

BEYOND TECHNICAL PROFICIENCY: CONCEPTUALISING INTERCULTURAL PROJECT-BASED LEARNING THROUGH THE GIPE AND GIPE++ INITIATIVES

Manfred Meyer¹, Alfonso Harrison², & Joshelyn Paredes-Zavala³

¹*Department of Mechanical Engineering, Westfälische Hochschule (Germany)*

²*Faculty of Business and Social Innovation, Atma Jaya Catholic University of Indonesia (Indonesia)*

³*Department of Industrial and Environmental Engineering, Universidad Católica San Pablo (Peru)*

Abstract

In response to the growing limitations of traditional internationalisation in higher education, this paper proposes Intercultural Project-Based Learning (IPBL) as a transformative pedagogical framework that enables meaningful intercultural engagement beyond short-term mobility and passive cultural exposure. While international initiatives have expanded globally, many educational models still fail to provide students with sustainability-related contexts, where environmental problems are inseparable from cultural practices, community structures, and socioeconomic realities. Drawing on a longitudinal, practice-based analysis of the Global Intercultural Project Experience (GIPE) and its evolution into GIPE++ between 2020 and 2026, this study examines how blended mobility models and real client projects can foster deeper intercultural learning. Particular focus is given to the GIPE++ 2025 project on Untung Jawa Island, Indonesia, where students and experts from Germany, Indonesia, Namibia, and Peru collaborated in interdisciplinary streams to develop digital platforms, tourism development strategies, innovative promotional approaches, and baseline environmental reports for a local tourism organisation. The study highlights how intercultural communication competence, defined through tolerance, dialogue, cooperation, and international perspectives, becomes a critical condition for effective IPBL implementation. Furthermore, this paper introduces the concept of productive intercultural friction, emphasising that differences in cultural expectations, communication styles, and decision-making practices can serve as catalysts for creativity, adaptability, and transformative learning when appropriately facilitated. Ultimately, the findings suggest that intercultural competence is most effectively developed through co-creation under real-world constraints, positioning IPBL as a scalable and impactful approach to rethinking internationalisation and sustainability education in higher education.

Keywords: *Intercultural project-based learning, collaborative online international learning, intercultural communication competence, interdisciplinary collaboration, international education.*

1. Introduction

In the contemporary landscape of higher education, the imperative to equip students for globally distributed and interdisciplinary professional environments has never been more acute. However, a critical gap persists: traditional internationalisation strategies frequently prioritise physical mobility and internationally themed curricula over the cultivation of substantive intercultural competence. Such conventional approaches often fail to foster the collaborative resilience and systemic thinking required to navigate the wicked problems of the 21st century, such as climate change, social inequality, and resource scarcity. Consequently, mere global exposure does not inherently translate into the ability to address complex, transnational challenges that are deeply embedded in diverse cultural and governance structures.

To bridge this pedagogical divide, this study proposes Intercultural Project-Based Learning (IPBL) as a transformative framework. IPBL transcends disciplinary silos by integrating technical expertise with ethical awareness and stakeholder engagement within an experiential learning process. The conceptual evolution of this framework is evidenced by the Global Intercultural Project Experience (GIPE and GIPE++), an international initiative spanning universities across four continents between 2020 and 2026. What began as a technically oriented collaboration has matured into a sophisticated model for sustainability-oriented action and intercultural co-creation.

A pivotal case study within this longitudinal analysis is the 2025 GIPE edition, which focused on the sustainable revitalization of Pulau Untung Jawa, Indonesia. In collaboration with local organisations, students confronted multifaceted challenges, including mangrove degradation and waste management, while navigating disparate communication styles and academic structures across multiple time zones. Central to this experience is the concept of 'productive intercultural friction' (Dahlberg, Sitter, Woody, & Ketcher, 2025). Rather than viewing cultural and disciplinary disagreements as obstacles to be minimized, the IPBL framework recognises them as essential catalysts for innovation, empathy, and adaptability.

Ultimately, this research asserts that intercultural agility is not acquired through passive observation but is forged through the rigorous process of co-designing solutions under real-world constraints. By synthesizing longitudinal data and practical application, this paper contributes to the discourse on transformative learning, arguing for a shift toward educational models that are as interconnected and complex as the global challenges they seek to resolve.

2. Related work

Project-Based Learning (PBL) effectively promotes hands-on learning through real-world challenges (Bender, 2012), fostering the critical thinking and collaboration skills required in professional settings (Krajcik & Shin, 2014). Addressing complex modern issues further necessitates collaborative, cross-disciplinary solutions. Intercultural and Interdisciplinary Project-Based Learning (IPBL) addresses these needs by combining diverse cultural settings to enhance global communication and understanding. Hart (2019) highlights how structured interaction and reflective practice within IPBL significantly improve students' intercultural competence alongside academic learning. Furthermore, Oladiran et al. (2011) demonstrate via the Global Engineering Teams (GET) program how technology facilitates virtual international collaboration with industry partners, allowing students to apply their diverse knowledge and cultural perspectives to create innovative solutions.

The Empathy Project, organised by the NGO Sociopreneur Indonesia (SID), exemplifies intercultural collaboration through a volunteering-based initiative involving university students and lecturers across Indonesia. The 2024 iteration focused on "Eco-Literacy for Sustainability," where "Youth Volunteers" (students) and "Expert Volunteers" (lecturers) formed small working groups to produce educational videos for children's communities in Bandung, West Java. Within these groups, students assumed specialised roles, including Project Leader, Storyline Writer, Graphic Designer, Video Editor, and Social Media Campaigner, while Expert Volunteers provided mentorship and subject-matter expertise. This collaborative process translated conceptual material into practical content, resulting in final educational video outputs aligned with the core sustainability theme (Sociopreneur Indonesia, 2024).

The diverse origins of students and experts from various Indonesian universities introduced unique values and norms into the project's collaborative dynamics. This intercultural framework stimulated novel ideas that likely would not have emerged in homogeneous groups. While these cultural differences necessitated strong communication skills to navigate disagreements arising from varied perspectives, the program's conflict management mechanisms became a distinctive and valuable outcome of the collaboration.

Collaborative Online International Learning (COIL) is recognised as an innovative, cost-effective method to promote intercultural learning through online faculty and student collaboration across countries (Rubin, 2017). Although online collaboration in student projects began in the 1990s, the focus on international intercultural aspects has gained prominence only recently (Appiah-Kubi & Annan, 2020).

Focusing on sustainability challenges, Sulkowski, Kowalczyk, Ahrendsen, Kowalski, and Majewski (2020) highlight a program where students from various disciplines and countries collaborate on projects aimed at promoting sustainable development. The initiative showcases how PBL with an intercultural and interdisciplinary focus can lead to innovative approaches to sustainability, encouraging students to think critically about environmental, economic, and social issues from a global perspective.

3. Conceptual framework: Defining Intercultural Project-Based Learning (IPBL)

Based on the background discussed in the previous chapter regarding Project-Based Learning, particularly Intercultural Project-Based Learning (IPBL), it can be understood that the fundamental concept underlying the implementation of IPBL is Intercultural Communication Competence. First, it is important to understand the concept of culture as the primary foundation. Culture is defined as learned norms, values, knowledge, artefacts, language, and symbols that are continuously communicated among people who share a common way of life (Calhoun, 1994). In addition, culture can also be understood as an umbrella term that

provides direction for individuals regarding social behaviour and norms in society, including knowledge, beliefs, laws, customs, and habits (Taylor, 1958).

Intercultural communication generally refers to interaction between individuals from different cultural backgrounds, aimed at sharing information across cultures (Jacob, 2011). In this context, intercultural communication is closely associated with cross-cultural communication, a field that examines how individuals from different cultures communicate in both similar and different ways. The importance of intercultural communication has increased due to market globalisation, technological advancement, intercultural workforces, global teamwork, and the growing demand for adaptable talent (Dirgeyasa, 2022). Based on these factors, IPBL can be understood as an educational approach shaped by global business opportunities and technological advancements. In practice, IPBL involves intercultural workforces operating within international teamwork structures. Therefore, strong Intercultural Communication Competence is essential for individuals participating in IPBL.

Furthermore, Intercultural Communication Competence is essential to reduce communication barriers such as language differences, misunderstandings, and even stereotypes. Several specific practical criteria can be used to define Intercultural Communication Competence (Dirgeyasa, 2022):

(1) Willingness to accept differences, (2) Increased tolerance, (3) Promotion of dialogue, (4) Creation of cooperation among members, (5) Development of positive attitudes toward others, and (6) Development of international perspectives.

These criteria can be viewed as key conditions of Intercultural Communication Competence that individuals should demonstrate when participating in IPBL. In short, IPBL can only function effectively when these competencies are applied, as the method requires collaboration among individuals from diverse cultural backgrounds within global teams supported by technological advancement.

4. Methodology: A longitudinal, practice-based research approach

The GIPE Educational Model has evolved over a decade from bilateral software engineering projects into a robust framework for global, interdisciplinary student projects that address the UN Sustainable Development Goals (SDGs). Initiated in 2014 between German and Namibian universities, the model originally focused on distributed software development and short on-site visits to strengthen intercultural awareness.

In 2019, supported by the DAAD, the framework integrated International Project-Based Learning (IPBL) and Collaborative Online International Learning (COIL), augmented by physical mobility. This allowed students from Germany, Indonesia, Namibia, and Peru to gain a comprehensive Global Intercultural Project Experience (Meyer et al., 2022a). The model employs a four-phase cycle:

- Online Collaboration Preparation: Virtual kick-off and targeted training.
- Two-week Face-to-Face Phase: A "Spring School" in Germany for team-building and intercultural exposure.
- Online Collaboration: Students work in mixed teams using web-based tools, guided by international academic staff.
- One-week Project-Touchdown: A handover phase where German students travel to the client in the partner country.

While the 2020 and 2021 projects were restricted by the COVID-19 pandemic, necessitating "pure COIL" or hybrid formats, they remained successful. However, we have explicitly argued that physical meetings during the Spring School are essential for the social cohesion required by our approach (Meyer et al., 2022b). The model's scope matured from independent sub-projects (2020–2021) to integrated solutions. In 2022, serving a school in Peru, student mobilities in both directions fostered deeper intercultural understanding and the "GIPE family" identity. By 2023, collaboration with UNDP Accelerator Labs marked a shift to globally distributed clients. This allowed for the full implementation of the "Local-Presence-Online-Presence" pattern, where students gather requirements locally before convening for physical and virtual collaboration. Observations from the 2023 GIPE Conference (GIPECon) confirmed that this sequence optimises intercultural awareness and yields significant institutional impact for both students and staff (Meyer, 2024a).

To ensure long-term sustainability, GIPE has transitioned into the GIPE++ framework, funded by DAAD and Erasmus+. This iteration shifts from multi-disciplinarity (independent tasks) toward true interdisciplinarity, where students from diverse fields co-create holistic solutions to complex problems, e.g. the 2025 GIPE++ project in Indonesia addresses environmental degradation through an integrated approach involving baseline studies, business modelling for sustainable tourism, and technological platforms for waste management. This holistic framework fosters innovative problem-solving and cultivates critical soft skills, including teamwork and conflict resolution, by requiring students to navigate differing disciplinary perspectives and cultural backgrounds (Meyer, 2024b).

5. Case study: The GIPE++ 2025 Untung Jawa Island Project in Indonesia

The GIPE++ 2025 Project on Untung Jawa Island, Indonesia, focused on "Establishing a Digital Platform for Conservation and Tourism Development." Partnering with the community organization Pokdarwis, the project addressed critical gaps in digital presence, promotional creativity, business strategy, and coastal abrasion monitoring.

To tackle these issues, an international team from Germany, Indonesia, Namibia, and Peru—spanning IT, Environmental Engineering, Business, Communication, and Tourism—collaborated from March to July 2025. Participants worked in specialized "streams" to produce four deliverables which are: (1) A dedicated tourism website, (2) A business development strategy, (3) Innovative new media, (4) promotional content, (5) Baseline environmental data reports.

The stream selection process highlighted two distinct Cultural Motivation Styles (Samovar et al., 2017): (1) Learning When Interested, many students chose streams matching their academic expertise and (2) Intrinsic Motivation, where significant numbers of students joined unfamiliar disciplines to acquire new skills and contribute meaningfully.

Supported by Stream Leads and experts, these teams navigated complex intercultural dynamics. The project concluded in July 2025 with a formal handover to the client, successfully blending diverse cultural perspectives and academic disciplines through the essence of intercultural project-based learning.

6. Discussion

The longitudinal analysis of GIPE and GIPE++ (2020–2026) demonstrates that the future of internationalisation must transcend mobility metrics to embrace models of collaborative responsibility and tangible societal impact. Findings suggest that Intercultural Project-Based Learning (IPBL) serves as a robust educational paradigm, equipping students to navigate contemporary global complexities where traditional, passive exposure models fail. This shift aligns with the broader movement toward integrating sustainable development goals within higher education curricula to foster systemic thinking (Leal Filho, Shiel, & Paço, 2016). Critical to this growth is the concept of productive intercultural friction. While institutional frameworks often attempt to mitigate conflict, the GIPE experience reveals that facilitated tension, arising from divergent communication styles and cultural expectations, acts as a fundamental driver of innovation and resilience. This validates the premise that inherent tensions in professional and disciplinary diversity can be leveraged to enhance collaborative outcomes (Dahlberg, Sitter, Woody, & Ketcher, 2025). In the case of Pulau Untung Jawa, these frictions transformed diversity from a symbolic attribute into an operational necessity, forcing students to reconcile conflicting values while co-designing sustainability strategies.

The study validates the efficacy of the "Sandwich Model" of blended mobility. The integration of virtual collaboration with intensive physical immersion, specifically the Spring School in Germany, functioned as a relational accelerator, transforming fragmented digital teams into cohesive communities. This ecosystem proves that physical encounters are most effective when embedded as catalysts within long-term collaborative processes rather than as isolated events (Beelen & Jones, 2015). Such models effectively advance "Internationalisation at Home" by embedding global sustainability challenges directly into institutional identities, ensuring that intercultural learning is accessible beyond the mobile minority.

Although the implementation of IPBL demands significant organisational flexibility and robust facilitation to manage the cognitive demands of transnational teamwork, its potential for scaling is evident. Ultimately, the GIPE initiative argues for a shift in higher education: moving beyond the production of "globally mobile professionals" toward the cultivation of socially responsible agents of transformation capable of co-creating equitable futures under real-world constraints.

7. Conclusions

The longitudinal evidence from the GIPE and GIPE++ initiatives (2020–2026) demonstrates that Intercultural Project-Based Learning (IPBL) serves as a vital pedagogical evolution, moving higher education beyond traditional mobility metrics toward a model of substantive societal impact. By integrating real-world sustainability challenges with interdisciplinary co-creation, IPBL transforms intercultural competence from a theoretical concept into an operational necessity, where productive intercultural friction acts as a primary driver for innovation, resilience, and ethical adaptability. The success of the blended Sandwich Model further demonstrates that global engagement can be structurally embedded within institutional identities, fostering a scalable form of internationalisation at home. Ultimately, this framework redefines the role of the university in the twenty-first century, transitioning from the production of globally mobile professionals to the cultivation of socially responsible agents of transformation capable of navigating complex, transnational crises through collaborative action.

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