

Wielding the Magic Wand: COIL integration in ASEP and WYM for Sustainable Global Education

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Abstract: This paper examines the application of Collaborative Online International Learning (COIL) activities within Asian Student Exchange Program (ASEP) and World Youth Meeting (WYM). These programs offer a valuable framework for international university students to engage in cross-cultural collaboration centered on the United Nations' Sustainable Development Goals (SDGs) through topic-based competitions. This study analyzes how structured planning, guided facilitation, and intentional preparation within the COIL framework significantly enhance students' understanding of SDGs, while concurrently developing critical thinking, intercultural communication, and collaborative problem-solving skills. Moreover, this study is comprised of a qualitative investigation of the COIL projects. The goal of our research is to evaluate the perceived opportunities and challenges of COIL as a potential policy for internationalization, and its utilization within ASEP and WYM, grounded in educational contexts. To accomplish this aim, our research conducted interviews with 6 participants involved in the COIL programs. The paper applies thematic analysis to address the challenges encountered in both the online and onsite phases of these COIL experiences, offering insights for educators to foster COIL events more smoothly and efficiently.

Keywords: Asian Student Exchange Program (ASEP), Collaborative Online International Learning (COIL), Online Teaching and Learning, Sustainable Development Goals (SDGs), World Youth Meeting (WYM)

1. Introduction

The COVID-19 pandemic accelerated the adoption of online teaching and learning, solidifying globalization as a central focus of higher education. Online communication and international exchange initiatives facilitate cross-cultural interaction, emphasizing the necessity for higher education to cultivate global competencies for students. Collaborative Online International Learning (COIL) offers a powerful approach to achieving this aim. COIL, also referred to as globally networked learning and virtual exchange, is an innovative teaching and learning paradigm. By utilizing Internet-based tools and innovative online pedagogies, COIL not only incubates meaningful exchanges between teachers and students with peers in geographically distant locations and from different linguacultural backgrounds, but also involves students in learning course content both through their own unique cultural lens which facilitates cross-cultural dialogues (SUNY COIL Center, 2015). Therefore, student-centered participation, receiving the results of the interaction among the factors,

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intercultural competencies, experiential learning, and technology are the key components of COIL (Nava-Aguirre, Garcia-Portillo, & Lopez-Morales, 2019). In other words, “COIL is grounded in the social-constructivist approach which emphasizes learning through social interaction. COIL encourages collaborative learning for teachers and students. This involves teachers from partner institutions co-designing a shared curriculum, pedagogical and assessment activities, and students from different cultural backgrounds working together to solve problems and complete tasks”. The COIL framework of six key components is illustrated in the figure 1, and the specific module is designed in the figure 2 (TALIC COIL@HKU – TALIC COIL@HKU, n.d.).

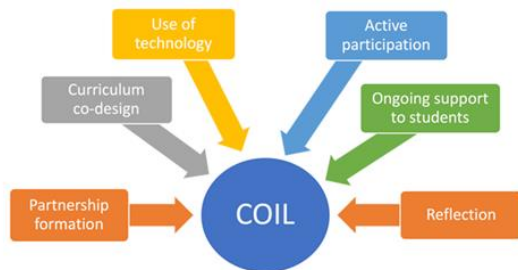


Figure 1. COIL 6 components

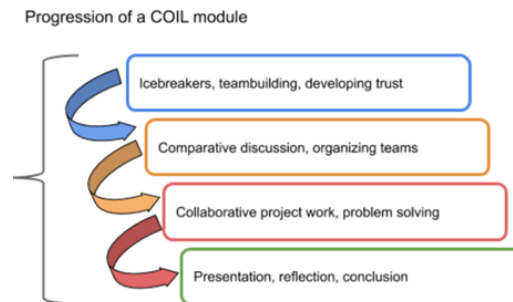


Figure 2. COIL module

In recent years, we have witnessed the growing integration of COIL into higher education to provide students with international exposure and collaborative experiences without requiring physical mobility (O’Dowd, 2018). This paper explores the implementation and impact of COIL activities within two distinct programs: Asian Student Exchange Program (ASEP) and World Youth Meeting (WYM). ASEP, hosted by the Education Bureau in Kaohsiung City Government in Taiwan, promotes academic and cultural exchange among high school and university students in Asia. It aims to cultivate global citizens, enhance international understanding and cooperation, and improve the academic and career readiness of participating students. WYM, hosted in Japan, focuses on inspiring and equipping young people with the knowledge, skills, and networks necessary to contribute to a more sustainable world. While both programs share a commitment to fostering international understanding and personal development, they differ in scope. ASEP primarily involves students from Asian countries, emphasizing academic exchange and cultural immersion. WYM welcomes youth from around the world, fostering dialogue and collaboration on global issues through activities, workshops, and seminars, while simultaneously empowering them, cultivating leadership capabilities, and establishing global networks through intensive interaction. In other words, ASEP is more academically focused, offering educational immersion within an Asian context, while WYM is a global event, emphasizing leadership development and international cooperation. Both initiatives prioritize intercultural understanding, critical thinking, and collaborative skills among students from diverse backgrounds. In recent years, both ASEP and WYM have centered their competitions around the Sustainable Development Goals (SDGs), as defined by the United Nations (UNESCO, 2020), providing a global perspective on sustainability issues. This paper will inquire into the practical implementation of COIL within these programs, highlighting best practices and challenges encountered. Therefore, the research questions this paper seeks to answer are as follows:

1. How is COIL within ASEP and WYM driving broader transformations in Taiwanese higher education scrutinizing from the theme-based impact?
2. What obstacles hinder the implementation of COIL in Taiwanese higher education using ASEP and WYM as examples?

2. Literature Review

2.1. Internationalization in Taiwanese Higher Education

In recent years, since Taiwan embarked on the Bilingual 2030 policy, many internationalization policies in Taiwan have focused on approaches with quantifiable metrics for success, such as recruiting international students, sending domestic students to study abroad, expanding English as the Medium Instruction (EMI) provision, and developing Content and Language Integrated Learning (CLIL) curricula. Many of these statistical data have heavily shown and emphasized the trend of the promotion of internationalization. However, as educators on the front line, we hope students can be cultivated as global citizens with 21st-century skills and attainment, such as Education for Sustainable Development (ESD), Sustainable Development Goals (SDGs), and University Social Responsibility (USR).

2.2. National SDGs Policy in Taiwan

In fact, Taiwan has limited global participation due to its unique political situation and special international status. In addition, in the traditional teacher-centered, lecture-based, and test-oriented educational system, the educators and students at each level literally focus more on the school knowledge than on accessing to international participation (Ho et al., 2022). However, with educational reform and in order to cope with the rapid and uncertain social changes, SDGs have undoubtedly played an important role worldwide. Currently, Higher Education Institutes (HEIs) around the world are gradually increasingly conducting transnational research and contacts to promote international communication in pursuit of generating and applying collaborative knowledge shows that HEIs highlight the need for substantial research in diversification and globalization (Koehn, 2012). In Taiwan's pursuit of the SDGs, the Ministry of Education (MOE) included sustainability USR Program, encouraging HEIs to augment engagement with the local community, the environment, industrial ties, and economic sustainability, health, and food safety, cultural sustainability, and other social practices (Center for University Social Responsibility, Ministry of Education, 2019). Consequently, reinforcing global sustainable development has become an integral part of student learning.

2.3. University-Level SDGs Initiatives in Taiwan

Here are some examples of how universities in Taiwan administer the SDGs initiatives. The National University of Kaohsiung's (NKU) 'SDGs-Inside' policy commits the university to embed sustainability across all aspects of its operations. This policy supports and promotes the SDGs through research, education, and operations to strengthen the connection with its external partners (Chang, & Lien, 2020). Also, National Cheng Kung University (NCKU)'s Signature Program of Sustainable Development (SPSD) is a school-wide initiative of combining school consensus, SWOT analysis, resource extension and application, and accelerating global impact to execute sustainable development and SDGs indicators (NCKU, 2025). In addition, National Taiwan University (NTU)'s SDGs Campus project aims to deliver "an information integration platform for participatory action on campus sustainability". This project is utilizing Intelligence, Multiculturalism, Participation, Action, Connection, and Technology as an index to reverberate learning, participation, and action in SDGs Student Program to prosecute IMPACT Campus (NTU, 2025). Moreover, National Taiwan University of Science and Technology (Taiwan TECH) X UNSDGs Sustainable Development Goals also integrated SDGs into general courses and held lectures to promote SDGs attainment (Taiwan TECH, 2025). National Taichung University of Science and Technology (NCUST) also established SDGs in NCUST Taiwan sustainable development integration platform to commit its SDGs promotion on and outside of the campus (NCUST, 2025).

Additionally, the National Pingtung University (NPTU) also implemented Suzaku Pioneer of Pingtung Rural Three-Division Co-Learning Model of Education Internationalization to fulfill its USR. Within this project, NPTU has not only helped teachers' professional growth in rural areas but

also aimed to incorporate USR in teaching, research, and public service, connecting elementary teachers and preservice teachers, emphasizing teaching abilities, co-learning mode, technology, etc. For instance, they intermingled SDGs concepts and sustainable development into local activities. (Yang, 2023) The study also proposed 4 ideal principles for designing an SDGs-oriented curriculum. First, adopting the procedural principles allows teachers and students to create experience from SDGs-related lessons. Second, connecting local issues with SDGs topics gives students a better, concrete understanding. Third, SDGs actions, such as guiding students to solve problems, have been designed in reality. Last, emphasizing cooperation between designers' praxis and relationships has been valued (Ho, 2021).

3. Methodology

3.1. Research Design

This study applied thematic analysis (Braun & Clarke, 2006). The principal means of gathering qualitative data was through interviews. Besides, each interview was structured and lasted approximately half an hour. Our goal was to identify various reasons, motivations, and hindrances as participants involved in the Collaborative Online International Learning (COIL) programs. We also asked participants to vocal intended learning outcomes, whether they felt COIL activities fostered intercultural competencies. Then, based on the transcription of the recordings, the authors immersed themselves in the transcripts in order to familiarize the data. Next, generating initial codes and classify emerging categories. Following this, analysis conducted by the researchers to identify quotes that were congruent with the overarching themes. Afterwards, the authors reviewed and reexamine the themes. Finally, the authors developed themes previous to defining and naming them. Eventually, the researchers review the themes, subthemes, and categories and create the mind map to illustrate the thematic identification produced while conducting the research analysis and writing up the report.

3.2. Participants

Six participants who have attended ASEP program were selected by applying purposive sampling to participate in this study. They are from a university in southern Taiwan. The gender includes 1 male and 5 female¹ and their ages are from 22 to 27.

3.3. The Procedure Analysis of ASEP and WYM

Over the past decade, ASEP and WYM have engaged students from a diverse range of nationalities, including Taiwan, Japan, Cambodia, Laos, Indonesia, Vietnam, Thailand, the Philippines, Egypt, the U.S.A., and others. The COIL model enables cross-border collaborative learning and international cooperation, fostering deeper understanding and practical application of the SDGs. Both programs utilize a hybrid approach, combining online and face-to-face interactions to facilitate the development of English communication skills. This is achieved through cooperative research on SDGs-related topics by student groups from diverse backgrounds. (See Figure 3: Overview procedure of ASEP & WYM)

¹ All consent forms obtained from the interviewees have been compiled in a folder, accessible via the following link: https://drive.google.com/drive/folders/1I41HnCTCe59QIUp4Xr_ex00QKk99KmKI

Overview Procedure of ASEP & WYM

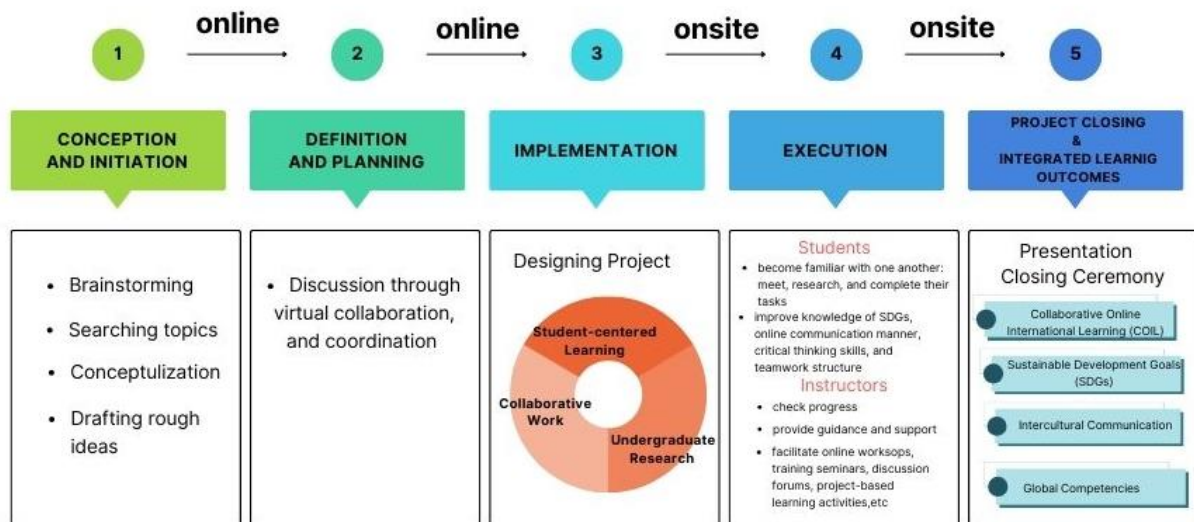


Figure 3. Overview Procedure of ASEP & WYM

During the stage 1 for building the conception and initiation and stage 2 for establishing definition and planning, students engage in virtual collaboration across different time zones, utilizing platforms such as Zoom, Microsoft Teams, and Google Meet, as well as online tools like Google Docs and Canva (Smith & Hill, 2019). This communicative process enables students to become familiar with one another, gaining insights into linguistic and cultural nuances. This includes increasing lexical knowledge, preventing language fossilization, and acquiring native-sounding discourse (Lee & Markey, 2014), while forwarding intercultural effectiveness, such as empathy and open-mindedness (Armah et al., 2020; Gungor et al., 2021). Participants also have the opportunity to attend online workshops, training seminars, discussion forums, and project-based learning activities facilitated by teachers, professors, and experts. All these further enhance their knowledge of the SDGs, online communication etiquette, critical thinking skills, and teamwork structures.

As Helm and Guth (2016) have found, virtual collaborative projects help learners navigate cultural differences and even strengthen their global competencies. This type of virtual interaction is crucial for breaking down cultural barriers and establishing a warm, collaborative working environment. However, despite a strong initial start, students often encounter communication challenges during online discussions. For instance, in 2024, the WYM theme "Striving for World Peace in Our Daily Lives," (related to "SDGs: Tackling the Root Causes of Conflict") presents a particularly profound challenge for topic-based teamwork. Students must explore this complex theme with peers from countries that may or may not have experienced war firsthand. This disparity in lived experiences can make it difficult for students from more privileged backgrounds to develop a truly critical understanding of the daily realities of conflict. Bridging the gap between theoretical knowledge acquired in the classroom and the real-world situations of ongoing conflicts poses a significant hurdle.

Furthermore, students' diverse cultural and social backgrounds can lead to preconceived notions that may influence their perspectives. Virtual communication provides a platform for them to encounter diverse opinions and challenge their own assumptions. These skills and knowledge can help to solve the real communication problems in the virtual environment (Guth, 2010). During the stage 3 for making further implementation, teachers face the challenge of guiding the dialogue toward deeper, more sincere exchanges, encouraging open-mindedness. Thus, teachers must act as facilitators to provide applicable scaffolding structures, accelerating the communication process by providing timely suggestions, without dominating the project with prescriptive instructions. Additionally, the online discussion serves as a decisive space for forging consensus and enabling

team members to develop a united voice in their research projects. Nevertheless, online collaboration sometimes lacks the nuances of personal interaction. Even with cameras enabled, students interacted with individuals at a distance, where nonverbal cues can be misinterpreted due to unclear audio, imprecise English, subtle facial expressions, emotional states, and physiological stress (Bouhlal et al., 2020). This can create confusion and misunderstanding. The stage of online discussion is vital for lowering affective filters, building relationships in a virtual setting, cultivating mutual trust, and nourishing sincere exchange of opinions among participants from diverse academic and cultural backgrounds (Lee & Markey, 2014).

With a project structure emphasizing fact presentation, SDGs issue analysis, action plan development, and conclusion formulation, tasks are accomplished through virtual communication and discussion before the competition week. During the final competition week, we are moving from stage 3 to stage 4 for conducting project execution, students travel to the host university or high school for face-to-face collaborative teamwork. This transition from online to onsite interaction is pivotal, which allows students to solidify virtual relationships and enhance group work effectiveness through personal interaction. Students revise online work, examine details, re-evaluate the project, and refine their common goals. The team's united voice and spirit are then manifested during the competition. Research by de Wit (2020) suggests that blended learning experiences like this are highly effective in promoting more profound understanding and engagement, especially among students with prior disagreements or differing opinions. During the stage 5, on the designated presentation day, students showcase their research through collaborative design and teamwork, effectively demonstrating their integrated learning outcomes on SDGs-related issues and innovative action plans. This final project-closing stage serves as an opportunity for all participants to confidently articulate their co-research findings with their international partners, fostering academic discourse and presenting their teamwork in an international competition setting.

Through project-based teamwork, students gain increased awareness and understanding of the SDGs and embody the spirit of these goals within their projects and research. On top of that, critical thinking and intercultural communication skills are enhanced through this process (Leask, 2015). ASEP and WYM offer valuable insights into the challenges and opportunities of COIL-based pedagogy. Both the online collaboration and onsite interaction are equally important. Online collaboration requires careful preparation, while onsite interaction demands patience in managing face-to-face communication. Misunderstandings may occur at any stage, so interpersonal dynamics become more pronounced. Therefore, developing strategies for overcoming obstacles in each stage is essential to ensure successful COIL activities outcomes.

3.4 Interview Process

Participant interviews conducted after the completion of the 2024 ASEP event. These interviews took place on a mutually agreed-upon date, either in person or via Google Meet. Key questions and open-ended statements were utilized to explore relevant themes. The central questions were “Did you face any challenges in communication or collaboration? How did you overcome them?” and “How do you think COIL activities and ASEP experience have helped you develop global competencies?” The interview aimed to investigate students’ perspectives on online international collaboration, cross-cultural communication, and the challenges encountered during COIL activities. Additionally, participants were invited to provide feedback on potential improvements for future COIL events.

Table 1. Data extract sample, with codes applied

Research question	Coded for	Data extract (one of many)
How is COIL within ASEP and WYM driving broader transformations in Taiwanese higher education scrutinizing from the theme-based impact?	- Every country is facing different problems and different environmental issues. -vehicle emissions problem - different ways to handle leftover food	“I realized that every country is facing different problems and different environmental issues. So, in Taiwan, when I proposed a topic about vehicle emissions, they said that that problem doesn't exist in the Philippines. On the other hand, when I

--plant fertilizing
 --throw it away

listened to another group presenting about food waste, they also had different ways to handle leftover food. They say they're gonna use it for plant fertilizing, but here, we're just going to throw it away. So, they have different solutions for this issue. That's what I learned from them” (Interviewee #3, 2025).

Table 2. Searching for themes – subthemes to primary themes

Research question	Primary theme	Subtheme	Codes (level 1)
How is COIL within ASEP and WYM driving broader transformations in Taiwanese higher education scrutinizing from the theme-based impact?	Cultural Differences on Sustainability	-cultural differences -environmental issues	-cultural differences -environment issues -vehicle emissions -handle leftover food -food waste

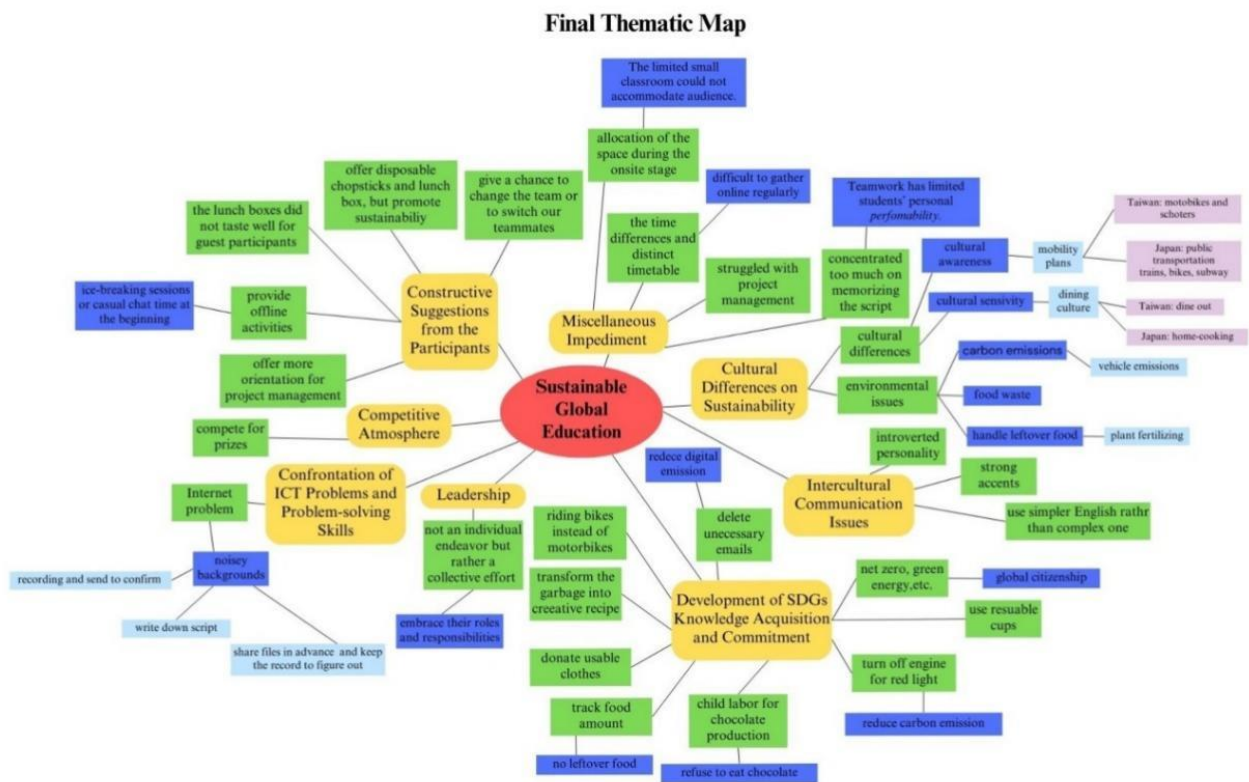


Figure 4. Identifying Themes and Developing Map

4. Results

The analysis produced eight themes. The themes emerged upon analysis: Cultural Differences on Sustainability, Intercultural Communication Issues, Development of SDGs Knowledge Acquisition and Commitment, Leadership, Confrontation of ICT Problems and Problem-solving skills, Competitive Atmosphere, Miscellaneous Impediment, and Constructive Suggestions from the Participants.

4.1. Cultural Differences on Sustainability

Through Collaborative Online International Learning (COIL), students learn within a globalized learning environment, misunderstandings often arise, but these become opportunities to develop respect for diverse cultural perspectives. Therefore, 6 out of 6 participants (100%) declared that in joining the COIL programs, ASEP and WYM, they had to learn to deal with cultural differences and learn from different cultural perspectives especially on sustainability. COIL activities exposed participants to the challenges and solutions related to sustainability issues faced by different nations, leading to changes in their perceptions and behaviors. Topics such as digital emission, fast fashion, energy conservation and food waste heightened their attention to environmental protection. Consequently, they integrated sustainable development ideas into their daily lives, reinforcing the importance of global responsibility and eco-friendly action plans.

“We did a project on food waste. I think that this is a big issue worldwide because, in the Western countries or some Asian countries, we waste quite a lot of food, while in Africa they are starving. Their children cannot be fed very well, and this is a big issue, and we should manage it so it also mentioned the sustainability of the sustainable development goal, and we did. In addition, we needed to know their culture, Japanese culture first. More precisely, it’s some kind of cultural awareness and cultural sensitivity.” (Interviewee #2, 2025)

“I realized that every country is facing different problems and different environmental issues. So, in Taiwan, when I proposed a topic about vehicle emissions, they said that that problem doesn't exist in the Philippines. On the other hand, when I listened to another group presenting about food waste, they also had different ways to handle leftover food. They say they're gonna use it for plant fertilizing, but here, we're just going to throw it away. So, they have different solutions for this issue. That's what I learned from them.” (Interviewee #3, 2025)

“Through this experience, I realized that I always thought our mobility plan would be centered around scooters because they are prevalent in Taiwan. However, in Japan, their main modes of transportation are trains, bicycles, or subways. Therefore, our mobility plans will naturally differ significantly. It was only through online discussions that I understood how different the transportation methods are between the two cultures.” (Interviewee #5, 2025)

“My group ultimately chose household waste as our group topic. As expected, cooking at home is not very common in Taiwan due to the prevalent dining-out culture, so vegetables are not very familiar to university students. However, Japanese people, even when living alone in Taiwan, cook just like in Japan. Japanese university students also live alone and cook for themselves, so this issue indeed exists. Additionally, the group members discussed transportation methods. In Taiwan, scooters are commonly used, whereas in Japan, subways and trains are more frequently used.” (Interviewee #6, 2025)

Different viewpoints were presented during the discussion stage and the cultural backgrounds brought rather unique insights into the SDGs issues. Thus, the ability of handling cultural differences indeed is one of the decisive factors embedded in the trends of globalization and sustainability.

4.2. Intercultural Communication Issues

Rubin (2016) argues that "COIL enables students to engage in meaningful cross-cultural exchanges and develop intercultural competencies that are crucial in today’s globalized world." Preparing students for the real world requires adapting the COIL model to empower them with imperative skills and competencies grounded in global interconnectedness. This creates a unique learning environment where students can gain international learning experiences and develop a global

perspective and cross-cultural communication skills without leaving their home country. Nevertheless, without face-to-face interaction at first, according to our research, students are most likely to encounter intercultural communication issues, which enhance their ability of cultural understanding and tolerance.

“As I mentioned, I think that the most difficult one is to let them talk about something because they didn't want to say anything, so they were just very quiet, and we could not be very fluent to produce this meeting. We do try, but I think that the Japanese are very introverted.” (Interviewee #2, 2025)

“I think the most challenges for me are the accent of Japanese students, because I really cannot understand their accents and I needed to let them to say more times and I could understand what they were saying about or they needed to type the words via Line or the website, so I can know what they are going to share about.” (Interviewee #4, 2025)

“I felt that the skill I learned in ASEP is English communication. Since we had to communicate with the foreign student partners in English, we used simpler English rather than complex English to achieve our communication goals and I felt that kind of practice is very useful to fulfill the communication purpose.” (Interviewee #5, 2025)

Students encountered communication challenges when engaging in online conversations. Their attitudes toward these challenges played a crucial role in facilitating discussions, exchanging ideas, and collaborating on COIL projects.

4.3. Development of SDGs Knowledge Acquisition and Commitment

COIL highlights the world's interconnected nature, making it feel more like a closely knit community. However, the participants think these experiences have helped them to develop true understanding and commitment to SDGs.

“From COIL activities to this ASEP event, I think I learned a lot of sustainable knowledge like net zero, green energy, and related legal issues. So, I can use this knowledge to become a good global citizen and hopefully I can contribute more in the future.” (Interviewee #4, 2025)

“When I go shopping or buy drinks, I always bring a reusable cup instead of using paper cups. Additionally, when I stop at a red light for around 40 or 50 seconds, I would always turn off the engine to reduce pollution. These habits are experiences I gained from participating in ASEP.” (Interviewee #5, 2025)

“It has changed my mindset not only on sustainability but also on other kinds of problems like chocolate production, child labor and slavery in the chocolate industry, and stuff like that. These are the things I have never thought before in my life. But now I am able to think of these things more seriously and this has changed my attitude toward these issues.” (Interviewee #1 2025)

“For my awareness, I think because before when I went to the convenience store or somewhere just a little bit distance not really far away, I would usually ride my motorbike, so it increased the carbon emissions. When I really enjoy these activities, I change my thinking and my awareness because I think that I need to be a good global citizen. I need to reduce carbon emissions, so I usually change the motorbike to the bike.” (Interviewee #4, 2025)

“I practiced what I preached, so I have deleted unnecessary emails. I have told my friends about the digital emission thing and told them to save their data. I also listened to other groups on fast fashion. Instead of throwing away old clothes, I would try to donate those still usable or maybe used for another purpose, and I also keep track of my food amount in my family. I would tell my mom or my sister to cook only enough food and try to waste as little as possible.” (Interviewee #3, 2025).

“Our action plan is to minimize vegetable left-over, to transform the garbage into something new, and to find ways to reuse them in creative recipes. Actually, by re-cooking the left-over vegetables and not wasting them, we did feel much better and happier.” (Interviewee #6 2025)

Students have cultivated a nuanced understanding of the SDGs, enabling them to approach these issues with both thoughtfulness and practicality. This deepened perspective empowers them to develop feasible solutions and actionable strategies that integrate sustainability into their daily lives, ensuring their initiatives are not only personally attainable but also impactful within their broader communities. Their commitment to environmental protection extends beyond ASEP and WYM events, leaving a lasting influence on their dedication to sustainability.

4.4. Leadership

COIL also emphasizes teamwork, which shows the importance of *leadership*. A good leader is the soul of a team who listens to others’ opinion, synthesizes voices, coordinates communication, unites the team spirit, and guide the direction of the whole team. With the cooperation of each member and the leadership from the leader, the participants develop problem-solving skills in their mutual-help nature, and thus, they acquire the true meaning of the cooperation deeply.

“I think it's leadership because I'm the leader in our group, I need to gather everyone's ideas, suggestions and also the advice. I need to make a work list and know about which person needs to do this which person needs to do that. I think I learned about how to lead the team in the correct way.” (Interviewee #4, 2025)

Leadership is particularly essential within a cross-cultural context for communication. The diverse backgrounds and perspectives of participants necessitate a heightened level of adaptability, communication, and strategic thinking, making the experience not only more complex but also more rewarding. As students navigate this dynamic environment, they recognize that effective leadership is not an individual endeavor but rather a collective effort that emerges when each participant fully embraces their roles and responsibilities. This gradual progression fosters deeper collaboration, critical thinking, and mutual understanding, ultimately leading to outcomes that exceed initial expectations.

4.5. Confrontation of ICT Problems and Problem-solving Skills

As Guth and Rubin (2015) suggest, the COIL model "transforms traditional teaching and learning by integrating global experiences into the curricula, thus enriching students’ academic and personal growth." While traditional methods remain valuable, integrating global experiences is essential to ensure that academic skills and knowledge are applied to real-world problems, enabling students to engage with the world around them. Topic-based competitions like ASEP and WYM provide structured training and enhance soft skills and ICT competencies through carefully designed online and onsite communication processes. Nevertheless, students still unavoidably confronted ICT problems; this was also an arduous challenge for them to develop their problem-solving skills.

“The problem I faced was the internet connection. We heard noise from the background. I couldn't hear clearly what they were saying. I also felt bad if I kept asking them to repeat themselves. Therefore, I recorded everything and then sent it to them to confirm. Then, I asked them to write down the script. I shared a Word file and

asked them to fill in their ideas and their script on what they were planning to say or what they just said in the meeting. So, when I look at the words, I figure them out." (Interviewee #3, 2025)

ICT challenges are inevitable, and students initially experienced frustration when encountering them. However, within a collaborative team setting, no individual faced these technical difficulties alone. Through collective problem-solving under stress and time constraints, students worked together to find solutions. These technical issues further complicated communication and understanding, making interactions more challenging. Nevertheless, by overcoming ICT-related obstacles, students not only developed problem-solving skills but also experienced a heightened sense of achievement, which reshaped their perception of barriers and empowered them to approach similar challenges with greater self-confidence.

4.6. Competitive Atmosphere

Transforming ASEP and WYM from a competition to a forum or platform for youth is indispensable. Rather than confining ASEP and WYM to single-city competitions, we should broaden their reach to facilitate wider participation and idea sharing.

"I feel it's more like a competition than a platform that you go there and share, because they give various prizes. So now it feels more like a competition. So maybe it would be more fruitful and enjoyable if the authority can give the participants the idea that it's not a competition." (Interviewee #1, 2025)

Students seek to engage in international teamwork and COIL learning beyond the pressures of competition and prize-winning. With reduced competitive stress, they can prioritize learning, intercultural collaboration, and meaningful interactions with peers from diverse backgrounds, fostering a more enriching educational experience.

4.7. Constructive Suggestions from the Participants

Moreover, interviewees provided suggestions for the design of COIL activities, such as offering more comprehensive pre-activity guidance, providing more flexible opportunities to choose international partners, establishing clear goals for each online meeting, enhancing the organization of discussion meetings, hosting more-ice-breaking online or offline activities, optimizing the presentation environment. These suggestions aim to improve the quality of COIL activities and the learning experience of participants. Some of their opinions were beyond expectation, but they would provide a new dimension to view how COIL can be done more suitably and effectively.

"Originally the teachers helped us to select the partner students and it might be better if they can give us more orientations. In the very beginning, we were very struggled because we didn't know how to manage this project and we expected, you know, teachers to give us more advice.... We should set the goal for each meeting so that we can achieve something...and be more well organized. For each discussion, yeah, of course, we need to set up some goals to achieve. I think in this way we can be more efficient for our teamwork." (Interviewee #2, 2025)

"Maybe ASEP organizer could give us a chance to change the team, or to switch our teammates in case that we could not really work together well. In fact, this time during the teamwork, we had wasted time, really a lot of time." (Interviewee #2, 2025)

"The conference provided us with reusable chopsticks, and I think this is a great initiative as it encourages us to practice environmental protection at all times."

However, when we received the lunch boxes, there were disposable chopsticks inside, which I think is not very ideal.” (Interviewee #5, 2025)

“Additionally, after meeting Japanese students in person, we became very close. If there were more offline activities, such as ice-breaking sessions or casual chat time at the beginning, it would be even better.... The lunch boxes provided by the conference were not very suitable for Japanese participants and didn't taste alright.” (Interviewee #6, 2025)

4.8. Miscellaneous Impediment

First, a primary requirement of the COIL module is project-based, and students “struggled with project management” as a result (Interviewee #2, 2025). Interviewee #3 (2025) also explained that in terms of “the time differences and distinct timetable”, it caused the difficulty for participants to gather online for routine discussion each week. Secondly, the allocation of the space during the onsite stage were suggested to be improved. For example, all the teams were separated into various classrooms for discussion and preparation. “The limited small classroom could not accommodate many students, so students from other schools cannot learn and view our presentation, as there were no other audience at the site” (Interviewee #4, 2025). Finally, during the presentation, students were stressful. For instance, according to Interviewee #1 (2025), “I concentrated too much on memorizing my part of the script.” and Interviewee #5 (2025), “Within about seven to eight minutes, I finished delivering those lines. To overcome the challenge, I made my speech more fluent and successfully completed my lines within the time limit.” The teamwork has limited students’ personal *performability* due to the time limit and also the united team style. This should be resolved if more communications and compromises can be made before the presentation.

5. Discussion

This paper is to interrogate how the Collaborative Online International Learning (COIL) model is applied in ASEP and WYM in higher education institutions. All interviewees indicated that intercultural communication was the primary challenge during the process of COIL activities, yet it also provided valuable learning experiences. Language differences, cultural backgrounds, and communication styles posed obstacles, although these were overcome through various methods such as written communication, mutual interpreting, simplifying language, visual aids, and compromise. The strategies not only helped participants navigate linguistic barriers but also enabled them to establish consensus and collaborate more tacitly. Our findings supported our initial understandings of COIL as a form of application to ASEP and WYM. Nevertheless, our study also disclosed the unexpected findings about COIL programs and pedagogy.

Participation in COIL activities within ASEP and WYM has yielded significant positive outcomes, fostering global collaboration and interdisciplinary knowledge exchange. Students were initially introduced to COIL through institutional initiatives and peer recommendations, with a strong motivation to engage in cross-cultural learning and interdisciplinary research. Their overall experience was enriched by memorable interactions with international peers, where meaningful discussions and collaborative problem-solving enhanced their understanding of diverse global challenges; this can be shown in theme 4.5 Confrontation of ICT Problems and Problem-solving Skills. Despite initial communication barriers mentioned in theme 4.2 Intercultural Communication Issues, students successfully navigated linguistic and cultural differences through adaptability and the use of digital communication tools. Through these activities, participants developed critical skills such as intercultural communication, teamwork, and analytical thinking, all of which contribute to their global competencies. Likewise, in theme 4.1 Cultural Differences on Sustainability, it is clear that engagement in COIL further deepened their awareness of sustainability by exposing them to varied cultural perspectives and innovative approaches to environmental challenges. At last, according to theme 4.3 Development of SDGs Knowledge Acquisition and Commitment, many students asserted a heightened commitment to sustainable practices, applying newly acquired knowledge to their daily lives and academic projects. These experiences not only reinforced their understanding of global

interconnectedness but also encouraged proactive engagement in sustainability efforts. Overall, COIL provided a transformative educational experience, equipped students with essential skills for navigating global issues, and fostered an appreciation for cross-cultural collaboration. This is indeed the unanticipated fruitful result we gained from the COIL programs.

In summary, here are some actionable recommendations for policy makers, educators, and the program organizers.

- For policy makers, in order to develop Taiwan as a bilingual country, it is strongly suggested that COIL-based events should be held more frequently. Besides, the more diverse participants from international community, the better chances for students to explore different cultures and probe into the reality in the global village.
- For educators, aside from online workshops, training seminars, discussion forums, and project-based learning activities, applying ice breakers to allow participants to get familiar with each other and guiding students with Culturally Responsive Teaching, such as pre-activity cultural awareness orientation and project manage skills, is imperative.
- For the program organizers, the liaison of the venue, the practice of the SDGs-related principles during competition stage, and eventually the transformation of ASEP and WYM into an exchange platform or forum for youth instead of the competition are preeminent.

5.1. Limitations and Directions for Future Studies

This study has several limitations. First, while the qualitative data uncover rich insights into student experiences, the small sample size ($n=6$) may limit the generalizability. The conclusions of this study are confined to the interviewees, and the analysis of wider controversies is necessarily impacted by researcher subjectivity or bias. Thus, it is strongly suggested that further research should include a larger scale ($20 > n > 10$). Second, the study focuses specifically on ASEP and WYM, examining COIL activities within the context of SDGs-focused competitions. The focus on a specific topic might influence the challenges and benefits observed due to the participants' stress of awards and ranking. Therefore, it is highly recommended that ASEP and WYM evolve into a global platform where young people can freely exchange ideas and perspectives and share and debate their viewpoints.

Other than above mentioned points, given that initiatives of ASEP align with the Taiwanese government's New Southbound Policy, the majority of the target students are from Asian countries. However, future improvements could focus on diversifying the participation to include individuals from various cultural and ethnic backgrounds. In terms of scalability, the model of ASEP or WYM, should be able to be adapted to cater the needs of participants for broader context. For example, it is suggested that ASEP can engage more diverse population from the West, such as Australia, Finland, France, Germany, Spain, the U.K., etc. This also means the program organizer needs to have more comprehensive preparation making ASEP not just an activity, but a large-scale welcoming exchange event. Besides the online workshops and training seminars for participants, more details need to be tackled. First, preparatory committee should be established. While it is functioning for organizing, coordinating, and directing a series of different affairs, including budget computation, venue liaison, venue setup, schedule management, marketing, hosting service, luggage delivery, transportation arrangement, and accommodation service, the government can recruit volunteers to assist on the side or even provide translation service; this action looks insignificant, but it can not only draw people's attention but also involve more people in the event and even become an civic engagement. Then, at the at of the event, the ending activity could be extended to meeting, incentive travel, convention, exhibition (MICE) and tourism. Meanwhile, since it becomes a large-scale event, local citizens can interact with overseas people, build the rapport with each other, and it eventually becomes "All out diplomacy".

On the other hand, when interacting with students of different nationalities, teachers must adapt their communication methods and strategies to accommodate diverse cultural contexts. Additionally, the scaffolding structures provided to students must be both effective and tailored to support them meaningfully. The content and progress of student discussions, as well as the shared responsibilities between teachers and students, should also be adjusted to be consistent with the involvement of participants from diverse cultural and national backgrounds. Drawing on Facilitation Theory (Rogers, 1967), the level of teachers' engagement and their roles as facilitators warrant deeper and more rigorous

examination. Nevertheless, this dimension has not been comprehensively examined within the scope of this paper, thereby constituting a limitation of the study.

6. Conclusions

Overall, the Collaborative Online International Learning (COIL) activities have provided a valuable platform for students to engage in international collaboration, learn cross-cultural communication skills, teamwork organization, problem-solving skills and knowledge of sustainable development in the global context. Notwithstanding, there were still many challenges during the process. Through continuous efforts and improvement, the COIL activities can become more refined, offering students a more enriching learning experience who would bring a whole new definition of learning and education. Seeing from this angle, O'Dowd (2018) asserts that "Virtual exchanges such as COIL provide students with the opportunity to engage in collaborative projects with international peers, fostering a deeper understanding of global issues and cultural diversity." The impact and implementation of COIL in higher education undoubtedly bring a more robust vision for education, anticipating changes in the educational environment and teaching methods. Moreover, more significant challenges will inevitably arise in online or onsite learning, emphasizing the characteristics of teaching and learning in the digital era. As exemplified by ASEP and WYM, COIL-based pedagogy offers a promising avenue for enhancing global competencies in higher education. In other words, ASEP and WYM, utilizing the COIL model, indeed enhance participants' global competencies through cultivating international-mindedness and taking action after the events. In particular, its effect is evident in transitioning from online to onsite interaction. By leveraging technology, encouraging cross-cultural dialogues, emphasizing international collaboration, and promoting the SDGs, educators can further ameliorate the COIL model to suit diverse situations, courses, and activities, so as to maximize its impact and benefits for students. With this enhanced approach, like a magic wand, teachers can prepare students for an interconnected world—a world that transcends textbook descriptions and overcomes time and space limits. Ultimately, the cultivated competencies empower students to confront real-world challenges confidently.

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