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Telecollaborative Projects for Teaching English for Professional and Academic Purposes

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ABSTRACT

Implementing the project-based approach in telecollaborative environments seems to be helpful in the foreign language classroom. This research aims to analyze the perception of students on the need to communicate internationally and follows the classification of the most usual communicative situations proposed by Lehman and DuFrene (2013). For this purpose, an experiment was conducted with students from the Polytechnic University of Valencia (UPV) and Igor Sikorsky Kyiv Polytechnic Institute (KPI) during the spring term in the school year 2020/21. Students from both universities worked virtually in mixed international teams on projects to create blogs on the topic 'Sustainable development today'. Our results showed that students from both institutions increased their confidence in communicating in professional and academic contexts through the completion of this project. Participants improved their communicative competence in international online environments, and this virtual exchange experience helped them develop their digital and intercultural skills, among others. The value of this research is the implementation of telecollaborative project work in the foreign language classroom in order to help students communicate in a global context about technical issues, such as sustainability.

Keywords: Telecollaboration, Project Work, English Language Teaching, Language for Specific Purposes.

RESUMEN

El uso práctico del enfoque basado en proyectos mediante telecolaboración parece ser un recurso útil en el aula de idiomas extranjeros. Esta investigación tiene como objetivo analizar la percepción de los estudiantes sobre la necesidad de comunicarse en un ámbito global siguiendo la clasificación de las situaciones comunicativas más habituales propuesta por Lehman y DuFrene (2013). Para ello, se realizó un experimento entre estudiantes de la Universidad Politécnica de Valencia (UPV) y del Instituto

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Politécnico Igor Sikorsky de Kiev (KPI) durante el semestre del curso 2020/21. Estudiantes de ambas universidades trabajaron virtualmente en equipos mixtos internacionales en sus proyectos para crear blogs sobre el tema 'Sustainable development today'. Nuestros resultados mostraron que los estudiantes de ambas instituciones mejoraron su confianza para comunicarse en contextos profesionales y académicos durante la realización de este proyecto. Los participantes mejoraron su competencia comunicativa en entornos online internacionales, y esta experiencia de intercambio virtual les ayudó a desarrollar sus habilidades digitales e interculturales, entre otras. El valor de esta investigación es la implementación de un trabajo mediante un proyecto telecolaborativo en el aula de lengua extranjera con el objetivo de ayudar a los estudiantes a comunicarse en un contexto global sobre cuestiones técnicas, como la sostenibilidad.

Palabras clave: Telecolaboración, Trabajo mediante proyectos, Enseñanza de Inglés, Lengua para Fines Específicos.

1. Introduction

The globalization of the modern world and economy, together with the development of science and technology, lie behind the fact that universities are becoming more international. The English language has gained the status of the Lingua Franca of international communication. The development of communication technologies has opened up new resources and opportunities as well as new challenges for educators. In this sense, telecollaborative project work in learning and teaching English for professional and academic purposes is a valuable educational tool for students and teachers from different countries as it enables their students to work and learn together online. By connecting teachers and students from different countries through interactive online tools (video conferencing, chat, forum, blogs), telecollaboration provides an engaging environment for learning and practicing foreign language skills to address students' academic and professional needs as well as for developing their intercultural and digital competence through a project-based approach.

Working virtually with students and teachers from different locations creates new professional, academic, and personal opportunities, and this research focuses on the impact that telecollaborative project work can have on learning and teaching English for professional and academic purposes (EPAP), following Alcaraz-Varó's view (2000) that language serves a specific purpose wherever it is used. Thus, it shows the relevance of the English language in academic and professional settings. Telecollaboration in teaching EPAP is an effective educational tool for developing students' autonomy and intercultural interactions through communicative and project-based learning. EPAP is defined by Dooly (2017) as an embedded, dialogic process that supports remote collaborative work, intercultural exchange, and the social interaction of students with the help of communication technology in order to achieve mutual objectives and build shared knowledge.

English is considered an international language of communication in the academic and professional worlds and this research offers interdisciplinary, diverse cross-cultural, and international perspectives on teaching English as a foreign language. The experiment was carried out with students from the Polytechnic University of Valencia (UPV), Spain and the Igor Sikorsky Kyiv Polytechnic Institute (KPI) in Ukraine during the spring term of 2020. It involved 24 bachelor engineering students from Spain and 32 engineering master's degree students from Ukraine. Students from both universities worked virtually in mixed international teams to create blogs on 'Sustainable development today', concentrating mainly on environmental issues.

To ensure free access and availability for all the students involved, several Google tools were used in this telecollaborative project: Classroom, Hangouts, Blogger, Drive, and Docs. During the project preparation phase, the students used English as a Lingua Franca to discuss and exchange their ideas and opinions so that they could create blogs. The project-based approach employed demonstrated how students are able to socialize, make decisions, perform the tasks, and create and presenting their blogs using English as a common foreign language, which improved their learning outcomes and helped prepare them for various professional, academic and social situations in the future.

To measure their improvement, students completed a questionnaire at the beginning of the project and at the end. In addition, a control group was also used to compare it with the experimental one. This questionnaire collated information on students' perceptions of the need to communicate internationally with respect to the most common communicative situations as proposed by Lehman and DuFrene (2013), which included attending meetings, writing reports, presenting information, and working in a group, as well as asking them about their confidence to execute such tasks and their ability to use some Google Tools.

The main findings of this research are that participants enhanced their communicative competence in international online environments, and that this experience helped them develop, among others, their digital and intercultural skills. We also observed that students from both institutions enhanced their confidence in communicating in professional and academic contexts during the execution of this project. This telecollaborative experience should be considered fruitful and satisfactory for learners and teachers, as students showed progress and developed linguistic, intercultural, interpersonal, and cognitive abilities by taking an active part in telecollaborative project work.

2. Literature

O'Dowd (2015: 21) defined telecollaboration as "the use of online communication tools to bring together language learners in different countries to develop collaborative project work and intercultural exchange". In the last decade, the development of communication technology and its accessibility has permitted students from different countries to easily connect via electronic tools and work collaboratively. As a result, institutions from all over the globe have engaged their students in virtual exchanges in order that they obtain linguistic and cultural benefits. Case studies providing evidence for this can be found in Casañ-Pitarch and Candel-Mora (2021), Casañ-Pitarch, Candel-Mora, Carrió-Pastor, Demydenko and Tikan (2020), Godwin-Jones (2019), Korkealehto and Leier (2021), Lee and Song (2019), Lenkaitis (2020), Lenkaitis, Calo and Venegas Escobar (2019), Marull and Kumar, (2020), Polyakova and Pastor-Garcia (2021), Taskiran (2019), and Üzümlü, Akayoglu, and Yazan, (2020).

To understand the concept of telecollaboration, it is necessary to review the theoretical principles detailed in prior research. O'Dowd (2018) suggested that telecollaboration is based on communication among participants. This idea connects with the basis of the communicative approach in foreign language learning, as it promotes the development of communication in a natural environment over forms such as grammar (O'Rourke, 2007). However, although the main focus within the communicative approach is the fluency of communication rather than accuracy, new language forms do need to be introduced and then practiced before the learner can acquire them (Krashen, 1985; Swain, 2005).

The learning-acquisition process is divided into three stages: input, process, and output (Stern, 1983), and each stage relies on different mechanisms. Following Ellis (2009), however, learning should be distinguished from acquisition. This author considers that learning concerns memorising the explicit use of grammar rules, whereas acquisition refers to the practical command of the target language. In this sense, the first involves a conscious process, whereas the second is unconscious. However, before this, the input stage concerns presenting the new information that students are expected to learn (Richards & Renandya, 2002). Krashen (1985) had previously explained how the input should be comprehensible but slightly challenging. Other authors, such as Muñoz (2007) and Skehan (1996), have added that input should be authentic, varied, relevant, and treated as experimental.

After presenting new content, this should be practiced to 'learn' it. Therefore, the process stage consists of practicing the new knowledge to interiorize it. Learning is a conscious process, usually achieved through repetitive exercises, also known as drills (Paulston, 1970). Examples are gap fills, multiple-choice, crossword, jumbled sentences, matching, ordering words, and text entry (Boytcheva, Kalaydjiev, Nenkova & Angelova, 2002). Besides, this stage also requires scaffolding from the instructor and feedback to students based on their performances (Swain, 1995).

The output stage concerns producing new content based on the new knowledge. Swain (2005) explained that students should be able to communicate naturally with the new knowledge by analyzing the situation and choosing the most suitable and accurate form to use. To this end, the use of tasks seems to be a suitable exercise to ensure communication flows naturally (Nunan, 2004). Unlike drills, tasks represent the application of this new knowledge as a whole, as it is real communication. In a task-based approach, language learnt becomes the instrument of communication, rather than a simple exercise, during the process of completing a task (Ellis, 2003; Samuda & Bygate, 2008).

The task-based approach has been reported to enhance students' oral fluency, listening, and the acquisition of new vocabulary (Chacón, 2012), to increase the use of the target language in the classroom (Tinker Sachs, 2007), and to implement new knowledge and skills in the real world (Macías, 2004). Other researchers have also noted that the use of tasks in the classroom increases learners' motivation (Park, 2012), their confidence with the command of the target language and communicating with it (Lopes, 2004), and students also perceive this approach as entertaining (McDonough & Chaikitmongkol, 2007) as they are encouraged to perform a more active role and collaborate with other students (Iwashita & Li, 2012).

For our research, a step further in the task-based approach is to transform a series of tasks into a project. The main difference between projects and tasks is that tasks are small and not structured in phases like projects (Brataas, Hughes & Sølvsberg, 1994). In this sense, projects are longer, more complex, and require more effort. Larsson (2008:7) explained that projects have "well-defined objectives, schedule, and budget which rely on contributions from several functional departments across the organization". Winch (2013) also highlights length and complexity as crucial factors that distinguish a project from a task and adds manifest intentionality to the list. This concept concerns forming and executing a plan, something that does not happen in a task. Projects require a global vision and a broader range of organization skills in order to devise a strategy and procedures for its accomplishment. To illustrate this, Winch (2013) compares a project with building a house, whereas raising a wall would be a task.

In addition to these differences and similarities, other features of projects should be considered (De Graaf and Kolmos, 2003). Firstly, project work is based on constructivism; this implies that students are given opportunities for output, which requires problem-solving skills. However, it should be acknowledged that students also need the teachers' scaffolding and guidance and to have access to comprehensible input. This idea connects with the hybrid online learning model (Tsai, 2016). Secondly, this approach requires learners' to be involved in research, decision-making, and production, which lead to deeper learning and experiencing a real case study. Thirdly, project work is interdisciplinary, and it connects with different curriculums, contexts, and real-life situations. Finally, project work is also developed in groups, and it requires students to develop collaborative working skills to decide in groups the best solution each time and fulfil the objectives successfully. Furthermore, telecollaboration is based on continuous meaning negotiation, an action that is highly recommended within the foreign language classroom (Ellis, 2003).

In conclusion, as Dooly (2017) suggested, telecollaboration is a suitable approach to use in the foreign language classroom since it engages students in multiple interactions through teaching based on tasks, project-based learning, and language teaching based on communication methodologies.

3. Method

This telecollaborative project work aimed to help our students develop their communicative skills in a professional context while using English as a Lingua Franca. Our students had to create a blog on 'Sustainable development today', which mainly focused on environmental issues. Two universities participated in this telecollaborative project work: Universitat Politècnica de València (UPV) in Spain and Igor Sikorsky Kyiv Polytechnic Institute (KPI) in Ukraine. In total, there were 32 students from KPI and 24 from UPV. The students from Spain were enrolled on a bachelor of industrial engineering degree and were taking the subject English B2, whereas the Ukrainian students were doing a language education master's degree. The participants' language level of the UPV students was B1 and B2 and the KPI students were all at B2 level. This research was conducted from February to May 2020 in a virtual environment and involved an estimated 15 hours of work for the students (1.5 ECTS). Regarding the control group, 62 students from UPV were used to compare it with the experimental one. The control group followed the subject guidelines and completed the obligatory activities, not participating in the telecollaboration project, but completing language activities in a computing laboratory.

The project was divided into four stages, which were as follows. Firstly, the instructors organized the students into groups of four or five participants with two or three students from each institution. Students in each group were required to establish contact with each other in this initial stage. In the second stage, students received instructions about how to participate in this project and were exposed to the specific vocabulary and language forms in English related to sustainability. Next, in the third stage, students started working in their groups to create a blog about 'Sustainable development today'. This blog was based on activities that had to be completed in a virtual meeting of each group, which was recorded and shared with the instructors. These meetings promoted communication among the group members and helped them organize the work on the blog. The last stage concerned assessment, and this was divided into different parts. The students first met online and gave feedback to other groups on their blogs. Then, the groups had one week to modify their own blogs on the basis of this feedback before the instructors visited it to assess it as well as holding an oral presentation which the students made as a group.

A number of tools were used in this project. We chose the ones offered by Google because they are open and accessible to everyone. The tools used were Classroom, Hangouts, Blogger, and Drive, each of which had a specific use. Classroom was used as the main platform for the project, and the means by which students received instructions from and communicated with the instructors. Hangouts was used for groups hold their online video meetings, while Blogger was used to create the blogs. Finally, the cloud space Drive was used to share documents among the group members and for them to work collaboratively.

The data to be analysed came from two questionnaires specifically designed for this project that focused on what students felt their communication learning needs were, their opinion on the relevance of certain communicative actions for their professional interest, as Lehman and Dufrene (2013) proposed, and their confidence to implement them before and after the project. Students were also asked about their knowledge of the Google Tools used in this project and their satisfaction with this project. These data were based on a Likert Scale, graded from 1 to 5.

4. Results

Based on the answers to the questionnaires, this section explains the results obtained in our experiment with KPI and UPV students. The results show the participants' perception of how this project helped them enhance their communication skills in digital and professional contexts through a comparison of the experimental group's answers before and after participating in the programme as well as by comparing the post test results of the experimental and control group. Table 1 shows the differences between participants (experimental group) and non-participants (control) before (dif. 1) and after the project (dif 2.), while the last column shows the progress of the participants in terms of the percent variation from their pre-test to their post-test.

Firstly, students were asked about particular aspects of their learning needs before and after completing the project. Table 1 shows that students who participated in this project were slightly more enthusiastic than those who didn't participate in terms of developing their digital skills for their professional purposes. Considering that *the degree of agreement with the statements* on the questionnaire of participating students was high from the beginning (4.79), it was perhaps relatively surprising that this was the only item that did not get higher scores in the post-test (4.72). It was not the case with the other items. The results show that students considered that the skills mentioned in the questionnaire were more relevant to them after completing the project. Specifically, their degree of agreement with the items in the questionnaire related to different skills increased after the project in the range of 4.09% to 14.29% for different questions.

Degree of agreement with the following statements:						
Question	Non Part.	Participants		Dif. 1	Dif. 2	Progress
	Only answered once	Before	After	Before	After	B-A
Digital skills are necessary in the current professional world.	4.42	4.79	4.72	8.37%	6.79%	-1.46%
I need develop my digital skills.	3.58	3.97	4.23	10.89%	18.16%	6.55%
I need develop my language skills in digital contexts.	3.9	4.09	4.3	4.87%	10.26%	5.13%
I need learn a lot about engineering issues language for my professional life.	4.03	4	4.37	-0.74%	8.44%	9.25%
I need develop my professional skills in digital contexts.	3.92	4.16	4.33	6.12%	10.46%	4.09%
I need learn a lot about engineering issues for my professional life.	3.94	3.78	4.32	-4.06%	9.64%	14.29%

Table 1. Analysis of Learning Needs Before and After the Project.

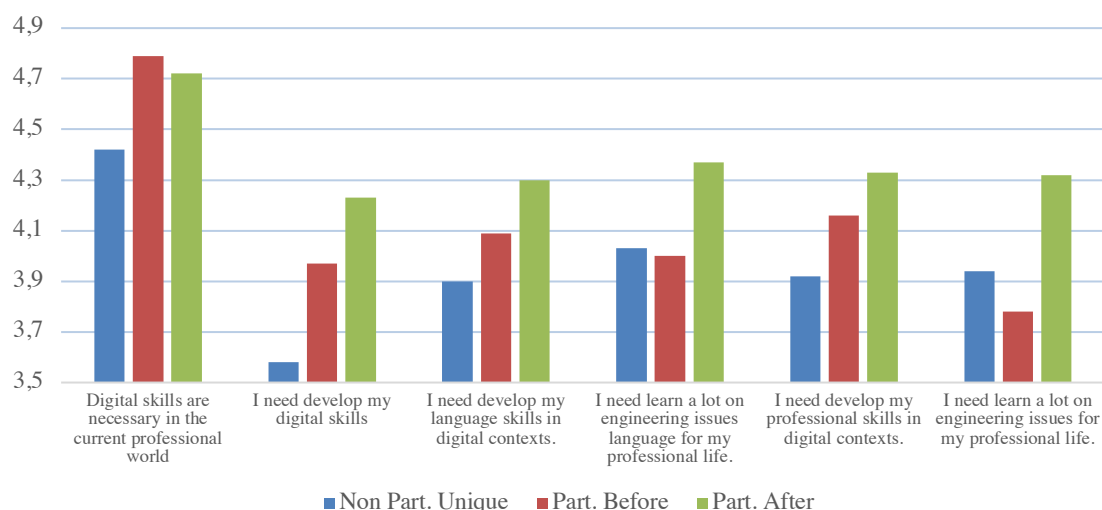


Figure 1. Analysis of Learning Needs Before and After the Project.

Our next concern was to analyze how important participants considered the most common communication skills in professional environments, based on the taxonomy of Lehman and DuFrene (2013). In this respect, their opinions did not change considerably. In the pre-test, all the items in the list scored above 3.81. However, after the project, the item with the lowest score ('writing reports') was evaluated at 4.05 and this was also the skill which increased least in terms of the value given to it by participants (1.25%). In contrast, the most significant change was seen in relation to the item 'evaluating and counselling other people and their work' (12.34%), which was initially the most undervalued, and increased from 3.81 to 4.28 on our Likert scale. The items whose positive evaluation increased the most among the participants were 'working in a group' and 'promoting your product or service / persuading others'.

I think that the following skills are important for my professional life:						
Question	Non Part.	Participants		Dif. 1	Dif. 2	Progress
	Only answered once	Before	After	Before	After	B-A
Attending meetings	4.15	4.36	4.42	5.06%	6.51%	1.38%
Writing reports	3.82	4	4.05	4.71%	6.02%	1.25%
Presenting information	4.24	4.38	4.51	3.30%	6.37%	2.97%
Explaining and Clarifying procedures to other colleagues	4.24	4.22	4.33	-0.47%	2.12%	2.61%
Working in Group	4.29	4.29	4.58	0.00%	6.76%	6.76%
Evaluating and counseling other people and their work	3.87	3.81	4.28	-1.55%	10.59%	12.34%
Promoting your product or service / Persuading others	4.13	3.98	4.3	-3.63%	4.12%	8.04%

Table 2. Analysis of Communication Needs in Professional Contexts Before and After the Project.

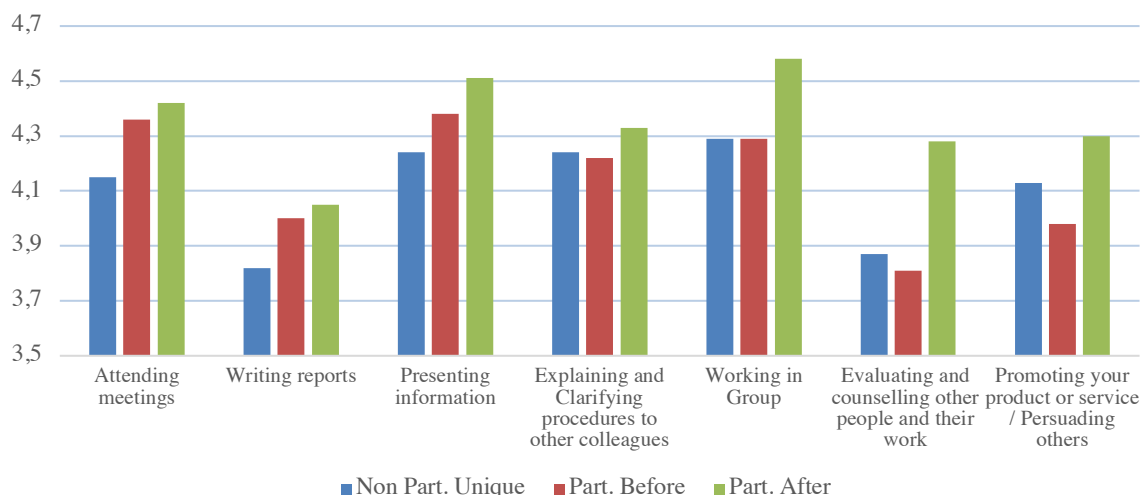


Figure 2. Analysis of Communication Needs in Professional Contexts Before and After the Project.

Complementary to the previous questionnaire participants were also asked about their degree of confidence to perform each of the required skills. The results among the control group showed that their confidence ranged from 3.10 to 3.98. The results of the experimental group were similar before the project, ranging between 3.26 and 3.88. After completing the project, however, the participants' responses showed they felt more confident about performing all the actions on the list, with increases being between 9.79% and 23.93%. In this sense, students felt that they had improved most in terms of 'writing reports' (23.93%), 'attending meetings' (21.45%), and 'presenting information' (18.73%), which were some of the skills that were probably the most relevant within the project. On the other hand, it was surprising that the progress in 'working in a group' was the lowest (9.79%). According to some of the responses provided by the participants, some groups had to manage internal conflicts, and this is probably the reason why the perceived improvement in this skill was below that of others.

Degree of confidence in:						
Question	Non Part.	Participants		Dif. 1	Dif. 2	Progress
	Only answered once	Before	After	Before	After	B-A
Attending meetings	3.19	3.31	4.02	3.76%	26.02%	21.45%
Writing reports	3.11	3.26	4.04	4.82%	29.90%	23.93%
Presenting information	3.1	3.31	3.93	6.77%	26.77%	18.73%
Explaining and Clarifying procedures to other colleagues	3.63	3.53	4	-2.75%	10.19%	13.31%
Working in Group	3.98	3.88	4.26	-2.51%	7.04%	9.79%
Evaluating and counseling other people and their work	3.42	3.48	4	1.75%	16.96%	14.94%
Promoting your product or service / Persuading others	3.29	3.38	3.84	2.74%	16.72%	13.61%

Table 3. Degree of Confidence in Communicating Skills in Professional Contexts Before and After the Project.

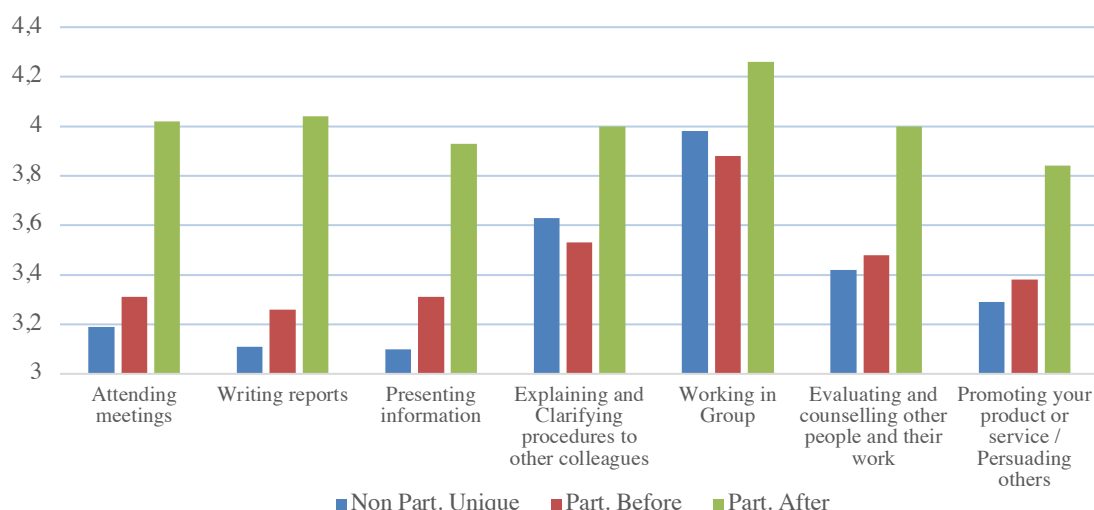


Figure 3. Degree of Confidence in Communicating Skills in Professional Contexts Before and After the Project.

Regarding the participants' digital skills, this project introduced students to the Google Tools mentioned in Table 4. The progress of the participants in the use of these tools was notable. As shown in the table and the figure below, the degree of confidence as users of these Google Tools was similar in the control and experimental group before the project (control group range, 2.40-3.85; experimental group range, 2.34-3.81). After completing this project though, the degree of confidence among the experimental group increased across categories to between 3.77 and 4.44. The increase in confidence was between 15.22% and 61.11% depending on the tool. The most significant progress was found in using Google Blogger (61.11%) and Google Classroom (59.41%).

I feel I am an expert in the use of:						
Question	Non Part. Only answered once	Participants		Dif. 1 Before	Dif. 2 After	Progress B-A
		Before	After			
Google Blogger	2.4	2.34	3.77	-2.50%	57.08%	61.11%
Google Docs	3.52	3.55	4.39	0.85%	24.72%	23.66%
Google Drive	3.85	3.81	4.39	-1.04%	14.03%	15.22%
Google Hangouts	3.34	3.43	4.44	2.69%	32.93%	29.45%
Google Classroom (as a student)	2.71	2.95	4.32	8.86%	59.41%	46.44%

Table 4. Degree of Confidence Using Google Tools Before and After the Project.

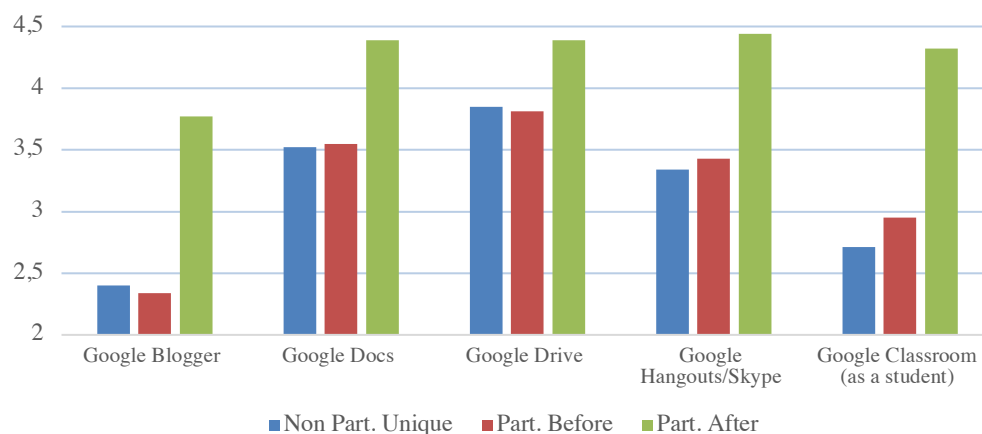


Figure 4. Degree of Confidence Using Google Tools Before and After the Project.

Finally, participants were also asked to assess their experience of the project work. Table 5 shows the results obtained: all items score higher than 4 on a scale of 5. As can be seen, students were satisfied with their participation in the project, and they also acknowledged that they had developed specific professional skills such as teamwork, problem-solving and working in multicultural environments.

Degree of agreement with the following statements	
Question	Particip.
I think the instructions for the tasks were clear.	4.33
I think the instructions for the assessment were clear.	4.33
I am very satisfied with this project.	4.23
I would like to have more experiences like this at the university.	4.25
I would recommend this project to other students.	4.33
I feel that the skills acquired in the project will be useful for me in my working life.	4.51
Working on this project improved my teamwork skills.	4.39
Working on this project improved my problem-solving skills.	4.09
I learned to apply knowledge to practice.	4.14
I learned about operating in a multicultural environment.	4.4

Table 5. Learners' Project Assessment.

5. Discussion

This research has revealed some possible benefits for students of participating in telecollaborative project work where the mother tongues of group members were different and so they needed to communicate in English as a Lingua Franca, as explained by O'Dowd (2015). As stated in the introduction, the objective of this research was to analyse the perceptions of students about the need to communicate internationally in the most usual communicative situations as proposed by Lehman and DuFrene (2013). The main findings of this research are that, first, students acknowledged both before and after participating in the project that the communicative professional skills highlighted by Lehman and DuFrene (2013) are necessary for their future, and second, that their degree of confidence to implement them in a real context increased after they had practiced these communicative skills in this telecollaborative project.

In this sense, our results showed a noticeable difference in terms of responses to the items on the questionnaire before and after the project with respect to confidence about attending meetings, writing reports, and presenting information, probably the most important activities within the project. The implementation of collaborative project work in a synchronous online environment influenced our participants' views about the importance of these communicative skills, as they needed to implement them in order to complete their tasks within the project. They had to attend and participate in meetings with participants from other groups as well as with their group mates, presenting information based on their research and opinions, writing reports at the end of each meeting, and continuously negotiating meaning with the other participants (Ellis, 2003). We believe that their active role in this project helped them to become more motivated to communicate in a foreign language, as suggested by Iwashita and Li (2012), Lopes (2004), and Park (2012). This active role could also be connected to the participants' emotional status as they felt more confident to communicate in a foreign language because they had progressively enhanced their language skills, as suggested by Chacón (2012) and Tinker Sachs, (2007), and participants then saw that they could use the new language effectively in the real world (Macías, 2004).

In addition, it was also significant to see that our participants felt more knowledgeable in the use of certain Google Tools such as Blogger, Hangouts, Drive, and the sharing of documents as part of their teamwork. Indeed, the current trend of ever-increasing globalization and the rising power and presence of multinational companies in the marketplace mean that some of these tools, or similar ones, are essential for telecollaborative environments

where employees from different locations around the globe meet and work together. These ideas are linked to the work of Winch (2013), who explained the importance of working with projects, which lies in the fact that projects go beyond tasks and require a global vision and organization in order to design a strategy and execute a plan. Project work combines communication in a foreign language with other non-linguistic actions, such as creating blog content. The implementation of new non-linguistic knowledge and the discussion with other group members of how to use it is the result of learning by doing, which also implies communicating naturally (Ellis, 2009; O'Dowd, 2018). In this respect, as pointed out by Larsson (2008) in terms of groupwork in schools, contributions from different departments are necessary. In an educational context, this implies that projects require teamwork. In our case, the creation of a blog on the topic of 'Sustainable development today' could be dealt with and understood as an opportunity for the participants in the project to share their individual contributions for the benefit of the group and thus complement the work of other members. As a result, groupwork is a fundamental skill for projects where the qualities of the members are complementary and necessary among them.

Participants' satisfaction with this project is a clue that this practice seems to be useful to students who need to learn how to work in international telecollaborative projects where the use of a Lingua Franca is necessary, English the most usual one. This project seems to have made students aware of their present professional needs, opening their eyes to the need to develop their communication skills and digital literacy skills. According to the results presented in this research, while students seemed to be aware of these needs at the outset, participation in the project lead them to more highly value the skills considered and give greater weight to how important they were to learn and develop. We believe that their awareness of the need to communicate in a foreign language and the use of online tools to complete tasks could be connected to their previous experience with the COVID-19 pandemics, which had already forced this generation of students to work collaboratively in online environments as face-to-face classes were cancelled temporarily in various periods of 2020 and 2021. Therefore, this prior knowledge and experience might have been inferred in our results compared to experiments before the pandemics.

6. Conclusion

This paper highlights the potential of implementing a telecollaborative project in the foreign language classroom. This research can conclude that this experience is highly recommended for foreign language students since it helps them develop several skills related to their professional interests, both linguistic and non-linguistic, as previously discussed in this paper. Undoubtedly, the primary purpose of a foreign language subject is to help students develop their language skills. However, it is also clear that contextualizing the practice of language skills learnt is convenient to promote the idea of learning by doing or role-playing, which also involves communicating naturally (Ellis, 2009; O'Dowd, 2018).

The idea of contextualizing new knowledge in a project with students from other institutions whose mother tongue is different makes students learn by doing and communicating in the language in common, in this case, English. In addition, with a project-based approach, students are encouraged to develop their non-linguistic knowledge while using a foreign language. Our experimental group students reported that they were happy with their participation in this project, and they also acknowledged that they had enhanced their language skills through their participation. Therefore, we consider that a telecollaborative project-based approach should be considered in all foreign language classrooms at university level, and the content should be adapted to the participants' degree subjects or interests. In our case, we adapted the topic of the project to a general science one, namely sustainability to accommodate the fact that our experimental subjects were a mixture of engineering

undergraduates and post-graduate master's degree in education students. In this way, students focused on specific language that they would be more likely to use to carry out actions related to their future professions. In other words, students need to find the project useful to their professional interests.

Regarding limitations, we found that managing a project-based approach is not easy because the instructors often needed to intervene to solve conflict among group members. In this sense, not all the participants have the same working style or degree of commitment, which makes the harmony in the group unstable. For this reason, monitoring participants' progress regularly and direct and continuous communication between the instructor and the participants is crucial for the development of a telecollaborative project work. In future research, our research group believes that the potential of project-based learning can be further explored by slightly modifying the guidelines in the current project or focusing on the development of different language and professional skills.

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