Fostering Musical Education through COIL Methodology: A Higher Education Journey

DAVIDE CAPPERRUCCI
Associato di Pedagogía sperimentale – Università degli Studi di Firenze
Corresponding author: davide.capperucci@unifi.it

ROSSELLA CERTINI
Associata di Pedagogía Generale e Sociale – Università degli Studi di Firenze

MATTEO M AiENZA
Dottore di ricerca – Università degli Studi di Firenze

LAURA MONDEJAR MUÑOZ
Docente di Music Education – Università di Siviglia

ALEJANDRO SORIA VILCHEZ
Docente di Educazione – Università di Siviglia

Abstract. This study focuses on a design proposal for the teaching of musical and artistic subjects in Primary Education teacher training through the COIL (Collaborative Online International Learning) methodology. Firstly, a description of the theoretical basis and the educational context of the proposal is given, followed by a presentation of the application of the project, the tools and materials used. Then, the implementation of this proposal with the students is presented, as well as other questions that emerged during the design process. Finally, the results obtained after its implementation and reflected in the evaluation survey of the participating students are shared. The objective is to enrich the data on the benefits of the application of this methodology at university level.

Keywords. COIL - Higher Education - Education Degree - Music education - Teacher training

1. Introduction

Collaborative Online International Learning (COIL) is considered a new paradigm for teaching and learning aimed at promoting the development of intercultural competence in virtual learning environments through the use of innovative internet-based tools and

1 Although this article is the result of collective work, on the level of scientific responsibility Davide Cappa-
rucci wrote section 4; Rossella Certini wrote section 2; Matteo Maienza, Laura Mondéjar Muñoz and Alejan-
dro Soria Vilchez wrote sections 1, 3, 5 and 6.
pedagogies. The increasing focus on the use of information and communication technologies (ICT) led, during the 1990s and 2000s, to the introduction of the concept of ‘virtual mobility’ which has become a growing trend in collaboration between higher education institutions to respond to the limitations caused by the COVID-19 pandemic.

In this sense, the importance of internationalization lies in the possibility of learning more about people from different countries, understanding their culture, and engaging in a multilingual process that can lead students to a relativistic approach to understanding truth. Virtual exchanges can also be considered preparation and/or extension of physical exchanges, which can be expanded by fueling a possible new demand for youth mobility for learning and the use of ICT. They are ultimately a particularly valuable resource for opening up to new contacts and preparing for a stay abroad, creating conditions for future physical mobility by facilitating friendships, contacts, and social networking (European Commission Green Paper, 2009).

The need to promote an international dimension of higher education by leveraging the potential of ICT derives from the need to ensure the same rights to students who, for various reasons, cannot or do not want to go abroad, first and foremost students with reduced mobility. Various higher education institutions, such as the State University of New York (SUNY), emphasize the potential of COIL as an integral part of the internationalization of university curricula, as it allows for a collaborative exercise between faculty and students, utilizes the international potential of technology, and integrates learning processes.

De Wit (2018) summarizes the potential of COIL in four dimensions:

- It provides an opportunity for all students who wish to do so to have an international learning experience without having to travel abroad for a semester or more.
- It provides an opportunity for students and teachers to remove spatial and temporal barriers and work closely together, an opportunity that in many cases is lost in traditional education.
- It focuses attention on the specific ways in which a specific discipline is taught and learned.
- It promotes inter-institutional collaboration and cooperation, as well as the creation of informal online learning and collaboration environments, such as virtual platforms.

Therefore, this project aims to offer students an international learning experience aimed at improving their language and cultural understanding and skills; developing students’ digital skills, such as using online platforms and virtual communication tools; providing problem and project-based learning opportunities, where students collaborate to solve real problems and apply the knowledge and skills acquired in their course of study; promoting the development of soft skills such as intercultural communication, teamwork, and conflict resolution; fostering inter-institutional cooperation and the creation of long-term collaboration networks between universities and students from different parts of the world.

In this sense, the benefits for teachers include the opportunity to develop new teaching methodologies based on the use of innovative technologies and online tools, with the possibility of gaining new perspectives and knowledge on specific disciplines, through access to an international network of teachers with whom to collaborate and increase leadership and project management skills, as well as cultural awareness and intercultural understanding.
2. Literature review

Several international experiences highlight international collaboration between higher education institutions. Authors such as De Klerk & Palmer (2022) conducted a study linking Strategic Disability Policies for the Education System in higher education institutions. The authors argue that the use of COIL methodology ensures inclusive education for students with various disabilities. On the other hand, Vahed (2022), designed a project with students from international universities aimed at finding a solution to material waste in dental laboratories. Other authors, such as Hackett et al. (2023), examined the intercultural competence that arises from the implementation of the COIL methodology. In a similar vein, Wimpenny et al. (2022), analysed digital inclusion and equity in Higher Education between countries in the Global South and the North. Similarly, de la Garza & Maher (2022), offer insight into how online collaborative learning can offer an effective way to decolonise teaching approaches in film studies between countries in Latin America. In relation to intercultural approaches Asojo et al. (2019) propose to foster intercultural competence among students from different countries, with an emphasis on problem solving corresponding to specific socio-cultural contexts.

Similarly, in order to promote issues related to learning and culture in other countries, Naicker et al. (2022), analyse the challenges faced by students when working under methodologies that require international collaborative learning. However, although the results show positive aspects, the authors state that the main barriers faced by students lie in technological aspects, language and relationships with international peers. Likewise, Ramírez & Bustos-Aguirre (2022) observed how teachers had implemented experiences under the COIL methodology and what kind of intercultural competences, and technological skills, students had acquired. On the other hand, Simone (2020) identifies what kind of technological difficulties students encounter when working with online collaborative methodologies.

3. Objectives

The development of the proposed proposal is based on a series of objectives which, in a procedural manner, allow for the adequate implementation of the project. Thus, these are framed according to a principle of progression, broken down as follows:

- To compile previous experiences of activities which, based on the COIL methodology, offer the teaching team an overview of international university collaboration.
- To design an inter-university project that favours the learning of contents linked to artistic and musical education in related subjects of the curriculum for the training of teachers in Higher Education.
- To promote a comprehensive training of the students participating in the experience through digital competence and linguistic interaction skills.
- To encourage self-criticism, sociability and oral expression of students of the Bachelor’s Degrees in Education through the design and elaboration of a final project associated with artistic education subjects.
- To evaluate the projects presented in order to offer students a useful report adapted to different aspects of competence.
4. Methodology

As stated above, the proposal is structured around two educational institutions, so that its markedly international nature requires a programme in line with this issue, giving priority to the principles of progression, adaptation and flexibility. The teaching methodology used is based on two basic pillars. Firstly, the expository class as a training resource and carried out by the three participating teachers. Secondly, the supervision of the project resulting from the theoretical training given together with an evaluation that reflects the degree of achievement of the general and specific competences, which reflect the success of this proposal as a training model for university education students.

4.1 Participants and Institutions

The characteristics of the participants in this project are described below, as well as other issues of a didactic nature that determine the programming of the sessions that comprise it. For this reason, the contexts of both groups of participating pupils are defined, as well as the gestation of the proposal by the teachers who direct it.

4.1.1 Collaborative Online International Learning for University students of Italy and Spain

The assimilation and practice of the educational foundations of education is the basis of the studies taken by the participating students. In this formative context of university education, the starting point is a subject on music, with similar contents, similar timing in the semester and framed within the syllabus of the university degree. On the one hand, in the case of Spain, the degree that the participating students take is called Primary Education Degree and, more specifically, major in Music Education. On the other hand, the students at the University of Florence are trained as teachers at the Dipartimento di Formazione, Lingue, Intercultura, Letterature e Psicologia (FORLILPSI) and the subject in which the proposal is framed is called Teorie e Metodi di Progettazione e Valutazione Scolastica con Laboratorio di Progettazione Scolastica.

4.1.2 Partnership between CEU-Sevilla and Florence University

The agreement promoting this proposal arises from a previous teaching collaboration between both institutions, CEU Cardenal Spínola (Spain) and the University of Florence (Italy), which was developed thanks to a teaching staff mobility grant for teaching purposes, favouring the connection of the participating teaching staff and projecting future teaching cooperation. For this reason, it has been relevant to know the sociological and educational context of the participants in order to adapt the didactic aims of the proposal, as well as to adjust the time requirements of the participating students in terms of subject matter and maturity.
4.2 Instruments

An ad hoc questionnaire was designed for data collection. The aim of this instrument was to analyse the student’s perception of the use of COIL methodology. The questionnaire consists of 23 questions - see table 1 - combining questions on a 5-point Likert-type scale and open-ended questions. This instrument has been created based on other models that have been implemented in similar experiences (Carretero et al., 2017; Liu & Shirley, 2021; Portalla & Chen, 2010). On the other hand, the questions in the questionnaire are structured in three categories: Before starting COIL project (questions 1-4); During COIL project (questions 5-11) and After COIL project (questions 12-23).

**Before starting COIL project**

The questions in this category are aimed at finding out about the students’ previous background in terms of use, communication, collaboration and knowledge of the English language, as well as previous experiences and interests in participating in international projects.

**During COIL project**

The questions in this category are related to the learner’s perception of group and individual communication, as well as the development of skills and abilities, problem solving and effectiveness in collaborative work.

**After COIL project**

The questions in this section are designed to capture how participation in the COIL project has improved students’ social, communicative and collaborative skills, as well as the strengths and weaknesses of the project (see Table 1).
### Before starting COIL project

1. Before the course I was concerned with my ability to communicate in English.
2. Before the course I was concerned with my ability to collaborate with students from another country in a classroom setting.
3. Before the course I was looking forward to the opportunity of interacting virtually with students from another country.
4. Before the course would you have been interested in being an exchange student and studying a semester abroad?

### During COIL project

5. I actively exchanged my ideas with group members.
6. I felt part of a learning community in my group.
7. I was able to develop problem solving skills through peer collaboration.
8. I was able to develop new skills and knowledge from other members in my group.
9. Collaborative learning in my group was effective.
10. Overall, I am satisfied with my collaborative learning experience in this course.
11. Collaborative learning in my group was time consuming.

### After COIL project

12. To what extent did the course provide you with meaningful opportunity for discussions with students from other countries?
13. To what extent did the course provide you with meaningful opportunity to collaborate on a project/assignment with students from other countries?
14. To what extent did the course provide you with meaningful opportunity to develop virtual social relationships with students from other countries?
15. To what extent did the course help increase your self confidence to participate in international programs?
16. To what extent would you be willing to take another course that connects you with students from other countries?
17. After this course, to what extent would you be interested in being an exchange student and studying a semester abroad?
18. To what extent would you be willing to participate in another international program or project?
19. To what extent do you feel that this international learning experience contributed or enriched the academic learning of the subject matter of your course?
20. What did you like most about the course?
21. How do you feel that this course contributed to your feelings towards participating in international programs and projects?
22. Any recommendations or comments on how the course could best promote international relations and ties?
23. Would you participate in another COIL project in the future?

Table 1. Questionnaire on the student’s perception of the use of COIL methodology
4.3 Project development phases

The didactic experience has been developed in four phases, structured according to the following actions:

Phase 1: Contact between institutions and professors
Phase 2: Literature Review
Phase 3: Educational Programming
Phase 4: Implementation

Figure 1 shows an overview of the chronogram with the different phases of development of the entire didactic experience, from its internal organisation to its implementation in the classroom.

Figure 1. Chronogram

Phase 1: Contact between institutions and professors
The first step in implementing a didactic proposal based on the COIL methodology is to establish contact with educational institutions in foreign universities interested in participating.
Phase 2: Literature review

During this phase, a review of COIL experiences that had previously been carried out in other educational institutions. In this way, the documentation compiled would serve as support both at the internal organisational level, on the part of the teaching staff, and at the didactic level, with a view to student training.

Phase 3: Educational Programming

This phase requires special preparation and care, as it establishes the didactic sequencing, as well as the thematic areas or projects to be worked on with the students. For this reason, it is important for teachers to reach a consensual decision, always bearing in mind the academic profile of the students, the contents of the subjects and the objectives to be achieved. The didactic material designed during this phase is as follows: COIL report, group follow-up, self-assessment and academic timetable, all grouped under a single document in student guide format.

Phase 4: Implementation

The next phase is the implementation of the whole project with the students. A work schedule (see table 2) was established and provided to the students in the first session, as well as all the documents that would need to be addressed.

4.4 Procedure and structure of the sessions

Sessions are developed according to different teaching methodologies, which include the presentation of the project by the teachers, theoretical presentations, supervision and monitoring of the students’ projects, their evaluation and grading.

4.4.1 Initial sessions

During the first sessions, the students were given instruction on the COIL methodology, as well as the general development of the project. All the documentation necessary to carry out the didactic experience was distributed and all the doubts arising from the proposal were resolved. On the other hand, the working groups were also organised. Two issues were also taken into account when establishing the groups: the first was to ensure that the groups had an equal number of Italian and Spanish students. The second issue was to ensure that within each group of students from both institutions there was a balanced level of English language proficiency.

4.4.2 Theory class sessions

The sessions taught by the teachers were done through mirror classes, a strategy that allows opening the barriers of the traditional classroom through technological tools, ‘bringing the outside world closer from anywhere in the academic spheres’ (Yangali et
al., 2021, p. 5). In each of the established sessions, the teacher gave a lesson oriented to the work to be developed by the students in their final project. The three topics chosen by the teachers were as follows:

**Didactic designing of materials to work on artistic contents.** This topic will attend to create resources destined to Primary Education students framed through Arts like Music, Fine Arts or another kind of artistic expression.

**Design of didactic sessions to work on inclusion through music.**
The aim of this topic is to develop several practical sessions where music is used as a vehicle to work on inclusion or some kind of specific educational needs, for example, children with hearing loss or visual disability.

**Design proposals to work on artistic contents at a distance.**

As the main proposal —option A—, this topic will attend to create resources destined to Primary Education students framed through Arts like Music, Fine Arts, Dancing or another kind of expression. The difference is that University students will design resources to implement through an online or virtual methodology with their Primary Education students.

Once the three sessions had been given by each teacher. The groups of students chose one of the three topics proposed to design their own didactic proposal as a final project. In addition, this didactic design had to be presented and justified in the last work session, which was destined for the presentation of each project.

### 4.4.3 Autonomous work sessions and presentation of projects

A number of working sessions were scheduled to encourage student autonomy. Although the official timetable indicated two sessions, students were free to meet with their international group according to their needs and personal availability.

To close this didactic experience, the last session was devoted to the presentation of the proposals designed by the students. In addition, they had fifteen minutes for presentations. Once they had finished, the teachers made contributions on the students’ presentations.

### 4.5 Working tools used

During the development of this project, it was decided that the Google Classroom platform was the most appropriate tool to establish a communication channel between teacher-student, as well as the most effective way to deliver the mirror sessions. One of the reasons we opted for this learning environment is that the service is free of charge, as well as the ease of use when sharing files, creating meetings and communicating with students - see figure 2.
The mirror classes were delivered via the Google Meet videoconferencing service. Each teacher gave a two-hour session - see table 2 - linked to their area of knowledge, which also served as a theoretical basis for the projects that the students had to present. In relation to the form of communication between students from both countries. It was decided to leave freedom in the way the students met in the autonomous work sessions.

![Figure 2. Overview of the Google Classroom platform. Source: screenshot](image)

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Work session schedule</th>
<th>Session Type</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12/09 We explain the project to Spa and It students. Ask who wants to participate.</td>
<td>Face to face</td>
<td>Each professor (SPAIN/ITALY) informs their students about the COIL project</td>
</tr>
<tr>
<td>2</td>
<td>19/09 Establishing the groups (SP/IT) by the teachers.</td>
<td>Face to face</td>
<td>Organizing and mixing Italians and Spanish students. During the week Students must be enrolled in the google classroom.</td>
</tr>
<tr>
<td>3</td>
<td>26/09 Professor 1 + Students (SP/IT) During the week: Sept. 27th 3pm</td>
<td>Online</td>
<td>Content: Option B: Design of music lessons to work on inclusion</td>
</tr>
<tr>
<td>4</td>
<td>10/10 Professor 2 + Students (SP/IT) During the week. Oct. 11th 3pm</td>
<td>Online</td>
<td>Content: Option A: Didactic designing of materials to work on artistic contents</td>
</tr>
<tr>
<td>5</td>
<td>24/10 Professor 3 + Students (SP/IT) During the week. Oct. 25th 3pm</td>
<td>Online</td>
<td>Content: Option C: Design proposals on artistic contents at a distance.</td>
</tr>
<tr>
<td>6</td>
<td>14/11 Students work (SP/IT)</td>
<td>Online</td>
<td>The students work by their own. Weekly professors supervise the student’s work</td>
</tr>
<tr>
<td>7</td>
<td>21/11 Students work (SP/IT)</td>
<td>Online</td>
<td>The students work by their own. Weekly professors supervise the student’s work</td>
</tr>
<tr>
<td>8</td>
<td>28/11 Presentations and conclusions. Closing of the project (SP/IT)</td>
<td>Online</td>
<td>Students share and present their final work</td>
</tr>
</tbody>
</table>

Table 2. Work Sessions schedule
4.6 Participants profile

Knowledge of the educational context of the participants is essential in collaborative projects with a diverse educational, geographical and social environment. Moreover, the characteristic of the online format accentuates, if possible, these differences. Thus, the construction of an approach that, taking into account the multidisciplinary characteristics of the participating students, brings together in the same project training aspects of interest for their future teaching profession, has been relevant.

On the one hand, in relation to the Spanish students, the project is offered to six students who are specializing in Music teaching at the Primary Education Degree at the University Cardenal Spinola CEU (University of Seville). Thus, this proposal is a training complement to subjects that make up the speciality, such as Instrumental Training and Vocal and Auditory Training. On the other hand, Italian students take the subject Teorie e Metodi di progettazione e valutazione scolastica, the contents of which can be framed within the framework of musical and motor expression as a resource for the training of future Primary Education teachers.

5. Didactic resources for the development of the proposal

The proposal is complemented by the development of resources that aim to advise students on the correct development of their project, while they are also aware of how it will be evaluated.

Guideline for students

This document has been designed as a didactic guide for students. When working under a pedagogical approach of this type, it is vital that the student knows at all times what the objectives of the project are, what the tasks or projects to be carried out are and how they will be evaluated. For this reason, the material provided to the student contains all the information related to the COIL project, the thematic lines to be worked on, the objectives to be achieved, the methodology to be followed, the evaluation to be carried out and a list of sources with accessible resources.

Self-monitoring group members

The group self-monitoring tool is a simple and effective system used to track the meeting attendance. It helps the team keep a record of who attends the meetings and who might be absent. By using this tool, team members are encouraged to be accountable and participate actively during meetings. It also allows the team to identify any patterns of attendance and address any issues related to absenteeism. With the group self-monitoring the team can ensure everyone contributes to the collaborative effort, leading to a more successful and cohesive group dynamic.

Intermediate self-assessment rubric

This tool was carefully crafted to serve as a comprehensive instructional aid for students engaging in this innovative pedagogical approach. In order to foster a successful learning experience, it is paramount that students are fully aware of the project’s goals, desi-
gnated tasks, and the evaluation criteria. This valuable resource equips students with all the necessary information pertaining to the COIL project, including the thematic areas to be explored, the specific objectives to be attained, the prescribed methodology to be employed, and the detailed assessment process. Furthermore, to facilitate seamless access to relevant materials, the rubric also provides an extensive list of accessible sources and resources, ensuring that students have the essential tools to thrive in their COIL project endeavors.

Memoria of the COIL project

The final memoria holds profound significance as a culminating document for students participating in the COIL project. Designed to serve as a comprehensive reflection of their learning journey, this report plays a central role in documenting the students’ experiences, achievements, and insights gained throughout the project. As a didactic guide, the memoria serves to enclose the students’ understanding of the project’s objectives, the complexity of their undertaken tasks or projects, and the methodologies employed to explore the thematic lines. This report stands as a testament to the collective wisdom, synergistic ideas, and shared learning experiences that have emerged from the collaborative endeavor. Within this collaborative document, each student’s unique contributions interweave to create a tapestry of insights and knowledge that surpasses individual capabilities.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>TASK</td>
<td>We are disoriented and/or confused when faced with the assignments</td>
<td>We are sufficiently satisfied with the result of the work done up to now</td>
<td>We are well satisfied with the result of the work done so far</td>
<td>We are fully satisfied with the result of the work done so far</td>
</tr>
<tr>
<td>GROUP</td>
<td>There is a complete lack of cooperation in the group until now</td>
<td>Some members are participating little, others are prevaricating</td>
<td>The level of collaboration is overall quite satisfactory</td>
<td>The activity has been carried out with an active and constructive contribution from everyone</td>
</tr>
<tr>
<td>TIME</td>
<td>The group is lagging far behind in its work, is scattered and/or or not working at home</td>
<td>Work is progressing, but it is pretty unfocused, sparse, or unproductive</td>
<td>Work is progressing, even if time could be better used</td>
<td>Time is used in the best way possible</td>
</tr>
</tbody>
</table>

Table 3. Intermediate Self-Assessment Rubric
6. Results and conclusions

Significant results are presented below, as well as their interpretation in order to draw conclusions that support the usefulness of this proposal and the set of didactic and social benefits that its application in the university classroom has generated.

Before starting COIL project

In general, before starting the project, the responses indicate that students experienced some fear in communicating and collaborating with international students due to the use of English language skills. However, there was some willingness on the part of the students to seek opportunities to interact with students from other countries, either in their immediate social environments or because they were interested in participating in exchange programmes.

During COIL project

Data on the perception and involvement of the students during the course of the project reveal that more than half of the students were proactive in sharing and expressing ideas. They also reported that they developed new skills that enabled them to provide solutions to problems that arose during the working groups, while feeling supported by other members of the group.

With regard to collaborative learning, the data indicate that there were discrepancies in terms of the degree of effectiveness when working in groups. Despite this, the students were satisfied with the experience of working collaboratively with students from a foreign university.

After COIL project

Generally analysing the responses to the questionnaire, students indicate that participation in the COIL project has been an interesting opportunity to work and discuss with students from other countries. In addition, it has increased the student’s self-confidence to participate in similar projects.

On the other hand, the students have expressed the following proposals for improvement with regard to the organisation and structure of the project:

• Greater control over the presence of students during online classes.
• The possibility of holding face-to-face sessions.
• Holding preliminary work sessions so that students from both international institutions could get to know each other better.
• Establish a greater number of group sessions between students and teaching staff in order to resolve doubts or problems arising from the working groups.
• Greater control and monitoring of group work

Finally, it should be noted that participation in international collaborative projects involves a great deal of preparation and time investment on the part of the teaching staff. However, there are many advantages that we have found, such as offering an opportunity to work online with students from foreign universities, the development of language skills, as well as acquiring technological skills that are so important nowadays. On the other hand, it should be noted that students with a lower level of knowledge of the
exchange language may be disadvantaged in terms of their level of performance and motivation, as their skills do not allow them to communicate fluently, and therefore, a greater integration in the group work sessions. Despite this, we believe it is important to offer the student different ways of learning.

References


Simone, B. (2020), Manejo de emociones negativas en el aprendizaje colaborativo en línea.

