11 words
1 group of 4 students	1 of 9 words
1 group of 3 students	3 of 8 words
1 group of 3 students	2 of 7 words
1 group of 4 students	8 of 5 words
1 group of 3 students	5 of 5 words
1 group of 3 students	2 of 5 words
1 group of 3 students	0

The data collected in this activity show how a tendency among the students that appeared in activity 5 (Table 3) is not only maintained but increased. Most students (23 out of 26) continued to use English also when they were asked to prepare questions for their partners in Toronto. Only one group of three students still preferred to use Catalan to write their questions.

Discussion and Conclusion

This article presented both the design and the implementation of an international CLIL- & PBL-based project developed in English as an L1 or L2 and the analysis of the results collected from one class in the Catalan school. The contents incorporated in the project were related to the 2030 UN's Sustainable Development Goals, specifically number 11, Sustainable cities and communities. There are very few studies that examined the implementation of CLIL & PBL projects on SDGs with primary level students, so our study would be a first approximation of how this SDG can be included in the curriculum of primary compulsory education.

Overall, the results seem to suggest that the activities proposed in this project have facilitated the achievement of the objectives agreed in the first teachers' meeting where the project and its goals were defined. The project was structured in such a way that at first the students wrote and shared their previous ideas of what a community meant for them, then they prepared an oral description of their own community to be shared with their international partners and finally students demonstrated that they could find similarities and differences between the three communities while working collaboratively. The conclusion is that, according to the students, the awareness of belonging to a community emerged and developed as the project progressed, so it can be suggested that using an innovative methodology, a combination of CLIL and PBL, within an international environment, has favoured the awareness of the students in this sense, thus allowing them to achieve Objective 1: *To strengthen the sense of belonging to a specific community*.

Achieving Objective 2: *To boost students' communication skills in L1 or L2, through the use of vocabulary and expressions related to the Community topic*, was essential for the success of the project. To complete the activities described in this article students were asked to work collaboratively, so interaction was promoted. In class, students had to discuss, agree, or search for clarification, sometimes when working in small groups and at some other moments in collaboration with the teachers. That was possible due to the features of the project.

In this project we chose one of the SDGs as a thematic axis of the CLIL approach and PBL as a teaching methodology. The abundant existing literature on PBL shows that one of the essential elements in the PBL methodology is to start the project with a problem or a driving question that is connected to the real world. The recent inclusion of the SDGs in the Catalan curriculum makes it easier for teachers to work on one of these goals as part of the official curriculum and could be integrated into school syllabus.

Moreover, the fact that it was an international project has facilitated the use of oral interaction between students from different schools when they were exposed to the preparation and the development of the videoconferences themselves. The students' responses show us that, beyond the proposed topic, what really prompted them to communicate was the international situation created in the classroom. This was also perceived by all the teachers involved in the project. It should be noted, however, that the aim of the project was not to demonstrate the effectiveness of the CLIL-PBL model for the promotion of communication in English and the accuracy in the messages prepared by the students themselves. Instead, the project's main goal was to create an international environment that would motivate students to step out of their comfort zone and be encouraged to use English to communicate orally and in a written format. That means that Objective 3: *To initiate students into the concept of international collaboration and cultural awareness through virtual tools* was also accomplished.

The data collected throughout the project clearly show a tendency among students to use English instead of Catalan as the language of written communication. The data collected at three different moments of the project reveal that at the beginning of the project (September) only 33% of the students tried to use the foreign language. As the project progressed, more and more students showed their willingness to use English to write their texts, with greater or lesser accuracy, but also more frequently; in fact, at the end of the project (May), nearly 90% of the students in Barcelona were already using the foreign language in their written activities. In our opinion, this already supposed an increase in the use of written communication skills of the students.

Finally, the students were made aware of their cultural similarities and differences thanks to the use of virtual tools. This is an aspect that the students themselves have also highlighted through their activities. We believe that the use of ICTs has been vital for this to happen. Students highly evaluated the use of the videoconference, and it appeared as one of the most outstanding elements of the project for the students.

Taking all this into account, the international project described in this article and its

results manifest the importance of involving students in a real, meaningful and motivating context where the need to use the language for oral and written communication is paramount for the participation in the collaborative activities.

Acknowledgements

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References

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Alan, B., Stoller, F. (2005). Maximizing the benefits of project work in foreign language classrooms. *English Teaching Forum*, *43*(4), 10–21.

Bernaus, M., Wilson, A., & Gardner, R. (2009). Teachers' motivation, classroom strategy use, students' motivation and second language achievement. *Porta Linguarum*, *12,* 25–36. https://doi.org/10.30827/digibug.31869

Bereiter, C., & Scardamalia, M. (2006). Education for the knowledge age: Design-centered models of teaching and instruction. *Handbook of Educational Psychology*, *2*, 695–713. https://doi.org/10.4324/9780203874790.ch30

Cates, K., & Jacobs, G. (2006). Global issue projects in the English language classroom. In G. Beckett, P. Miller (Eds.), *Project-based and foreign language education (Research in second language learning)* (pp. 167–180). IAP.

Chen, C.H., & Yang, Y.C. (2019). Revisiting the effects of project-based learning on students' academic achievement: A meta-analysis investigating moderators. *Educational Research Review, 26*, 71–81 https://doi.org/10.1016/j.edurev.2018.11.001

Fried-Booth, D.L. (1986). *Project Work: Resource books for teachers*. OUP.

Generalitat de Catalunya (2022). *Educació per als objectius de desenvolupament sostenible.* Retrieved 9 October 2022 from https://xtec.gencat.cat/ca/curriculum/primaria/orientacions/educacio-objectius-desenvolupament-sostenible-ods/

Generalitat de Catalunya (2022). *DECRET 175/2022, de 27 de setembre, d'ordenació dels ensenyaments de l'educació bàsica.* DOGC 8762 29.09.2022. https://dogc.gencat.cat/ca/document-del-dogc/?documentId=938401

Harmer, N. (2014). *Literature Review - University of Plymouth*. Retrieved June 26, 2022, from

https://www.plymouth.ac.uk/uploads/production/document/path/2/2733/Literature_review_Project-based_learning.pdf

Hedge, T. (1993). Key concepts in ELT. *ELT Journal*, *47*(3), 275–277.

Kilpatrick, W.H. (1918). *The project method.* Teachers College. Retrieved June 26, 2022, from http://www.educationengland.org.uk/documents/kilpatrick1918/index.html

Knoll, M. (1997). The project method: Its vocational education origin and international development. *Journal of Industrial Teacher Education, 34*(3), 59–80.

Knoll, M. (2014). Project method. In C.D. Phillips *(Ed.), Encyclopedia of educational theory and philosophy* (pp. 665–669). Thousand Oaks.

KBI. (2022 October 1). About knowledge building international. KBI. https://ikit.org/kbi/

Larmer, J., Mergendoller, J., & Boss, S. (2015). Gold standard PBL: Essential project design elements. Retrieved from https://www.pblworks.org/blog/gold-standard-pbl-essential-project-design-elements

Lasagabaster, D. (2017). Language learning motivation and language attitudes in multilingual Spain from an international perspective. *The Modern Language Journal*, *101*(3), 583–596. 10.1111/modl.12414 0026-7902/17/583–596

Scardamalia, M., & Bereiter, C. (2006). Knowledge building: Theory, pedagogy, and technology. In K. Sawyer (Ed.), *Cambridge handbook of the learning sciences* (pp. 97–118). Cambridge University Press.

Stoller, F. (1997). Project work. A means to promote language and content. *English Teaching Forum, 33*(2), 10–15.

Stoller, F. (2006). Establishing a theoretical foundation for project-based learning in second and foreign language contexts. In G. Beckett & P. Miller. (Ed.), *Project-based second and foreign language education: Past, present, and future* (pp. 19–40). Information Age Publishing.

Thomas, J.W. (2000). *A review of research on project-based learning*. Retrieved June 26, 2022, from http://www.bobpearlman.org/BestPractices/PBL_Research.pdf

United Nations. (2022, April 5). *Goal 11: Make cities inclusive, safe, resilient and sustainable.* Sustainable Development Goals. https://www.un.org/sustainabledevelopment/cities/