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ORIGINAL ARTICLE / ARTÍCULO ORIGINAL

A Collaborative Online International Learning (COIL) Project: Educational Management and Soft Skill Development

Proyecto de Aprendizaje Colaborativo Internacional en Línea (COIL): Gestión Educativa y Desarrollo de Habilidades Blandas

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A B S T R A C T

Within the context of globalization and the Fourth Industrial Revolution, internationalization strategies in Higher Education Institutions (HEIs) have become one of the most outstanding aspects in the field of education, as a response to the dynamics generated by the process of globalization. During 2024, a University from Peru and a University from Colombia designed, implemented, and evaluated the implementation of a project using the COIL methodology, based on knowledge exchange, experiences, soft skill development and competencies mediated by ICTs. The general objective was to develop competencies and skills in professionals in educational management in a COIL (Collaborative Online International Learning) context. The idea was to promote continuous improvement in educational processes and foster collaboration and internationalization in the management of educational institutions. The study focuses on the collaborative construction of knowledge about skills, knowledge, and competencies in the practical course: "*Practicum* in Educational Management." Methodologically, the sample consisted of 41 students enrolled in the professional practicum. Due to the nature of the project, a qualitative research paradigm was applied to describe and explain the social phenomenon, using two data collection instruments: 1) documentary analysis, and 2) survey. During the project implementation, a strengthening of soft skills such as critical and reflective thinking, teamwork, creativity, empathy, and problem-solving, through participation in collaborative activities and intercultural exchanges was found among the participants. This fostered an environment of respect, appreciation of diversity, and the construction of harmonious and productive relationships in a globalized setting within a virtual learning environment. A finding of the COIL project was an effective strategy in shifting from traditional practices to the creation of innovative learning environments in Higher Education Institutions. This enhances the development of 21st Century skills and competencies in future education professionals.

Keywords: Collaborative Learning; Pedagogical Skills; Online Learning; Educational Management; Methodologies

R E S U M E N

En el contexto de la globalización y la Cuarta Revolución Industrial, las estrategias de internacionalización en las Instituciones de Educación Superior (IES) se han convertido en uno de los aspectos más relevantes del ámbito educativo, como respuesta a las dinámicas generadas por el proceso de globalización. Durante 2024, una universidad de Perú y una universidad de Colombia diseñaron, implementaron y evaluaron un proyecto utilizando la metodología COIL (Collaborative Online International Learning), basado en el intercambio de conocimientos, experiencias y en el desarrollo de habilidades blandas y competencias mediadas por las Tecnologías de la Información y la Comunicación (TIC). El objetivo general fue desarrollar competencias y habilidades en profesionales de la gestión educativa dentro de un contexto COIL, promoviendo la mejora continua de los procesos educativos y fomentando la colaboración y la internacionalización en la gestión de las instituciones educativas. El estudio se centró en la construcción colaborativa del conocimiento sobre habilidades, saberes y competencias en el curso práctico denominado "*Prácticum* en Gestión Educativa". Metodológicamente, la muestra estuvo conformada por 41 estudiantes inscritos en la práctica profesional. Debido a la naturaleza del proyecto, se aplicó un paradigma de investigación cualitativa para describir y explicar el fenómeno social, utilizando dos instrumentos de recolección de datos: 1) análisis documental y 2) encuesta. Durante la implementación del proyecto, se observó un fortalecimiento de habilidades blandas como el pensamiento crítico y reflexivo, el

trabajo en equipo, la creatividad, la empatía y la resolución de problemas, mediante la participación en actividades colaborativas e intercambios interculturales. Esto favoreció un entorno de respeto, valoración de la diversidad y construcción de relaciones armoniosas y productivas en un contexto globalizado dentro de un entorno virtual de aprendizaje. Uno de los hallazgos del proyecto COIL fue que constituye una estrategia eficaz para transitar de prácticas tradicionales hacia la creación de entornos de aprendizaje innovadores en las Instituciones de Educación Superior. Asimismo, contribuye al desarrollo de habilidades y competencias del siglo XXI en los futuros profesionales de la educación.

Palabras clave: Aprendizaje Colaborativo; Competencias Pedagógicas; Aprendizaje En Línea; Gestión Educativa; Metodologías.

I N T R O D U C T I O N

Fourth Industrial Revolution has had an increasing influence on new challenges based on ICT, gamification, artificial intelligence, and virtual reality into educational systems. Within this context HEIs must adapt to this new reality in order to create academic space, which foster the development of competencies and soft skills in their students, teachers, and staff. The university 4.0 concept should be conceived as a source of knowledge and skills for the future. The university 4.0 entails responsibilities for higher education institutions regarding infrastructure, knowledge management, and curriculum design open to globalization. During 2022, the development of the educational management course based on the COIL methodology is planned to enhance the competencies of participating students.

In this so-called digital era, where multiculturalism and the development of soft skills are vital for personal and professional growth, there is a clear need to analyze how these two aspects are interrelated. Also, it is necessary to know how their integration can promote holistic growth in individuals and organizations, especially in the field of education with future professionals.

Despite the importance of developing soft skills in knowledge societies, there is a perceived gap in understanding how multiculturalism can influence their development and effective application. From a professional perspective, significant challenges arise when trying to foster soft skills such as critical thinking, creativity, collaborative work, and empathy in multicultural contexts. Cultural differences can create barriers to interaction and mutual understanding.

Within the COIL methodology, it is crucial to understand how cultural diversity can enrich and strengthen the acquisition of soft skills while overcoming challenges and obstacles associated with cultural differences. Therefore, it is necessary to go deep into the study of the relationship between the development of soft skills and multiculturalism in order to provide practical recommendations and strategies that allow individuals and organizations to maximize the benefits of this interaction. This can foster more effective personal and professional growth in a multicultural environment.

The Collaborative Online International Learning (COIL) project is a proposal based on the interests of an increasingly universal and international education. The COIL methodology may have students practice and strengthen their soft skills, interculturality, digital literacy, and other strengths and abilities aimed at harmonizing curricula resulting in the internationalization of education. In practice, COIL activities facilitate interaction and the execution of creative exercises, which correspond to their professional needs, within the framework of a dialogue of knowledge in which undergraduate programs can converge in the reinforcement of their learning outcomes and competencies.

Based on the above-mentioned aspects, the emergence of new learning strategies is a concern for Higher Education Institutions. When analyzing contemporary methodologies for learning, we can find

innovative ideas that allow the acquisition of meaningful knowledge, such as the COIL methodology. This educational strategy is carried out with technological tools, enabling participants to interact with external pairs within their current academic settings. This form of active learning presents itself as a valuable resource for students, teachers, and any individual interested in acquiring knowledge using creative and modern strategies.

The Fourth Industrial Revolution has been a process of economic, social, and cultural influence, among other implications. These can affect the relationships among individuals within a community. In this digital era of information globalization, the development of both hard and soft skills is necessary for individuals to go through culture, which can constantly generate critical thinking and reflection based on all interaction processes. In an information era, professionals and educational researchers are required to be critical and reflective coping with the information circulation going through various media channels.

One of the major challenges related to the open access to knowledge is the absence of critical and reflective thinking present in different societies, especially in emerging countries. There, the circulation of information is often taken as an absolute truth, without generating enough questioning. According to this aspect, López (1998) states that "critical thinking is an organized and clear thinking, which conveys to the knowledge of reality through the statement of truth judgments" (p. 10). Thus, education needs to develop this soft skill in order to generate critical thinking and reflection when facing with surrounding phenomena, especially those in the research field. There, lots of information circulates without epistemological and methodological judgments, regarding the explanation of physical and social situations.

Considering this, another problem faced by teachers in education is the absence of collaborative work for the construction of scientific knowledge, especially in developing countries, due to conscious and unconscious individualistic tendencies. Glinz (2005) says, "education currently requires group work. In teaching and learning activities, collaborative work is one of the main elements" (p. 2). Innovative projects that use active methodologies enable systematic and reflective knowledge construction.

In the knowledge society, where hard skills are acquired by means of tutorials, virtual and augmented reality videos, the development of soft skills such as teamwork, which leads to innovation and creativity, becomes even more important, resolving conflicts in the best possible way. The development of soft skills in pre-service teachers aims to facilitate and consolidate their competencies in a more systematic and reflective manner. Zabalza (2004) states that "soft skills manifest themselves in the teaching performance, planning, effective communication, use of new technologies, developing methodologies consistent with reality, and effective interaction with students." In a world where innovation is increasing and disruptive, education should not adhere to the traditional Prussian education model of the 18th century, which aimed to produce individuals who would work similarly at the same time, every single day, respect authorities, and work on machines individually. Additionally, Prussian education aimed to shape their thinking to avoid criticism and reflection. However, as Oppenheimer (2018, p.107) puts it, "traditional education is becoming increasingly inefficient in the innovation economy of the 21st century, where robots and algorithms are performing routine jobs, and countries need more innovative people."

Justification

A virtual COIL learning environment, from Meza's perspective (2018), allows the promotion of the development of intercultural competencies and skills among participants through interactive virtual

activities. Thus, the participation of 41 students and 2 professors from the universities was coordinated between the Education Faculties of both universities. Based on the identification of common curricular objectives related to the field of educational management, the aim was to offer professionals in training the possibility of establishing a COIL relationship. To achieve this, the project "Educational Management and the Development of Soft Skills" was designed in order to create a synchronous and asynchronous academic relationship between students and professors from both universities.

Since its inception at the State University of New York, this active methodology has facilitated the mobility of students and professors through ICTs. Moreover, the invitation of subject experts from one or more international academic settings. This has proven to be greatly beneficial for the strengthening or development of advantageous competencies and skills in educational management, teaching, and learning. With this methodology, it is worth noting how communicative, analytical, and administrative competencies can be reinforced. Additionally, this methodology can provide better personal and professional training and foster values such as camaraderie, empathy, and respect.

Undoubtedly, COIL methodology is a tool that paves the way for the simplification of various topics, making them easier to understand. Through this methodology, both soft and hard skills, competencies, and values are developed, complementing the way teachers teach. Through this active methodology, knowledge can be generated in a more collaborative and accessible way for all participants in the educational process.

Technologies are a realm that transcends barriers and breaks stereotypes that we, as individuals, fear as they appear to be unknown. They transcend international barriers, so that from home, you can travel and exchange knowledge with others. Based on this aspect, the perception of COIL methodology expands as a tool capable of bringing enriching experiences, as it uses technology to enhance communication, the exchange of ideas, and the holistic development of individuals.

To embrace this methodology as a teaching and learning tool takes us out of the comfort zone and traditional classes, allowing the freedom to explore beyond what it is common place, where cultures from many countries come together. This provides limitless knowledge, as the perspective of the environment expands and all the knowledge and expertise of each individual are enhanced.

METHODOLOGY

For the development of the proposal, a qualitative approach was considered in order to provide in depth data analysis, dispersion, interpretive perspective, contextualization of the environment, details, and unique experiences (Hernández *et al.,* 2014). As part of the research process, with the objective of developing competencies and skills in would-be professionals in educational management through a COIL (Collaborative Online International Learning) context, we can promote continuous improvement of educational processes and foster collaboration and internationalization in the management of educational institutions. The entire methodological design is oriented towards measuring based on different instruments such as Google Forms for questionnaires and Zoom video conferences for questionnaire administration through ICTs. The purpose is to contrast all the instruments and responses from both students and teachers, regarding their experience with COIL and the development of soft skills.

Based on the above-mentioned aspects, starting from the development of the main competencies and skills, a documentary analysis is carried out, taking as a starting point the course syllabi from both universities, leaving the following competencies to be addressed in the teaching-learning process:

1. Use a participative leadership approach in the administration of the institution, through the implementation of mechanisms that foster active participation. Its objective is to guarantee the quality of learning processes, demonstrating management skills and a commitment to the sustainable development of the region.
2. Design educational programs and policies at the local and national levels, with the purpose of strengthening the institution's capacities and achieving continuous improvement. These initiatives allow addressing challenges related to the profession, valuing cultural diversity, promoting inclusion, and addressing learning issues.
3. Demonstrates ethical leadership in the planning, implementation, execution, and evaluation of entrepreneurial, business, sociocultural, and environmental projects. Its objective is to contribute to local, regional, and national development, always considering ethical aspects and the well-being of the community.

Table 1. Review Scheme and Collaborative Work Plan
Tabla 1. Esquema de revisión y plan de trabajo colaborativo

DATE	PROPOSED THEMES TO BE COVERED	DIDACTIC ACTIVITIES	PLATFORM USED
10/ 09/2024	Leadership in the Educational Institution	➢ Collaborative Work ➢ Case Studies with in-class debates. ➢ Problem-Based Learning. ➢ Analysis of the educational reality ➢ Guided Discussion.	➢ Zoom Room ➢ Blackboard Platform ➢ Virtual tools like Canva, Padlet, Google Drive, Jamboard
23/09/2024	Educational Management Instrument = Institutional Horizon		
01/10/2024	Characteristics of the Environment of Educational Institutions		
14/10/2024	Dimensions of the I.E.P Management Plan		

Source: Own elaboration.

The first advance was focused on document review, which was carried out by analyzing the program syllabi of the participating universities, observations in the collaborative participation process between students from both countries using COIL methodology. For its construction, seven key categories were taken into account for information extraction from syllabi and online documents:

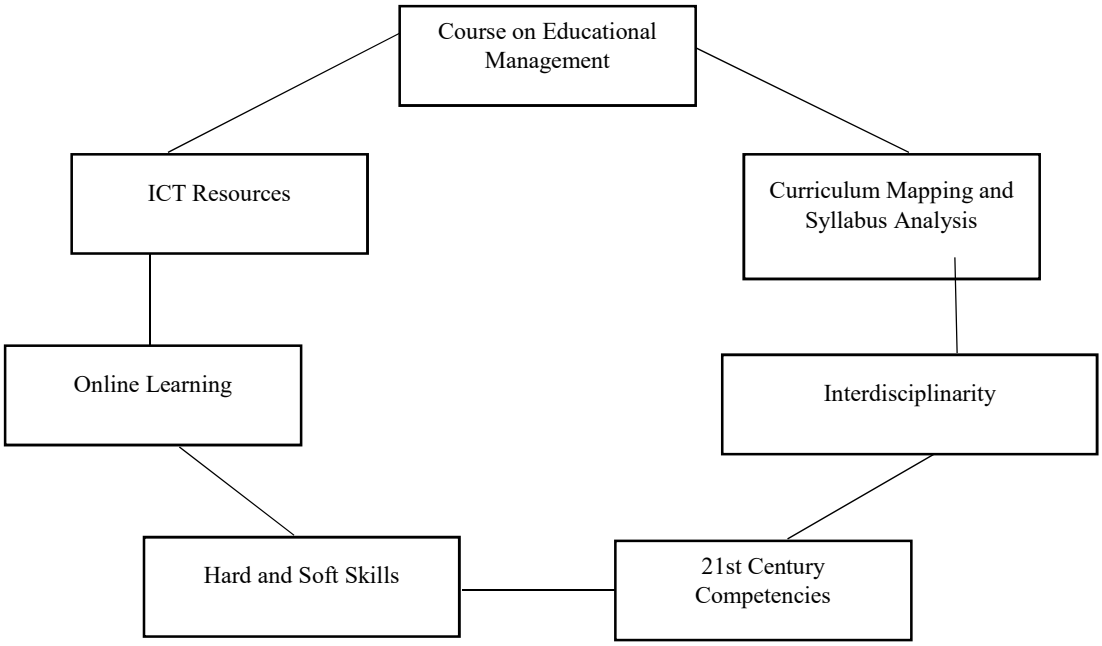


Figure 1. Key categories for information extraction
Figura 1. Categorías clave para la extracción de información
Source: Own elaboration.

For the COIL project, a semi-structured questionnaire with five items or questions was used as the instrument. This allows observing the perceptions and learnings obtained by students, regarding the immersion process of the course in collaborative learning and its impact on their careers. Additionally, triggering questions were used to inquire about the concepts and appreciations that students had about the lived experience with the strategy of focus group. These strategies allowed triangulating information to understand important aspects such as pedagogical approach, the development of soft skills, and active methodologies for the teaching process.

Procedures

During the development of the work proposal, the first class focuses on addressing leadership in educational institutions, which is of great importance within the global academic discussion. Through collaborative work, the construction of a profile of educational leaders is proposed, taking into account the context realities in each country. An analysis of the socio-economic reality of both countries for the management of educational institutions is considered as a significant experience. In the conceptual discussion space, the competencies and knowledge regarding the vision and mission of the institutions are strengthened in relation to the institutional horizon. During the collaborative work to consolidate knowledge of the characteristics of educational environments, a conceptual and procedural work is presented, emphasizing a group analysis of the educational institutions, where each student in the COIL course carries out the professional practices. A parallel between the reality of both public and private educational institutions in both countries is drawn. In the final meeting, the characteristics in the dimensions of the management of an institutional educational project are addressed, focusing on the concept of administration over time.

The work is carried out using the methodology of mirror classes, which involves articulating learning outcomes and competencies. In this way, we can ensure coherence and cohesion between objectives,

content, activities, results, feedback, and the sharing of findings. Platforms such as Zoom, Teams, and Google Meet are used to record the meetings, making them available to students who may have connectivity issues during class time.

The COIL process promotes interculturality through the exemplification of both nationalities, when seeking similarities and distinctions that allow the comparison of identity processes in Latin American culture. Simultaneously, we also foster the discovery of aspects that reveal regionalism and a sense of belonging to their own hometowns. The COIL project procedure consists of three phases. The first is the icebreaker, which involves introducing and consolidating the work team to promote intercultural interaction among students through various strategies such as interviews, spontaneous dialogue, and formal presentation of their profiles. The second is collaboration, where the steps around a chosen topic and a specific purpose are proposed. In this case, it is the creation of a product according to the planned topic based on the course syllabi in evenly distributed subgroups. Finally, a plenary session for sharing and evaluating the experience is held.

To identify the instrument validity (questionnaire), a pilot test is conducted with four students from both universities in order to verify its effectiveness and relevance. The pilot test helps determine certain criteria that should be modified for the general test to be administered to all students.

For the document analysis, the search period established for data collection covers the last decade (2014-2024), considering that the publication of online articles has significantly increased in recent years. The search for relevant material was conducted entirely through online sources.

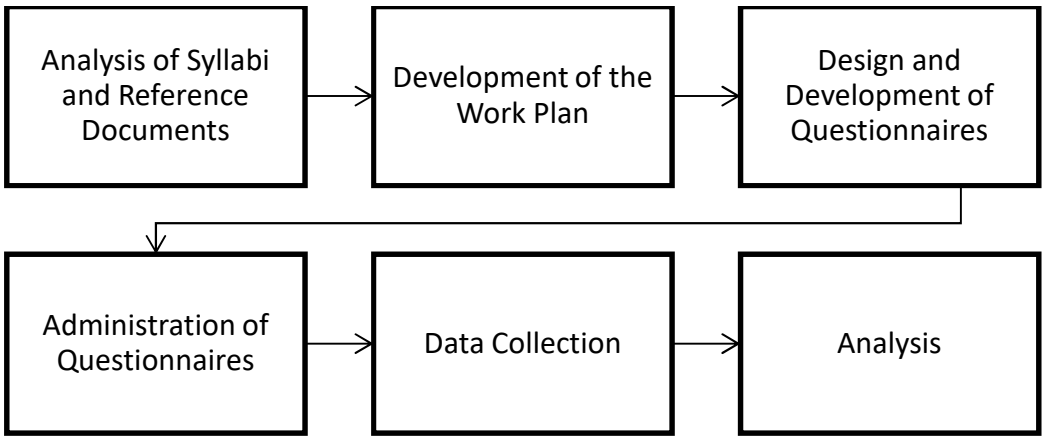


Figure 2. Flowchart of the used research methodology
Figura 2. Diagrama de flujo de la metodología de investigación utilizada
Source: Own elaboration.

R E S U L T S

Through the application of the questionnaire instrument, information was collected about the perception of students' experience under the COIL program. The following results were obtained regarding the questionnaires administered to assess the learning outcomes and competencies acquired through the COIL methodology:

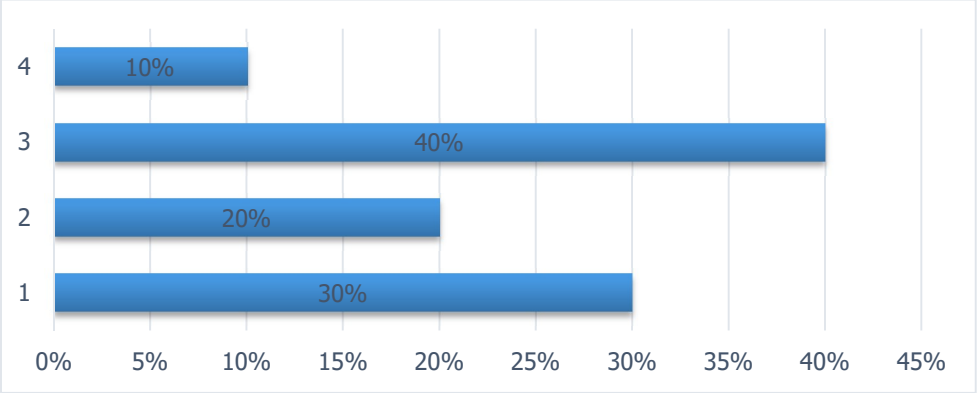
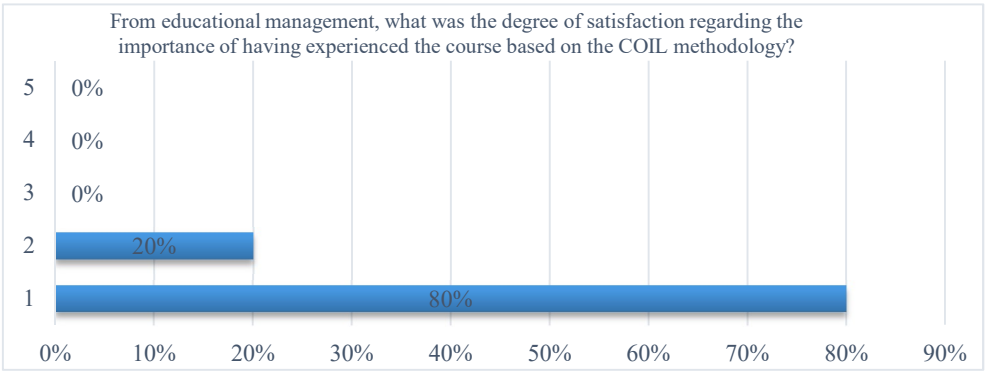


Figure 3. Level of satisfaction with COIL
Figura 3. Nivel de satisfacción con el COIL
Source: Questionnaire

80% of students expressed that the COIL course was very important for acquiring knowledge in educational management, while 20% stated it was important. None of the students expressed low satisfaction with the lived experience.

Figure 4. Competencies developed regarding COIL methodology
Figura 4. Competencias desarrolladas mediante la metodología COIL
Source: Questionnaire



The results of the 100% of surveyed students were the following. 10% indicated that the main competency developed was the knowledge and interaction with the physical world, 40% observed the

social and cultural competency, 20% expressed the digital competency, and 30% indicated the communicative competency.

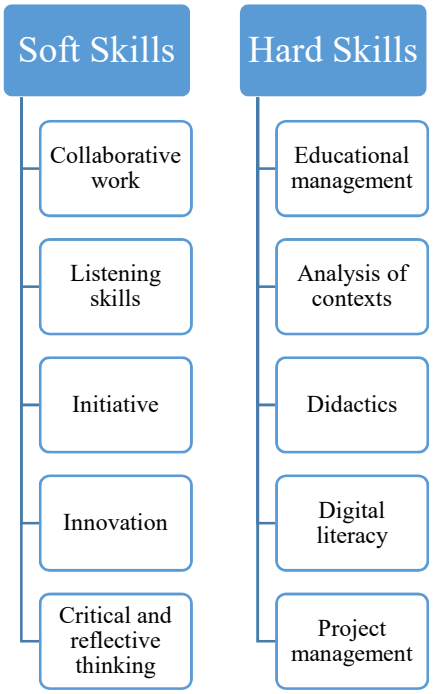


Figure 5. Soft and hard skills acquired
Figura 5. Habilidades blandas y duras adquiridas
Source: Questionnaire

In the previous figure, students reported that the main soft and hard skills acquired during the COIL experience would contribute to their better development in the field of educational management.

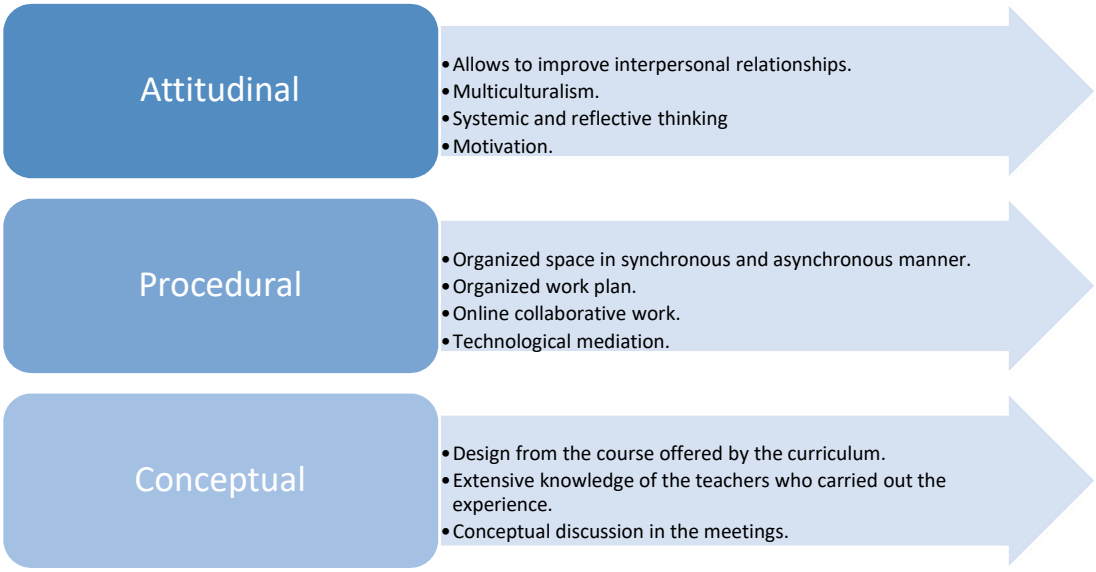


Figure 6. Evaluation of COIL
Figura 6. Evaluación de la metodología COIL
Source: Questionnaire

Based on the direct observation in the process of participating in the COIL course as a support for teaching and learning, it was evident that the course on educational management was enjoyable and productive. Information was gathered, highlighting the importance of this methodology in education. New knowledge about educational management, competencies, and hard and soft skills were acquired. During the sharing of collaborative activities, participants expressed the following:

1. A highly formative, interactive, and productive process that undoubtedly enables the achievement of the proposed objectives. Participants now possess managerial competencies, conceptual and practical tools to perform effectively in any educational context. Moreover, they have developed an awareness of the importance of human skills to lead with efficacy and assertiveness.
2. A meaningful learning experience where the COIL methodology was implemented in the four mirror classes using various strategies and instruments with discipline and leadership. The teachers showed a positive attitude, sharing their extensive knowledge effectively using ICT tools.
3. The significance of this methodology lies in the ability to learn from others on any platform, communicate with them, and have unparalleled experiences. It involves sharing ideas and different but highly effective knowledge, particularly in teacher training.
4. The effectiveness of using new technologies, tools, materials, and resources for teaching and learning becomes evident. These innovative and creative strategies keep pace with the evolution of our environment, promoting and enhancing the knowledge acquired at all times. Besides, participants in the process report the development and enhancement of the following soft skills: critical and reflective thinking, innovation, creativity, collaborative work, and empathy.

DISCUSSION AND CONCLUSIONS

The use of diverse tools for learning, as expressed by Adell and Castañeda (2015) is of vital importance in promoting progress in pedagogical theories and practices, leading to transformations and innovations in the field of education. These advancements have resulted in the development of novel teaching methods and strategies, such as the COIL methodology (Collaborative Online International Learning). The "Mirror Classroom" strategy, as a virtual learning environment, allows teachers and students from different educational institutions to share a course using technological tools.

Undoubtedly, it is evident how learning and teaching are becoming increasingly simplified, as every innovative strategy aim to facilitate and achieve meaningful learning experiences. In the course of educational management using the COIL methodology, participants were able to deepen their epistemological knowledge in the field. Besides, through collaborative work and knowledge sharing, the participants enhanced their learning and experienced the gratifying and productive nature of the course.

As a result of the experience, it is determined that the internationalization of the curriculum is a pressing need for higher education institutions (HEIs) to strengthen and expand academic and collaborative research processes. This enables the creation of learning environments that aim to develop soft skills and competencies within the framework of the Fourth Industrial Revolution and the digital era. During the lived experience, significant results were achieved regarding the learning outcomes of the mirror classes in different educational contexts, affirming the importance of observing the concepts and phenomena of pedagogical study objects from different perspectives. Additionally, establishing inter-institutional relationships to promote and broaden the academic offering facilitates participation in events of this

nature, strengthening the participants' soft and hard skills as a strategy for professional and occupational competence development.

It is important to highlight that the relevance of the COIL course contributes to the fulfillment of the Sustainable Development Goals (SDGs). The curriculum internationalization experience between the universities generated the development of intercultural competencies and skills among the participants involved in the collaborative work conducted over several months. Mobility of students and teachers allowed the development of soft skills such as collaborative work, critical and reflective thinking, and conflict resolution, among others.

From the perspective of educational innovation, the proposed approach facilitated the implementation of pedagogical processes focused on the educational technology, gamification, virtual reality, and other innovative educational approaches to strengthen learning processes and the development of competencies and skills in the current digital era.

The development of a COIL course generates interinstitutional and interdisciplinary work at the HEIs, thanks to the participation of both institutions, with clearly defined complementary roles that play an important role in its success. In addition, an interdisciplinary approach is observed in its development. The opening to the world by HEIs is a fundamental process to face the new challenges generated by the automation of processes and the Fourth Industrial Revolution.

Similarly, the importance of curriculum internationalization lies in the alignment with the new educational reality. According to Prendes and Cerdán (2021), the rapid integration of emerging technologies in education within formal systems is, undoubtedly, a key factor in preparing students to face the challenges of the job market and economic and social changes.

In the future, continuing this experience will allow further thinking about a second cycle of work between the universities in the first semester of 2023. The formats designed for class planning, conferences, and work cycles can serve as inputs to continue mirror classes and future COIL initiatives between the universities.

To conclude, it is important to consider the need to develop soft skills in individuals from the beginning of their academic life. This enables a smooth transition between primary education, higher education, and the workforce. Having individuals in society with critical and reflective thinking skills allows for creative problem-solving. From a research and teaching perspective, the development of soft skills is crucial as it enables better adaptation to the disruptive changes of the Fourth Industrial Revolution. Education professionals require a high capacity for teamwork, innovation, and development of systematic thinking to maintain high quality standards in their educational and research work.

Conflict of interests

The authors declare that they have no conflicts of interest that could affect the results and conclusions presented in this article.

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