Latin American COIL for the Development of 21st Century Competencies: Experiences from Mexico, Colombia, Peru and Chile

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Abstract

The competencies required for student education in the 21st century focus on problem-solving and meaningful, challenge-based learning. Therefore, during five weeks of the 2024-1 cycle, a COIL (Collaborative Online International Learning) program was conducted among four Latin American universities (Tec de Monterrey-Mexico, PUJ-Colombia, UPCH-Peru, and PUC-Chile), involving a total of 119 students (20 from Medicine and 99 from Nutrition). The program aimed to raise student awareness and address some of the Sustainable Development Goals, using the Policy Brief methodology to design public policy proposals for schoolchildren in Latin America. This initiative was designed with the use of digital tools that also facilitated communication among students. As a result of the activity, 24 policy proposals were generated, with 5 published in repositories and 77 digital badges awarded.

KEYWORDS: COIL, LATIN AMERICA, TEACHER COMPETENCIES.

Introduction

In an educational setting where the aim is to develop skills, competencies, and generate knowledge using technology and artificial intelligence, education today plays a crucial role in critical thinking and problemsolving for students. As part of the strategy and educational collaboration among Latin American universities in Mexico, Colombia, Peru, and Chile, a COIL (Collaborative Online International Learning) was designed and implemented over a 5-week period during 2024-2. This resulted in the development of 24 public policy proposals using the Policy Brief methodology, which focuses on providing evidence-based recommendations for public policy, communicating relevant information clearly and effectively.

COIL provides an opportunity for students to reflect and analyze a global health issue impacting the school population, with the ease of collaborating in real-time to share local situations with their peers, generate a broad perspective, and reach a consensus for the development of their policy proposal.

Theoretical Framework

Twenty-first-century teaching competencies require academics who are experts in their field and possess the skills to plan, select resources, and know how to evaluate. This involves abilities that enable intercultural communication, facilitating interaction with a diversity of people, as well as being competent in lifelong learning. Finally, they should lead by example (Criollo, 2018).

The COIL methodology originated in the United States as a pedagogical method to delve into certain global themes through digital technology (de Castro et al., 2019). This methodological innovation in the higher education teaching and learning process allows for collaboration between professors and students, generating significant global experiences. It is centered on equity, connecting students through various digital platforms, and enhancing their intercultural interaction.

Method

Description of COIL

During five weeks in the regular academic cycle 2024-1, four Latin American universities, along with their students and faculty, developed a COIL. The goal was to address the global issue of school nutrition by proposing public policies that impact the well-being of this growing population, which is still developing and forming lifelong habits.

In teams of 4 to 5 members, problem-based learning and global competencies education were used to ensure effective teamwork among the 24 teams. Additionally, technological tools (Zoom, WhatsApp, Google Site, Padlet, Canva, Metaverse for avatar creation) were employed.

COIL Implementation Process

The COIL methodology from Tecnológico de Monterrey was followed with five activities over the five weeks:

- Icebreaker: Personal introductions using the institution's metaverse; each student designed their own avatar and shared information about their interests, hobbies, nationality, etc.
- Understanding Food Policies: In multicultural teams, students conducted research on the food programs and policies in the assigned country.
- Expert Discussion: Using Zoom, students interacted with experts from the four countries, reflecting on current food policies focused on school children and generating insights for future public policy design.
- Policy Brief: Students designed their public policy proposal on school nutrition based on the Policy Brief methodology.
- Final Reflection: Using the tool "Padlet," students had the opportunity to document their experience over the five weeks of the course.

Results

The participation included 119 students from the Medicine and Nutrition programs across the four participating countries (Mexico, Colombia, Peru, and Chile), 6 multicultural professors, and 4 international experts, resulting in 24 public policy proposals for Latin America, of which five were published in the SocArXiv Papers repository and received their digital badge (77 of the 119 students). The collaboration among health professions was more integrated and reflective, particularly in addressing health issues not only in a local or national context but globally, as demonstrated by the nutrition

issues tackled in this COIL edition. Thus, the result was analytical, articulated, and reflective learning among health professions.

Discussion

Cognitive skills such as reasoning, analytical capability, and problem-solving have been described as essential for professional success; however, it is now known that these skills have been overshadowed by transversal skills such as critical thinking, teamwork, communication, creativity, and innovation as desirable traits in a 21st-century professional committed locally and globally (Almeida, Vera, 2019).

From this experience, we have drawn the following lessons:

- Introduce the methodology, even if the course has already undergone a COIL.
- Detail all activities with their respective rubrics prior to commencement.
- Hold brief meetings among instructors before each collaborative activity.
- Implement self-assessment and peer assessment for teamwork.
- Synchronize time considering time changes between Mexico and Chile.
- Allocate class time for students to complete pre- and post-COIL global competencies surveys.
- Conduct COIL at the beginning of the semester.
- Schedule periodic and mandatory tutoring sessions.

Conclusions

Students were able to reflect on a global health issue such as school nutrition and analyze how countries in the region address it through state programs. They proposed improvements through Policy Briefs, aligned with the 2nd SDG Zero Hunger and the 3rd SDG Health and Well-being.

Limitations and Future Research

As the next step, it is necessary to evaluate the extent to which students acquired global competencies. To do this, a validated survey will be applied to measure the before and after effects of COIL.

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