

## **COLLABORATIVE ONLINE INTERNATIONAL LEARNING (COIL) AND ITS IMPACT IN THE EFL CLASSROOM. A LITERATURA RIVIEW.**

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### **Abstract**

COIL (Collaborative Online International Learning) is a methodology that has gained traction in recent years within higher education, demonstrating significant advantages in the development of essential skills for the 21st century, particularly in response to the demands of globalization. As a result, it has emerged as a highly relevant approach for training future professionals. This article presents a literature review of the implementation of this methodology across various countries, including those in Europe, Asia, and America. The researchers employed qualitative analysis and conducted a comprehensive search for research reports on the implementation of COIL courses. A thorough review of COIL course implementations identified ninety articles from the past five years. Twenty were selected for review, focusing on the development of communicative English skills and the incorporation of cultural elements.

The results indicate that significant advantages of this methodology include the development of intercultural, digital, social, and communicative competencies, particularly in English. This underscores the relevance and effectiveness of the methodology in fostering 21st-century skills. However, several disadvantages impede the effective implementation of this approach, such as a lack of institutional support, inadequate teacher training, and limited access to the Internet, which serves as a crucial means of communication for students from diverse regions. Other barriers, which are relatively easier to address, include time zone differences, teachers' commitment, and the emotional and social engagement of students. Interestingly, language barriers have emerged as positive aspects, as COIL offers opportunities for authentic communication in English with both native and non-native speakers.

**Key Words:** COIL (Collaborative Online International Learning), EFL classroom, intercultural competencies, digital competencies, communicative competencies.

### **Resumen**

COIL (Collaborative Online International Learning), por sus siglas en inglés, es una metodología que ha ganado popularidad en los últimos años en el ámbito de la educación superior, ya que demuestra ventajas significativas en el desarrollo de habilidades esenciales para el siglo XXI, particularmente en respuesta a las demandas de la globalización. Por ello, se ha convertido en un abordaje muy relevante para la formación de futuros profesionales. Este artículo presenta una revisión teórica de la aplicación de esta metodología en varios países, entre ellos, los de Europa, Asia y América. Los investigadores emplearon el análisis cualitativo y realizaron una búsqueda exhaustiva de

informes de investigación sobre la implementación de cursos COIL. De los resultados obtenidos, se seleccionaron veinte para su revisión, centrados en el desarrollo de competencias comunicativas en inglés y la incorporación de elementos culturales.

Los resultados obtenidos evidencian que, entre las ventajas significativas de esta metodología, se encuentra el desarrollo de competencias interculturales, digitales, sociales y comunicativas, especialmente en el idioma inglés. Este hecho subraya la pertinencia y eficacia de la metodología para fomentar las competencias del siglo XXI. No obstante, diversos obstáculos dificultan la implementación efectiva, tales como la falta de respaldo institucional, la formación insuficiente del profesorado y el acceso restringido a Internet, que constituye un medio de comunicación fundamental para estudiantes de distintas regiones del mundo. Otros obstáculos, relativamente más asequibles, incluyen las diferencias horarias, el compromiso de los profesores y el compromiso emocional y social de los alumnos. Es interesante destacar que las barreras lingüísticas se han manifestado como aspectos positivos, ya que el COIL ofrece oportunidades de comunicación auténtica en inglés, tanto con hablantes nativos como no nativos.

**Palabras claves:** Aprendizaje Colaborativo Internacional en Línea, aula EFL, competencias interculturales, competencias digitales, competencias comunicativas.

## Introduction

Globalization has introduced new challenges in education, necessitating the training of professionals for the future. According to Mujica-Sequera (2019), one of the most significant challenges in addressing the educational needs of the 21st century is responding to a globalized, technology-driven society. From this perspective, the author emphasizes the importance of incorporating values and fostering coexistence within educational frameworks. She also highlights the necessity of adopting methodologies that prioritize participatory learning, experiential learning, and collaboration, while underscoring the importance of equipping students with the skills to become independent and effective learners. Similarly, De Zubiría Samper (2019) argues that three principal categories of human competence are essential for training new professionals: cognitive, practical, and socio-affective. The author makes a significant contribution to the ongoing discourse on contemporary education by proposing a framework that encompasses these three distinct categories of competence: analytical or cognitive, socio-affective, and practical, as well as personal or value-based competencies.

COIL is a methodology that has been gaining traction worldwide as an innovative strategy to promote academic mobility and prepare students to become competent professionals equipped with the skills necessary for the 21st century. This approach has demonstrated significant benefits in enhancing participants' intercultural, technological, and communication skills. However, both teachers and students encounter challenges when implementing this methodology. According to Johnston and López (2022), the confluence of factors—including pandemic risks, rising costs, and new demands for experiential learning—has made it increasingly difficult for students to study abroad. Consequently, there is a growing interest in globalizing and internationalizing the curricula of colleges and universities worldwide. In this context, COIL has become increasingly effective since its inception, as it has been shown to result in increased mobility from students' home institutions.

A review of the literature reveals over ninety articles available on platforms such as Google Scholar, Scopus, the Directory of Open Access Journals (DOAJ), ResearchGate, and others that advocate for the implementation of Collaborative Online International Learning (COIL) across various fields, including health, engineering, law, international business, and education. This theoretical review specifically focuses on research supporting the application of COIL in foreign language classrooms. Twenty articles were identified that report findings on the experiences associated with implementing the COIL methodology in these settings. Research in this area is limited due to the recent emergence of this methodology within the context of foreign language teaching, which is still in its initial stages of exploration.

The findings demonstrate that this methodology is an effective strategy for promoting intercultural competencies, technological competencies, and social-communicative competencies among both students and teachers. However, the implementation of this strategy is hindered by various barriers. The research identifies several factors that impede the effective execution of this approach, including a lack of teacher training, time constraints, limited access to technology, insufficient institutional support, and increased workload.

### **Theoretical Aspects**

Considering the evolving dynamics and challenges of education in the 21st century, innovative methodologies have emerged to equip future professionals with the skills necessary to navigate and interact effectively in a globalized world. Methodologies such as Collaborative Online International Learning (COIL) have significantly impacted the development of the skills required by new professionals. This approach is grounded in collaborative learning and the enhancement of intercultural competencies. To facilitate a more comprehensive understanding of the theoretical principles underpinning this review, the authors begin by elucidating the concepts of globalization and internationalization, as well as the nuances of intercultural competencies and collaborative learning. Finally, the COIL methodology is presented in greater detail.

### **Globalization and internationalization**

It is first necessary to recall that in a globalized world, in which information and communication technologies play a pivotal role. These technologies have brought about processes of internationalization, which can be defined as a strategy that responds to globalization trends. It is essential to make a clarification on the conceptions of these two terms. According to, Cely et al. (2020), globalization is defined as a worldwide process of changes and transformations that seeks to unify markets, societies and cultures, transcending frontiers, and that favours communication and interdependence between countries. In contrast, internationalization denotes how countries react to globalization's influence while preserving each nation's distinct identity. Globalization, while maintaining the distinct identity of each nation. Globalization, in this context, is observed to respect the individuality of the nation, Cely et al. (2020).

According to Rezaei et al. (2018), the term 'globalization' is used to describe a broader concept that encompasses economic, cultural, scientific, and political transactions among nations. These transactions often result in a consensus and interaction among nations. Rezaei et al. (2018) refers to the term 'internationalization' to describe the processes and strategies that higher education institutions adopt to incorporate an international

dimension into their operations, curricula, and research. Thus, internationalization refers to the mutual exchange and pre-planned, consensual, three-pronged process including teaching, research, and service in universities.

It can thus be concluded that globalization is a comprehensive and multifaceted process of global interaction across a range of fields, with the objective of fostering integration between countries and regions. While internationalization is a specific and controlled process that emerges as a response to the dynamics of globalization. Internationalization is of paramount importance in higher education. No discipline or training can be considered complete or up to date without global perspectives, Casallas (2020).

### **Intercultural competencies**

The contemporary era of globalisation, interdependence and multicultural societies has engendered both opportunities and crises in educational institutions, thereby affecting fields related to social relations and social maintenance. Consequently, there is an urgent need to promote intercultural competences at the cognitive, emotional, and relational levels, equipping educators with the capacity to act in linguistically and culturally complex contexts, Portera (2014). According to Álvarez et al. (2021) in the contemporary era, intercultural competence is a highly desirable skill, both in the general professional context and for those seeking to enter an intercultural work environment.

The term "intercultural competence" refers to the ability of individuals to facilitate dialogue between cultures, aiming to develop knowledge, values, and interactions. This skill is increasingly vital today, where promoting cultural diversity presents challenges in an interconnected society (Santana & Betancourt, 2021). Intercultural competencies describe the effective and appropriate management of interactions among individuals who possess different effective, cognitive, and behavioral orientations toward the world (Portera & Milani, 2021). The development of intercultural competence can be enhanced through the internationalization of the curriculum, which can be achieved by utilizing an educational platform under the guidance of a skilled teacher. This approach involves creating content and materials that promote self-reflection and discussions about intercultural situations (Álvarez et al., 2021).

It can be concluded from the above that an effective strategy for developing intercultural competence in higher education is the implementation of COIL courses, which facilitate international learning and encourage collaborative participation between students from diverse cultural backgrounds.

### **Collaborative learning**

Collaborative learning involves students working together in small groups. This method prioritizes student-centered learning over teacher-centered instruction. It encompasses lesson planning, resource gathering, and fostering a collaborative group dynamic. The term was first introduced several decades ago in the field of education. Traditionally, collaborative learning is defined as an educational approach that emphasizes interaction and participation among learners in the learning process (Collis & Moonen, 2005). From a more contemporary perspective, González et al. (2012) define collaborative learning as a precisely designed system that establishes interactions and encourages active participation among team members for the collective construction of shared meanings. Additionally, collaborative learning is characterized as a methodology that promotes

student engagement through peer-to-peer interaction and a hands-on approach to learning. This process necessitates effective communication and the use of technology to facilitate collaborative group work (Collis & Moonen, 2005).

### **Understanding COIL (Collaborative Online International learning)**

The training processes of new professionals are undergoing significant changes in the 21st century. Consequently, new professionals require training in a range of skills, including multicultural competencies, critical thinking, and the ability to interact in other languages. These skills are essential for professional success. A methodology that has been particularly effective in recent decades is the COIL, which is designed to develop the competencies required for success in the 21st century.

COIL (Collaborative Online International Learning) represents an innovative approach to teaching and learning that enhances students' intercultural competencies within the framework of international collaborative online learning environments. Originating in 2002, COIL has evolved into a widely adopted and well-researched pedagogical model (Doscher, 2023). It has been recognized as a paradigm of networked higher education, demonstrating effective integration and dialogue among institutions across various international regions. These institutions are characterized by diverse mandates and educational structures, differing academic calendars and teaching methodologies, and are located across a range of time zones (Rubin, 2017).

The COIL Virtual Exchange is fundamentally a bilateral online program that integrates existing courses from two or more institutions that are geographically and/or culturally distant (Doscher, 2023). This interactive learning approach emphasizes collaboration to analyze and solve problems within participants' fields of expertise. By fostering an environment conducive to knowledge sharing and the generation of proposals, this model advances internationalization. It offers institutions the opportunity to enhance their global standing by situating educational practices within an international and multicultural context (Meza, 2018).

COIL, as defined by Robles et al. (2023), is an educational program that uses technology to connect students and teachers across countries for collaborative online learning. The primary objective of COIL is to encourage cross-cultural cooperation and enhance global understanding using education and technology. By participating in the program, individuals can learn from diverse universities and cultures, working together on projects that address global and local issues.

As Ramírez & Bustos-Aguirre (2022), state, COIL methodology was initially conceptualized by Jon Rubin at the State University of New York (SUNY) at the beginning of the 21st century. COIL entails the collaboration of two educators in disparate geographical locations, who collectively orchestrate the curriculum of a course, or a portion thereof, in a manner that facilitates student engagement and collaboration on a shared project, with the aid of technological resources. The incorporation of COIL into a course allows professors to enhance the educational experience for their students by designing and implementing it from their own discipline and subject, thereby facilitating interdisciplinary work. The COIL course provides students and teachers with the opportunity to gain insights from other cultural perspectives and engage in an international experience.

COIL has become a valuable tool for many educational institutions worldwide, offering a readily accessible, flexible, and effective method for providing students with an



international learning experience without the need for international travel (Robles Pinto et al., 2023). According to Landa (2024), the advantages of implementing the COIL project for educators are as follows: First, COIL enables teachers to connect with colleagues abroad, fostering relationships that can lead to larger collaborations. Second, it encourages innovation in teaching practices. It can be assumed that there are numerous ways for educators to innovate in their roles. One such approach is the use of alternative methodologies, such as COIL, which facilitates the creation of an international learning environment.

### COIL and the UNESCO Framework for Intercultural Competences.

As demonstrated in the existing literature, the COIL collaborative project is a strategy that promotes the development of intercultural competence (IC) within the framework established by UNESCO. The UNESCO framework defines competence as the possession of adequate skills, abilities, knowledge, or training that, when applied appropriately in various contexts—whether verbal or physical—enables behavior consistent with an individual's principles and values (UNESCO, 2013, as cited in Shuali et al., 2020). The concept of competence encompasses four distinct components: cognitive, which includes knowledge and understanding of the subject; functional, which involves the practical application of that knowledge; personal, which refers to individual behavior; and ethical, which concerns the principles guiding behavior. Therefore, it is evident that competence relies on a set of interrelated knowledge, skills, attitudes, and values.

UNESCO attaches considerable importance to several concepts, including, but not limited to, culture, cultural identity, cultural diversity, intercultural communication, communicative competence, language, dialogue, intercultural dialogue, universality, intercultural citizenship, and intercultural competences.

**Figure 1.** Intercultural Competences Tree.



**Note:** the figure presents the IC tree, adapted from: Shuali Trachtenberg, T., Bekerman, Z., Bar Cendón, A., Prieto Egido, M., Tenreiro Rodríguez, V., Serrat Roozen, I., & Centeno,

C. (2020). Addressing educational needs of Teachers in the EU for inclusive education in a context of diversity.

This knowledge is distributed and represented across three distinct structures: roots, trunk, and branches. The roots symbolize communication, while the trunk represents cultural dialogue and human rights. The branches symbolize human rights and intercultural dialogue, as well as soft skills, learning outcomes, competences, skills, and extensions of being, knowing, doing. (/Restrepo, 2022).

As is outlined in the subsequent section, the COIL methodology is designed to address and promote this set of intercultural competences proposed by UNESCO. It aims to foster cohesion by promoting culture and communication in a cohesive environment, wherein participants from diverse cultural backgrounds collaborate to promote knowledge through communication.

### **A COIL structure**

The implementation of a course with COIL methodology demands teacher preparation from both institutions, with factors influencing its implementation and success, including the development of pedagogical, didactic, intercultural, and technological competences on the part of the teachers (Guerro et al., 2020). According to the authors, the following factors influence its implementation and success: The first two denote to the teaching of relevant paradigms and paradigms framed in the active pedagogies. The intercultural competences concern the ability of the teacher to promote interaction within the framework of dialogue and respect. Technological competences refer to the mastery of learning management platforms or systems (LMS, Linguistic Management Systems) and their effective use for teaching and knowledge teaching and knowledge building.

The implementation of a COIL course is proposed in three phases: before, during, and after, as outlined by Cely et al. (2020). Phase one involves initiating actions to unite institutions, sharing experiences, comprehending institutional dynamics and guidelines, emphasizing the significance of these factors on students' progress, and recognizing the roles of teachers. This recognition includes understanding their dynamics, approaches, and teaching methods. Additionally, it requires an awareness of teachers' styles, experience, professional development, and personal interests, along with careful design, planning, and scheduling of activities.

Phase two refers to the development of the course, it involves recognition among students, socialisation of experiences, interests, tastes, or needs, and socialisation of problems. This phase is conducive to fostering cultural exchange. The project is presented, and activities are initiated. The project is socialized, and the course is evaluated. The final phase involves documented reflection on the experience. This entails an evaluation of accomplishments, strengths, and areas for enhancement. (Guerrero et al., 2020)

### **Methodology**

The researchers employed qualitative analysis, and an exhaustive search was conducted for research reports on the implementation of COIL courses. A comprehensive review of COIL course implementations identified ninety articles from the last five years that described implementation experiences and findings. Of these ninety articles, twenty articles were selected for review that focused on developing communicative English skills and incorporating cultural elements.

$$Percentage \left( \frac{20}{90} \right)^n \times 100 = 22.2\%$$

This literature review used library research designed by George (2008). It included findings from related articles and earlier studies on the same subject as the present study. Through color coding technique, researchers could group data into discrete categories, making the analysis process more effective and understandable. In this methodology, the use of color coding serves as a visual and practical tool for classifying data into distinct categories, facilitating a more efficient and understandable analysis process, (Nowell et al., 2017).

The initial step in the research process was to select a topic focused on the implementation of Collaborative Online International Learning (COIL) in foreign language instruction. The next step involved formulating a research question: What are the potential benefits of implementing the COIL methodology in English as a Foreign Language (EFL) classroom? The third step entailed identifying relevant studies and reviewing information from credible sources across various databases, including Google Scholar, Scopus, the Directory of Open Access Journals (DOAJ), ResearchGate, and others. The fourth step involved creating an Excel spreadsheet to standardize the data sources and establish criteria by analyzing, comparing, and filtering each article according to predetermined standards. This process facilitated the evaluation of the criteria, which subsequently informed the composition of the article's content.

## Findings

During the research process, researchers identified twenty articles reporting findings of the implementation of the COIL methodology in the EFL classroom in higher education. Findings highlighted cultural exchanges, significant interactions, and enriching experiences for students from diverse international backgrounds, including Mexico, Peru, Colombia, Argentina, Spain, Portugal, Thailand, Japan, and Taiwan. These studies emphasize the pivotal role of technology as a tool for learning, the importance of the teacher and the student, and the acquisition of knowledge through authentic experiences.

Research reports show that the implementation of COIL methodology has strong benefits for students and teachers. First it helps students to build their personal identity by developing intercultural awareness; increase communicative competence and enhance their abilities using technological tools since this methodology in all the cases promotes online learning. Findings also shows that this methodology also benefits for teachers since it provides learning opportunities, the development of pedagogy, professional recognition, and the satisfaction derived from providing students with a global education experience (Kučerová, K., 2023). Carlisle & Sáenz (2023) identified key enablers of teacher peer collaboration, with the opportunity to co-teach being a significant factor with significant experiences for mutual learning as co-collaborators, providing valuable insights into effective approaches and teaching methods.

Seventeen out of twenty studies found were conducted using a qualitative research approach, with a focus on exploration and case studies, three included quantitative data. All studies involve higher education students, as this methodology is designed for



implementation in these contexts. For the purposes of this review, only articles with results from research conducted in foreign language teaching contexts were included.

The reviewed articles show that this methodology has been adopted by students worldwide in several languages. In each case, however, the course was developed with English as the target language. This is largely due to the ongoing process of globalization, which has resulted in the emergence of English as the world's preferred language.

### **Intercultural competence development**

Intercultural competence enables individuals to successfully navigate diverse cultural interactions, encompassing actions, attitudes, and expectations (Meyer, 199, as cited in Santana & Cely, 2021). This refers to the ability of individuals to function effectively in various cultural and linguistic contexts. Intercultural competence serves as a valuable tool for achieving successful interactions, acting as a facilitator for managing situations across different contexts.

Globalization, interdependence, and multiculturalism have created both opportunities and challenges for social welfare, particularly in education (Portera, 2020). Schools increasingly require intercultural education and competencies—cognitive, emotional, and relational—to prepare teachers and students for diverse linguistic and cultural settings (UNESCO, 2015).

The implementation of COIL methodology has impacted the development of intercultural competences in higher education institutions. COIL methodology has been identified as a strategy to prepare new professionals for the competences required by the dynamics of globalization. The COIL framework was found to enhance the integration of multicultural learning experiences in both contexts according to Asojo et al. (2019). Research done by Simões & Sangiamchi (2023) with B2 level course students describe an intercultural teaching activity, involving undergraduate Business Communication students from the University of Aveiro (Portugal) and student volunteers from the University of the Thai Chamber of Commerce (Thailand). The findings of this research demonstrated that students found the activity to be beneficial, particularly in terms of the development of social and emotional skills, empathy and respect for others, responsibility, intercultural awareness and sensitivity.

Hackett et al. (2023) in a study conducted with a sample of 108 university students from two universities, one located in the Netherlands (NL) and the other in the United States (US), demonstrated the significant benefits of COIL in the development of intercultural competence. The results of the study demonstrated that COIL helps students to develop intercultural competence, namely cultural intelligence.

Research has consistently demonstrated that COIL is an effective tool for developing intercultural competencies. Participants have reported an increase in cultural awareness, openness, and tolerance toward both their own and their partners' cultures, along with enhanced teamwork skills (Marsee & Hoyos, 2025; Borger, 2022; Tran & Hoang, 2025). Students exhibit curiosity, openness, and respect, and these attitudes are cultivated throughout the course of the project, which enhances their communication skills and cultural awareness. Additionally, the establishment of enduring cross-border friendships underscores the significance of intercultural competence in forming meaningful global connections (Tran & Hoang, 2025). Carlisle & Sáenz (2023) found that COIL positively influenced students' motivation by offering them a genuine multicultural experience.

Harris & Seo (2024) in research conducted with 49 university students in the USA and the Netherlands aimed to reveal the impact of COIL on students' cultural perspectives, knowledge, and awareness of cultural norms. The study underscored the value of these Collaborative courses in fostering cultural understanding within educational environments and provided valuable insights for educators and students interested in engaging with diverse populations. Students' reflections following their learning experiences in COIL courses demonstrated an increased intercultural sensitivity in their design solutions. Furthermore, it was evident that the students developed an appreciation for technology and collaborative teaching as essential components in cultivating this intercultural sensitivity.

In this context, EFL (English as a Foreign Language) teachers in higher education play a crucial role by providing valuable resources that enhance students' opportunities for interaction with international peers while developing their intercultural competence (IC) in a dynamic learning environment. In today's globalized world, intercultural competence has become an essential skill set in both learning environments and workplaces, whether virtual or face-to-face. Furthermore, the ability to interact effectively with individuals from different cultures is a vital communication skill for fostering teamwork and managing conflicts. It has been demonstrated that COIL is an effective methodology to promote interaction and provide students with the opportunity to engage with peers from different cultures, integrating despite their differences in cultural backgrounds.

#### **Development of communicative skills**

Communicative competence, a concept introduced by Hymes in 1972, encompasses the ability to interact effectively in a language, extending beyond mere linguistic knowledge. The concept of communicative competence refers to an individual's ability to communicate effectively and appropriately in various contexts. It encompasses two key aspects: effectiveness, which pertains to goal achievement, and appropriateness, which relates to acceptability within a given context. This concept is linked to ongoing debates about the nature of language and was developed by Dell Hymes as a counterpoint to Noam Chomsky's notion of linguistic competence. Vorwerk, (2015).

The analysis of the articles collected revealed that English was the language primarily utilized for the instruction of the courses. Research has demonstrated that in the context of implementing COIL courses, language can initially act as a barrier. However, this pedagogical strategy has been shown to motivate students with lower proficiency levels and to enhance the skills of those who already possess a good command of English. According to Barroso & Ruiz (2022), a substantial improvement in English was seen in 87.5% of students from Spanish and Mexican universities. It is important to consider that many participants already possess advanced skills. Appiah-Kubi & Annan's (2020) research showed students improved both intercultural competence and communication skills. The findings of the research studies indicated that there had been enhancements in language proficiency, which included elevated levels of confidence in communication and better language skills. (Appiah-Kubi & Annan, 2020; Li, 2019; Gulbahor, 2023).

On the other hand, it has been demonstrated that COIL assists non-native English speakers in expanding their vocabulary by learning new words and idioms, while also improving their overall proficiency through consistent interactions with native speakers (Huang, 2022; Liu, 2023). Liu (2023) also identifies the advantages of COIL as a

methodology that offers opportunities to interact with native speakers in real-life situations, including peer feedback that help students avoid linguistic fossilization, and speak in a more natural way. Withanachchi & Sreesing (2022) emphasize how students enhance English conversation skills, collaborate with diverse peers remotely, and gain self-cultural awareness. Ghosh & Verma (2022) highlight that the presence of opportunities for straightforward communication during synchronous class meetings ensures the smooth progression of proceedings.

One of the difficulties experienced by students during speaking activities is linguistic anxiety. However, Huang (2022) indicates that participants reported an increase in confidence and a sense of ease when communicating with native speakers. Furthermore, they expressed gratitude for their COIL partners' helpfulness, enthusiasm, and high level of preparedness. Portera & Milani (2021) also reported that students achieved effective communication in a second language. Satisfactory outcomes were reflected in their grades, the enhancement of their skills, and the development of effective communication abilities. Finding a research project implemented by Дроботун et al. (2023) found significant advantages in terms of enhancing the students' linguistic capabilities. As English was the common language of communication - a non-native language for both Spanish and Ukrainian participants since students improved their listening skills and understanding of non-native English accents. Furthermore, the interaction with non-native speakers of English was found to be less challenging for both Ukrainian and Spanish students.

Withanachchi & Sreesing (2022) state that students demonstrated significant progress in three key areas: public speaking skills, intercultural communication, and career management. Specifically, they enhanced their ability to articulate ideas clearly before an audience, interacted respectfully with individuals from diverse backgrounds, and identified their strengths that are directly related to their career aspirations.

Integration into digital citizenship necessitates effective communication skills, proficiency in digital technologies, information management, and the ability to recognize the relevance of these skills in daily life. In this context Barroso & Ruiz (2022) state that students could develop the competencies required for successful integration, COIL methodology served as a global alternative for fostering intercultural and digital competencies.

### **Digital Competencies**

According to Van Laar et al. (2019), digital competencies encompass a range of skills including information, communication, collaboration, critical thinking, creativity and problem-solving. It is asserted that these competencies are generic, yet their relevance in digital contexts is specific. This definition pertains to the acquisition, processing, transformation, and dissemination of information into knowledge, facilitated by the use of Information and Communication Technologies (ICTs).

After the Covid-19 pandemic, many individuals enhanced their digital skills out of necessity to make progress in their studies and careers, ensuring they remain competitive and valuable in the face of the evolving demands and challenges of new generations. Digital technologies have transformed the nature and scope of education (Timotheou et al., 2022). Similarly, emerging teaching trends have garnered significant interest, particularly

as educators recognize the necessity of designing and implementing approaches that address contemporary needs.

Research shows that COIL methodology strengthens the process of improving these skills, encourages the student participant to integrate these new skills, because being an innovative methodology takes advantage of information and communication technologies (ICT). According to Barroso-Tanoira (2022), students considered themselves quite competent in terms of the use of digitalization tools, experience working with students from other cultures, orientation to teamwork.

It can be said that the greatest strengths were the digital part and teamwork, there would be no problem with technological or organizational barriers, indicating that students significantly improved their digital competencies in an interconnected world, Barroso-Tanoira (2022). Mobo (2022) showed how significant emerging teaching methods are because they effectively use technology and existing digital resources. Many platforms support teamwork and offer helpful resources. Ala-Kortesmaa & Muñoz (2023) highlight computer-mediated communication's role in fostering meaningful intercultural experiences within shared virtual spaces. Almost all virtual exchange experiences are based on communication between participants. Essential experiences are enabled by technology, and culture is influenced by digital resources. Villalobos & Carreño (2024) found that COIL is the best way to promote virtual exchange, using ICT tools and resources to foster global citizenship in students. Sun (2024) found significant improvements regarding the potential of AI-enabled COIL programs in preparing students for global citizenship and promoting inclusive educational practices.

As previously stated, this strategy offers substantial advantages, however, the success of this type of didactic strategy depends mainly on personal and institutional awareness, since students and teachers require greater effort during a course based on the academic and cultural achievements that are enhanced with this type of activity. In addition, it contributes to the improvement of the teaching-learning process by promoting the interaction of students with educational experts from other institutions, through the implementation of a linking strategy and academic interaction in the virtual modality. This promotes the linkage and collaborative work with other national and international institutions, enhances the number of academic contacts and strengthens the links between academic and work networks, Gaytán-Oyarzun et al. (2022). It has been determined that the advantages are equally applicable to students as well as to teachers and institutions willing to execute and endorse these programs.

### **Barriers in the implementation of COIL.**

Although the research analyzed reported significant improvements and results, primarily in three areas of education, namely, the development of digital skills, intercultural competencies, and communicative competencies in foreign languages. The implementation of these changes may be hindered by various challenges or barriers. Ramírez & Bustos-Aguirre (2022), mention that the implementation of a COIL course requires three essential components for success: the use of ICTs, the proficiency of academics and students in a foreign language, and institutional training and incentives for teachers.

Moguel & Meza (2025) further posit that a notable obstacle encountered pertaining to the linguistic capability of the professors. Specifically, the presence of professors from universities with a predominant English-speaking background and professors from

universities with a non-English speaking faculty results in a discrepancy in language proficiency, thereby hindering effective communication.

Due to the flexibility of the COIL methodology, which enables participants from different time zones to connect, time zone differences are a common challenge. Another barrier that has been mentioned in some research, although it is not the most frequent, is the language level. Barroso & Ruiz (2022) identified time difference as the initial barriers and the English proficiency including the challenges associated with remote work. However, it appears that these are readily overcome barriers.

A common challenge researchers have encountered is the use of technology. For this strategy to be effective, participants must have a reliable internet connection. Villalobos (2024) mentioned challenges that participants located in a rural mountain environment had to face because the internet connection was limited. Huang (2022) states that there are socioeconomic and demographic factors that influence the success of COIL courses, such as access to technology and internet use along with students' digital skills that contribute to participants' occasional reluctance to engage with COIL partners.

When implementing a COIL course, it is essential to consider the participants' demographics and personality traits, particularly when there are introverted or culturally unaware individuals. Factors that influence COIL courses are related to participants' personality traits, such as openness, extraversion, and conscientiousness (Huang, 2022).

Villalobos (2024) noted, challenges and drawbacks of the COIL approach, specifically citing the lack of professional training as a factor hindering the effective use of COIL. The author also argues that in the case of internationalization of the curriculum, it is revealed that further professional efforts are required. On the teacher's side, it requires a lot of extra work and motivation, (Kučerová, 2023). There is a paucity of enthusiasm for the implementation of Collaborative Online International Learning on a global scale. This may be attributed to an absence of awareness and an insufficiency of resources for those faculty members who are keen to devise a global perspective in their courses, (Дроботун et al, 2023; Moguel & Meza, 2025).

## **Conclusions and discussion**

COIL has been established as a methodology around the world that promotes academic mobility of students, facilitating exchanges between students despite time differences, cultures, curricula and investments that would otherwise be required for physical mobility. Recent research findings have indicated the merits of COIL in the training of students aspiring to become teachers, suggesting that this pedagogical approach is experiencing a period of rapid growth and increasing popularity. The COIL methodology has been shown to offer numerous advantages for students, particularly in the development of cross-cultural competencies. The report indicates that this approach enables interaction with peers from around the globe, facilitating learning about diverse traditions and customs. Such experiences have been demonstrated to enhance understanding, tolerance, and cultural sensitivity among students, (Marsee & Hoyos, 2025; Borger, 2022; Tran & Hoang, 2025).

COIL has been demonstrated to facilitate the establishment of digital partnerships. Technology serves as a conduit for accessing both synchronous and asynchronous meetings, as well as for conducting activities and collaborative projects that are integral to course planning. It is evident that students encounter significant opportunities to



communicate in the target language, as it is the official language that has been designated by the universities to deliver these courses. Students have been observed to communicate with increased fluency, expand their vocabulary, acquire new expressions and idioms, and refine their pronunciation. COIL fosters an authentic communication environment that transcends linguistic boundaries, thereby enhancing listening aptitudes among both native and non-native speakers, (Huang, 2022; Liu, 2023). Furthermore, it offers students the chance to hone their collaborative and problem-solving skills, which are pivotal for success in the 21st century.

Despite the numerous advantages associated with COIL, significant challenges and difficulties arise in successfully implementing these courses. A primary challenge confronting educators is the absence of institutional support, as the development of course plans and the acquisition of training in this methodology necessitates a substantial investment of time, which may also include the enhancement of English proficiency. Moreover, obstacles such as a paucity of technical resources, restricted internet access, and inadequate student preparation to capitalize on these new opportunities are also problematic.

In view of the aforementioned points, it is worthwhile to reflect on the relevance of this methodology and its benefits. In light of the advantages identified in the research, it is recommended that institutions increase their investment in training qualified teachers in these methodologies. To capitalize fully on the opportunities presented by the methodology, it is essential to provide the necessary tools, time, infrastructure, and conducive space conditions.

In developing countries, students encounter limited opportunities for physical mobility due to high costs, a lack of transportation options, and the resulting inequality gap. In this context, COIL presents a promising alternative to promote equity and enhance professional training opportunities for students. To date, a significant number of COIL courses have been developed by educators themselves. This is despite the challenges posed by such initiatives, which necessitate greater commitment and investment from universities, (Дроботун et al, 2023; Moguel & Meza, 2025).

### **Acknowledge:**

This article is part of a study titled "The Impact of the COIL Methodology in the English Classroom", by the research hotbed REFLECT (Research in Foreign Language Education, Culture and Teaching) in the Bachelors of Foreign Languages in Distance Learning program at Corporación Universitaria Minuto de Dios-UNIMINUTO.

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