CAPABILITY APPROACH ANALYSIS OF THE SUIJI PROGRAM FOR BUILDING SUSTAINABLE SOCIAL INNOVATION THROUGH CROSS-NATIONAL COLLABORATION

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Abstract

This study analyzes the SUIJI (Six University Initiative Japan-Indonesia) Program as a model of international collaboration aimed at fostering capability development and promoting sustainable social innovation within local communities. Employing a qualitative case study approach, data were collected through interviews, observations, and document analysis involving students, faculty members, and community participants. The findings demonstrate that the SUIJI Program effectively enhanced participants' capabilities, particularly in developing intercultural competence, reflective agency, adaptive leadership, and civic engagement. These enhanced capabilities facilitated collaborative social innovation initiatives, including organic farming, waste management, and the development of sustainable livelihoods. Although the collaboration faced several challenges, such as cultural differences, language barriers, and power asymmetries, the application of adaptive strategies and mutual learning mechanisms contributed significantly to overcoming these obstacles and ensuring the success of the program. This study underscores the critical role of community ownership, local capacity building, and institutional support in sustaining grassroots innovation. Furthermore, the research provides valuable insights into how the integration of the Capability Approach within social innovation practices can generate transformative impacts in the context of cross-national educational collaborations.

Keywords: Capability Approach; Social Innovation; Community Empowerment; Cross-National Collaboration; University-Community Engagement

Introduction
1. Background:

In an increasingly interconnected world, global society faces complex and urgent challenges, including poverty, environmental degradation, inequality, and social exclusion (Kurilovas & Kubilinskiene, 2020; Villa-Enciso et al., 2023). Addressing these persistent issues requires innovative and inclusive responses that are firmly grounded in local realities (Ghareeb et al., 2019). Higher Education Institutions (HEIs) have emerged as pivotal actors in this effort, not only as knowledge producers but also as drivers of social transformation (Granados-Sánchez, 2023). Through cross-national and community-based collaborations, HEIs have a strategic role in fostering social innovation that transcends disciplinary boundaries, integrates diverse perspectives, and responds to context-specific needs (Ferrarello, 2020; Villa-Enciso et al., 2023).

Recent studies also highlight the increasing relevance of leveraging unique resources, entrepreneurial capabilities, and ESG-oriented practices (Environmental, Social, and Governance) in addressing sustainability challenges (Alkandi & Helmi, 2024; Almagtome & Aljaafari, 2024; Chen et al., 2023). These perspectives underline the strategic importance of institutional and community collaboration in promoting inclusive social innovation, particularly in emerging markets and grassroots contexts

(Mormile et al., 2025; Orchi et al., 2025; Tian et al., 2024).

One promising model of such collaboration is the Six University Initiative Japan-Indonesia (SUIJI) Program, which brings together Japanese and Indonesian universities in joint service-learning projects with local communities. The following figure illustrates the core academic institutions from both Japan and Indonesia that participate in the SUIJI Program, highlighting the scope and balance of institutional collaboration in the service-learning framework.
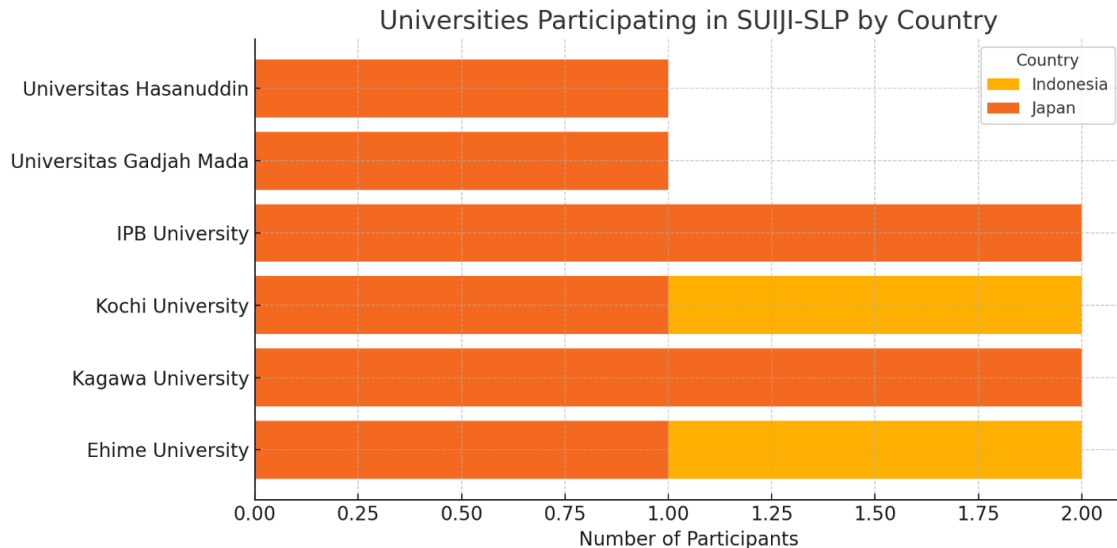

Fig. 1 Participant in the SUIJI Program

Through intercultural learning and participatory engagement, SUIJI facilitates the co-creation of innovative solutions to local social, agricultural, and environmental challenges. The program fosters both individual empowerment and collective capacity building, enabling students, faculty, and community members to collaboratively address real-world problems. Despite its long-standing implementation, the SUIJI Program has not yet been systematically analyzed through frameworks that center human development and agency. The Capability Approach (CA), pioneered by Sen, 1999 and further refined by Nussbaum, 2011 and Austin & Holloway, 2022, provides a robust normative framework for understanding human development beyond material indicators. CA emphasizes individuals' substantive freedoms and real opportunities to pursue lives they have reason to value (Belda-Miquel, 2022; Kotani et al., 2022; Rojas Luiz et al., 2021).

Unlike conventional educational evaluations that primarily focus on measurable outputs such as academic achievement or project completions, CA promotes an exploration of participants' development of critical capabilities, agency, and transformative capacities. This perspective aligns closely with the objectives of service-learning programs like SUIJI, which aim to foster critical thinking, intercultural competence, and social responsibility through collaborative engagement between students and communities (Premadasa et al., 2023; Shaheen et al., 2023).

Moreover, combining the CA with the perspectives of Social Innovation (SI) and Grassroots Innovation (GI) enriches the analytical framework for understanding the SUIJI Program. While SI emphasizes institutional and policy-driven approaches to systemic challenges, GI foregrounds community-driven, bottom-up initiatives that are context-sensitive and locally embedded (Belda-Miquel et al., 2020; Millard & Fucci, 2023). The SUIJI Program operates at the intersection of these paradigms, facilitated by universities (SI) while rooted in community participation and co-creation (GI).

Notably, international collaborations, especially between Global North-South and South-South

partners, often face challenges related to cultural asymmetries, communication gaps, and power imbalances that may marginalize local knowledge (Kurniawan et al., 2020; Millard & Fucci, 2023; Zhang et al., 2023). Addressing these challenges requires deliberate efforts toward reflexivity, shared governance, and equitable participation to fully realize the transformative potential of programs like SUIJI.

Furthermore, evaluations of international collaboration programs often prioritize short-term outputs while overlooking long-term impacts on participants' capabilities, agency, and community resilience (Belda-Miquel, 2022; Rojas Luiz et al., 2021). Sustainable community-based innovation demands strategies that foster local ownership, adaptability, and continuity within socio-cultural systems. Intercultural learning itself involves negotiation, adaptation, and critical reflection. Recent literature emphasizes the importance of designing educational programs that foster intercultural awareness, empathy, and mutual respect (Jiang et al., 2023; Ratanavanich & Charoensukmongkol, 2024). Effective program design must integrate preparation, facilitated reflection, and post-engagement learning processes to develop intercultural competencies.

Given this complex landscape, this study applies the Capability Approach as an evaluative framework to analyze the SUIJI Program. Utilizing qualitative case study methods, including semi-structured interviews, participant observation, and document analysis (Creswell, J. W., & Creswell, 2017), this research explores the experiences and transformations of diverse stakeholders engaged in the program.

Ultimately, this study aims to reposition international academic collaboration not merely as a mechanism for knowledge transfer or capacity building, but as a transformative platform where agency is cultivated, social ties are strengthened, and innovations emerge through mutual engagement. By analyzing the SUIJI Program through the integrated lenses of the Capability Approach, Social Innovation, and Grassroots Innovation, this research offers valuable insights into how higher education can contribute to sustainable development while centering the voices and capabilities of all stakeholders involved (Alekseyenko et al., 2024; Blavette et al., 2024).

Methods

This study employed a qualitative case study approach to explore the dynamics of capability expansion, grassroots social innovation, and intercultural collaboration within the SUIJI (Six University Initiative Japan-Indonesia) Program. A qualitative approach was deemed appropriate for capturing complex, socially embedded phenomena and for understanding participants' lived experiences in intercultural educational settings (Creswell, J. W., & Creswell, 2017). A deductive strategy guided the research process, drawing on key theoretical perspectives from Grassroots Social Innovation (Belda-Miquel et al., 2020), the Capability Approach (Belda-Miquel, 2022), and Social Innovation (Castro-Arce & Vanclay, 2020). The analysis focused on four core dimensions of grassroots social innovation processes; (1) agents, (2) purposes, (3) drivers, and (4) processes, within the strategic partnership between Indonesia and Japan facilitated by the SUIJI Program.

Research Focus, Location and Period

Figure 2 describe the research concentrated on an in-depth exploration of the following aspects; the involvement of stakeholders from the Indonesian and Japanese governments and universities, the individual and collective benefits obtained by participants from both countries, the driving forces or demands emerging from civil society or local communities, and the participation processes involving community engagement and knowledge co-creation. The study was conducted in South Sulawesi Province, Indonesia, particularly at Hasanuddin University as a core member of the SUIJI consortium, and the Japanese Consulate Office in Makassar. Fieldwork was undertaken from September to December 2024.

Building Bridges Through Collaboration

Fig 2. Building bridges through collaboration

Participants

Figure 3 show the roles of participants were purposively selected based on their direct involvement in the SUIJI Program, comprising; Japanese and Indonesian students engaged in field-based community projects, Faculty mentors supervising student and community activities, Community leaders and members participating in grassroots innovation initiatives, and Administrative staff coordinating the program. A total of 15 to 25 individuals participated in this study. Snowball sampling was utilized to identify additional informants based on recommendations from initial participants.

Roles in Community Projects
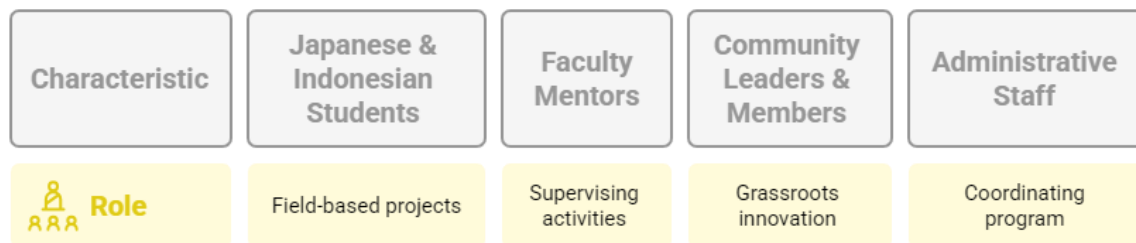
Fig 3. Roles in community projects

Data Collection Methods

Table 1. Data collected complementary qualitative methods

Method	Description	Participants/Subjects
Semi-Structured Interviews	Exploring experiences, capabilities, and intercultural learning	Students, Faculty, Community Members, Administrative Staff
Participant	Observing project activities	SUIJI Field Participants

Observation	and intercultural collaboration	
Document Analysis	Reviewing reports, project documents, and institutional records	SUIJI Program Documents

Interviews focused on exploring participants' experiences, reflections, agency, capability development, power dynamics, and intercultural learning processes. Each interview lasted between 45 to 90 minutes and was recorded with informed consent. Participant observation was conducted during SUIJI project activities, with attention to interactions, decision-making processes, and negotiation of cultural differences. Field notes were taken to enrich data interpretation. Document Analysis, Secondary data were collected from various program-related documents, including; Student reflection reports, Community project proposals and progress reports, and Program evaluations and institutional documents
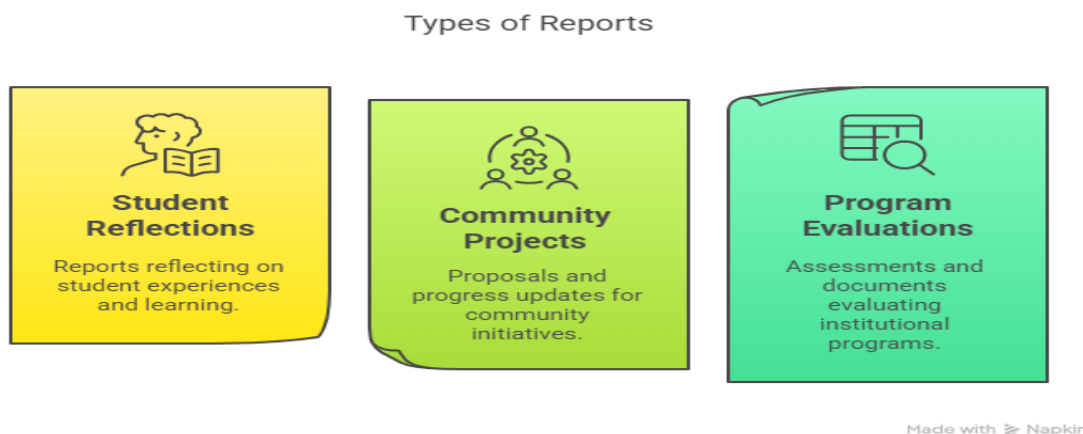

Fig 4. Types of reports

Data Analysis Procedure

Data were analyzed using the interactive analysis model proposed by (Miles & Huberman, 1994), consisting of four interrelated activities, such as Data Collection, Data Condensation, Data Display, Conclusion Drawing and Verification.
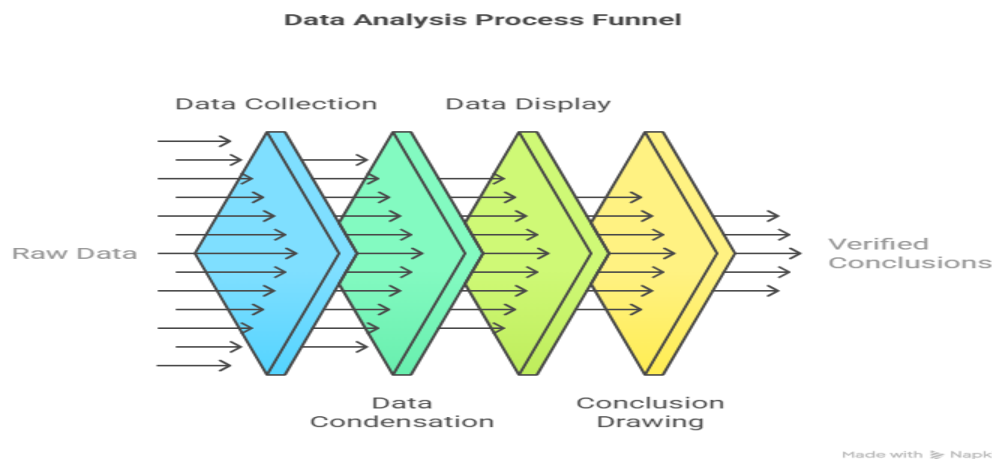
Fig 5. Data analysis Process

Thematic analysis was also employed, following (Blavette et al., 2024) (Bassett et al., 2018) guidelines, to identify key patterns and themes within the qualitative data, focusing on empowerment, agency, participation, and grassroots innovation. Coding was guided by key dimensions from the Capability Approach, including agency, functionings, and freedom (Nussbaum, 2011). The analytical framework integrates the Capability Approach to capture participants' experiences in intercultural collaboration, empowerment, and grassroots innovation, linking these to the core CA dimensions of capabilities, functionings, and freedoms.

Validation of Findings
To ensure data validity, multiple strategies recommended by (Creswell, J. W., & Creswell, 2017) were implemented;
Triangulation of data sources: interviews, observations, and documents.
Member checking to validate findings with participants.
Peer debriefing and critical review.
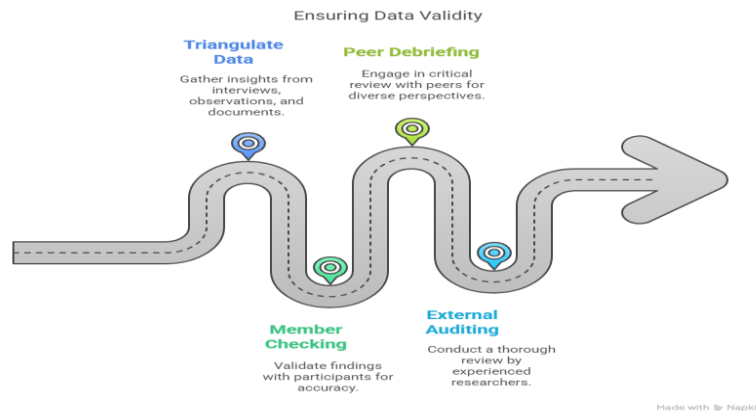External auditing by experienced qualitative researchers.

Fig 6. Ensuring data validity

Ethical Considerations
The study adhered to ethical standards for research involving human participants. Informed consent was obtained from all participants. Anonymity and confidentiality were maintained throughout the research process. Participants were treated as co-creators of knowledge, with full respect for their voices and perspectives (Boothby et al., 2021).

Results
This section presents the empirical findings of the study, organized into five thematic areas that reflect the core contributions of the SUIJI Program to transformative learning and sustainable social innovation. Figure 7 describes the themes derived from thematic analysis of interviews, observations, and document reviews include; Expansion of Capabilities and Agency, Social Innovation Outcomes, Intercultural Collaboration Dynamics, Long-Term Sustainability and Community Ownership, and Model Replication and Transferability. Findings are interpreted through the lens of the Capability Approach, focusing on agency, functionings, and contextual freedoms as key indicators of human development (Nussbaum, 2011).
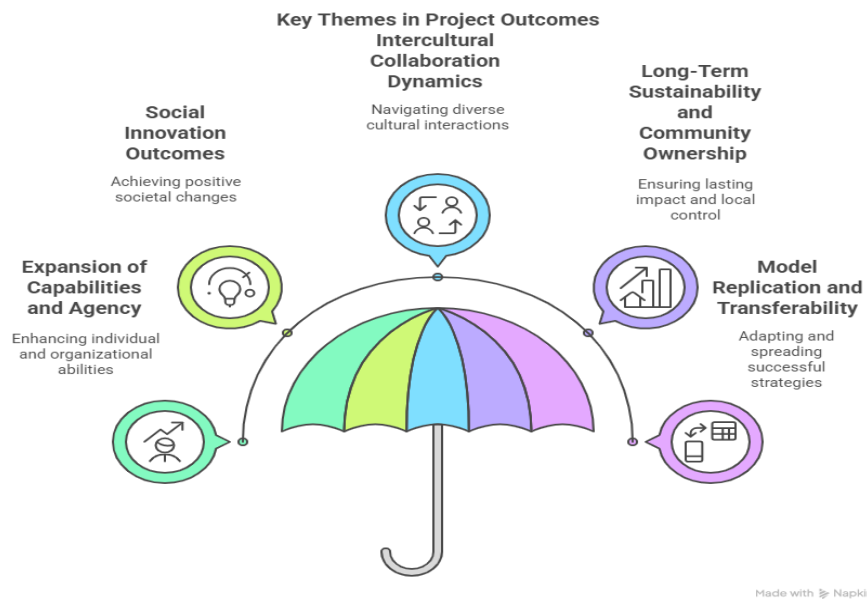
Fig 7. Key themes in project outcomes

Expansion of Capabilities and Agency

A primary finding of this research is the significant enhancement of participants' capabilities and agency as a result of their engagement in the SUIJI Program. In alignment with the Capability Approach (Lenzi et al., 2021), both Japanese and Indonesian students reported improvements in intercultural competence, critical self-reflection, leadership capacity, and civic responsibility, participants developed empathy, open-mindedness, and the ability to navigate complex social realities through direct immersion in rural communities. This aligns with (Vorontsova et al., 2022) concept of transformative learning, where exposure to unfamiliar contexts prompts shifts in worldview. Reflective Agency, through structured reflection and participatory experiences, students reported reevaluating their values and gaining greater clarity on social responsibilities and problem-solving strategies, and Adaptive Leadership, participants acquired leadership skills within diverse, intercultural teams by practicing democratic engagement and collaborative decision-making.

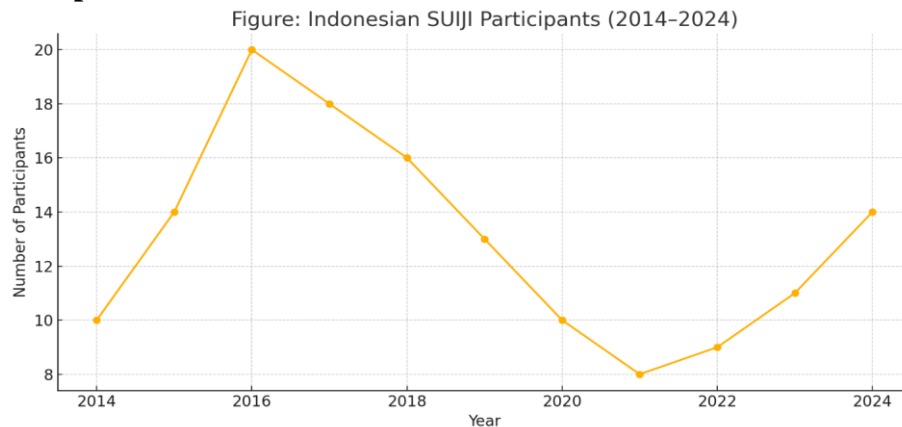**Graphs on Participant Growth**

Fig. 8 illustrates the trend of Indonesian participants (2014–2024)

Figure 8 illustrates the trend of Indonesian participants in the SUIJI program from 2014 to 2024, showing significant fluctuations over the years, with a notable peak in 2016. The number of participants initially rose gradually from 2014 to 2016, reaching its highest point at 20 participants in 2016. This increase could be attributed to factors such as improved awareness of the program, government initiatives, or socio-economic conditions that encouraged participation. However, the following years saw a sharp decline in the number of participants, particularly from 2017 to 2020, which might have been influenced by factors like political instability, changes in educational or training policies, or global economic challenges. After 2020, a recovery trend is observed, with the number of participants slowly increasing again, reaching 16 by 2024. This resurgence could be linked to renewed efforts to promote the program, the easing of the COVID-19 pandemic's effects, and shifts in national policy that fostered greater engagement in such initiatives.

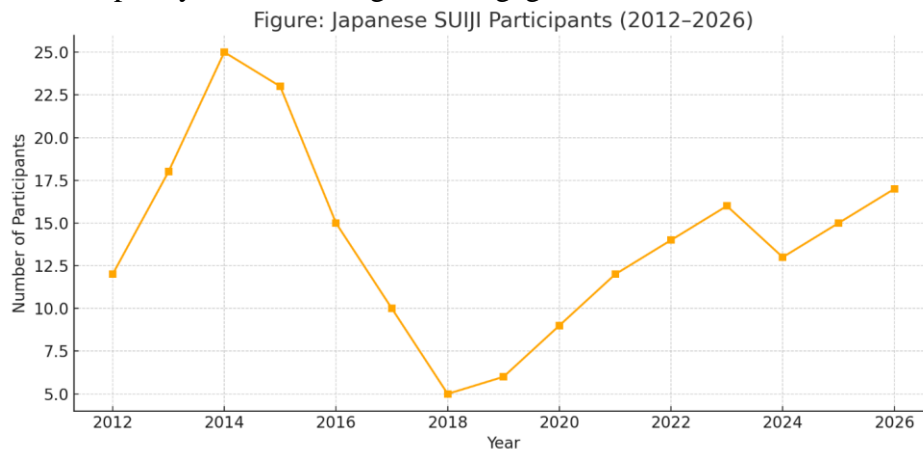Figure: Japanese SUIJI Participants (2012–2026)

Fig. 9 visualizes the Japanese participation trend (2012–2026), showing a decline in 2020 followed by recovery in 2022.

Figure 9 illustrates the trend of Japanese participants in the SUIJI program from 2012 to 2026. The graph shows a substantial peak in 2014, with the number of participants reaching over 25, before gradually declining over the next few years. This peak might be attributed to an initial surge in interest or the introduction of new incentives for participation. However, from 2015 to 2020, there is a steady decline, likely due to various factors such as economic challenges, changes in government policy, or external factors like the global pandemic. Notably, in 2020, there was a sharp drop in participation, potentially linked to the disruptions caused by COVID-19. However, since 2022, the number of participants has been on a steady recovery, with a gradual increase projected through 2026. This recovery could be due to post-pandemic adjustments, renewed promotional efforts, or changes in national policies that have reinvigorated interest in the program.

Table 2. Indicators of Capability Expansion among SUIJI Participants

Dimension	Indicators Identified	Supporting Evidence
Intercultural Competence	Empathy, open-mindedness, communication	Student reflections, field notes
Reflective Agency	Critical self-reflection, value reorientation	Interview transcripts
Adaptive Leadership	Teamwork, participatory decision-making	Observational data
Civic Commitment	Community engagement, social responsibility	Documented project reports

Table 2 presents the indicators of capability expansion among SUIJI participants, categorized into four dimensions; Intercultural Competence, Reflective Agency, Adaptive Leadership, and Civic Commitment. Intercultural Competence is evaluated through empathy, open-mindedness, and communication, with student reflections and field notes serving as evidence of how participants engage with diverse cultures and perspectives. Reflective Agency focuses on critical self-reflection and value reorientation, assessed through interview transcripts that capture the depth of participants' self-examination and shifts in personal beliefs. Adaptive Leadership emphasizes teamwork and participatory decision-making, demonstrating how participants contribute to collaborative efforts and leadership processes. Observational data provide insights into their behaviors and interactions in group settings. Finally, Civic Commitment is measured through community engagement and social responsibility, supported by documented project reports that showcase participants' involvement in initiatives benefiting their communities. Together, these indicators reflect the holistic development of SUIJI participants, illustrating their growth in intercultural understanding, self-awareness, leadership, and social responsibility.

Social Innovation Outcomes

The SUIJI Program catalyzed several grassroots innovation initiatives that align with sustainability principles and community empowerment (Belda-Miquel et al., 2020; Haxeltine, 2012). Figure 10 describe about social innovation outcomes, which are, organic farming projects, collaborations with local farmers supported the adoption of environmentally sustainable agricultural practices, minimizing chemical input usage. Community-Based Waste Management, students helped design waste segregation systems and awareness campaigns, particularly among school-aged children. Sustainable livelihood training, programs delivered practical skills in aquaculture, agroforestry, and income diversification tailored to local community contexts.
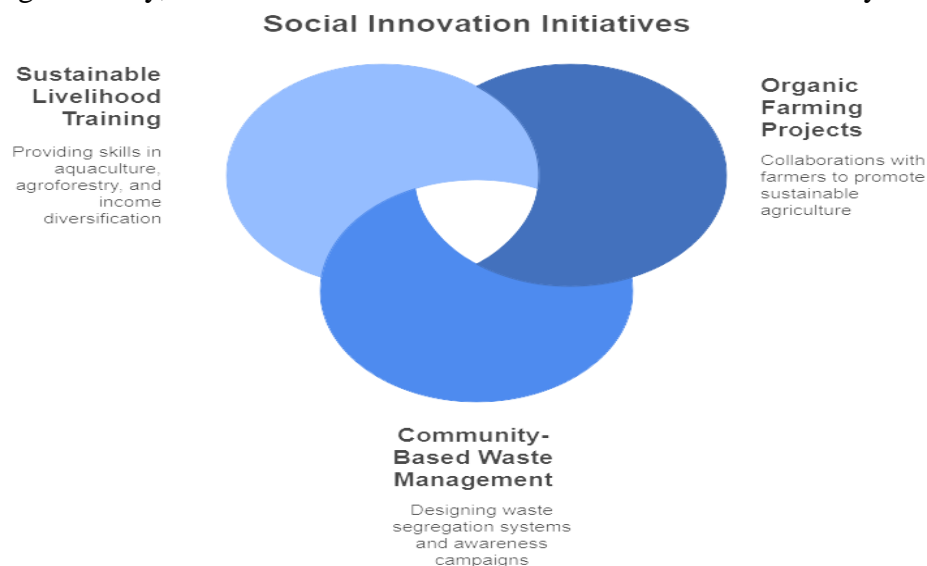

Fig. 10 Social innovation outcomes

Intercultural Collaboration Dynamics

The cross-national nature of the SUIJI program provided an invaluable opportunity for intercultural learning, but also introduced several complex challenges. One of the major obstacles was the power dynamics and cultural differences between Japanese and Indonesian participants. These disparities were reflected in differences in educational systems, communication styles, and expectations, which occasionally led to misunderstandings. For example, the hierarchical nature of Japanese education and the more egalitarian approach in Indonesia sometimes caused friction in

group discussions and decision-making processes. Additionally, the differing expectations regarding participation and leadership roles between participants from both countries often led to moments of miscommunication. As (Bhabha, 1994) highlights, cultural differences can create tension when not properly navigated, and such differences require careful management to avoid negative impacts on collaboration. These challenges, however, presented learning opportunities for participants to engage critically with their own cultural assumptions and biases, fostering greater intercultural awareness and adaptability as the program progressed.

Language barriers were another significant challenge in this cross-national collaboration. With participants speaking multiple languages, communication often proved difficult, particularly in areas requiring technical language or nuanced cultural expressions. To address these challenges, adaptive strategies were employed, such as the use of visual aids, informal language learning, and translation support. These strategies allowed participants to better understand each other's perspectives and effectively engage in the collaborative process. As participants worked together, they developed mutual understanding and intercultural sensitivity, which enhanced their ability to collaborate effectively. This gradual process of mutual learning reinforced the value of culturally immersive education, where participants not only shared knowledge but also adapted their communication styles to suit the multicultural environment (Bui & Baruch, 2010). Over time, these intercultural experiences allowed participants to build collaborative competence, preparing them to navigate similar challenges in future global collaborations.

Table 3. Key Factors in Cross-National Collaboration Dynamics

Factor	Challenge Identified	Adaptive Response
Cultural Differences	Divergent norms and expectations	Negotiation, mutual adaptation
Language Barriers	Difficulty in verbal communication	Use of visual aids, translation support
Power Dynamics	Imbalance in influence or voice	Facilitation of equitable participation

Table 3 highlights key factors in cross-national collaboration dynamics, identifying challenges and the adaptive responses used to address them. Cultural differences emerged as a major challenge, particularly due to divergent norms and expectations between participants from different cultural backgrounds. This often led to misunderstandings in communication and collaboration. To manage these differences, negotiation and mutual adaptation were essential. Participants had to engage in open dialogue, adjusting their approaches and behaviors to navigate cultural variations and ensure smooth collaboration. Language barriers also posed a significant challenge, as verbal communication was sometimes hindered by differences in language proficiency. To overcome this, participants used visual aids and translation support to bridge the communication gap, making complex ideas more accessible and fostering clearer understanding. Finally, power dynamics created an imbalance in influence or voice, especially in discussions where participants from different countries had varying levels of authority or input. Facilitating equitable participation was key to ensuring that all voices were heard, promoting inclusivity and collaboration.

Long-Term Sustainability and Community Ownership

The long-term sustainability of grassroots initiatives is heavily influenced by the degree of community ownership and the support provided by relevant institutions. According to (Haxeltine, 2012) and (Savoldelli et al., 2014), the integration of local communities in the ownership of

initiatives ensures that these projects are not short-lived but instead are maintained and expanded over time. Community ownership fosters a sense of responsibility, encouraging locals to continue efforts such as sustainable farming practices or waste management systems beyond the initial intervention. This sense of ownership is crucial in transforming these grassroots projects into long-term, self-sustaining solutions that continue to thrive even after external programs have concluded. Furthermore, the empowerment of community members is a key factor in ensuring the continuation of these practices. As Sen (1999) argues, empowerment allows individuals and communities to take ownership of their development and create lasting changes. In the SUIJI program, for example, certain communities continued to implement practices like sustainable farming or waste management systems after the program ended. This indicates that when people are equipped with the skills and knowledge to manage projects independently, they are more likely to ensure the longevity of those initiatives, securing a lasting positive impact on their communities.

However, the success of these initiatives also relies on the ongoing collaboration with institutional partners. The role of universities, local governments, and other institutions in providing technical guidance and resources is vital for the continuation of community-led projects. As noted by (Niehaves et al., 2013; and Rozikin & Sofwani, 2023)., institutions can offer critical support in terms of expertise, funding, and networking, enabling communities to overcome challenges and adapt to changing circumstances. This collaboration helps ensure that the initiatives remain viable and adaptable in the long term, fostering a strong, supportive ecosystem that promotes both community growth and sustainability.

Model Replication and Transferability

The SUIJI program offers a replicable model for cross-national service-learning and innovation partnerships, with a strong focus on adaptability to local contexts. One of the key strengths of the program is its ability to integrate the specific needs and challenges of local communities while drawing from global knowledge and expertise. As highlighted by (Domanski et al., 2020) and (de Juana-Espinosa & Tarí, 2012), the program's adaptability is driven by reflective learning and co-creation, which allows both faculty and students to tailor their approaches based on local conditions. This dynamic process ensures that the solutions developed are not one-size-fits-all but are context-sensitive and relevant to the communities involved. By engaging in iterative cycles of reflection and adaptation, participants can adjust strategies to address emerging challenges, making the SUIJI model highly flexible and applicable to a wide range of settings. This adaptability is crucial for the long-term success and scalability of the program in diverse environments, ensuring its continued relevance across different cultural and socio-economic contexts.

Moreover, SUIJI exemplifies a robust global-local innovation framework that fosters bi-directional knowledge flows and ensures that community voices are central to the innovation process. This model facilitates a two-way exchange of ideas between global and local stakeholders, ensuring that innovations are not imposed but co-created through mutual collaboration. By prioritizing community input and participation, the program empowers local populations to shape the direction of the projects and solutions, making them more sustainable and aligned with their needs. As a result, the innovation processes become socially inclusive, allowing marginalized voices to contribute to the design and implementation of solutions. This integrated approach is a powerful example of how global-local collaborations can create impactful, contextually relevant innovations that benefit both the local community and the broader international network, fostering a more inclusive and equitable approach to global challenges.

Discussion

This section critically interprets the findings of the study through the theoretical lens of the Capability Approach (Nussbaum, 2011), supported by insights from Social Innovation (SI) and Grassroots Innovation (GI) literatures (Belda-Miquel et al., 2020; Haxeltine, 2012). The discussion is structured into four interrelated themes that articulate how the SUIJI Program fosters transformative learning and sustainable innovation in cross-national contexts.

Expanding Capabilities through Intercultural Engagement

The study reveals that SUIJI significantly contributes to enhancing participants' intercultural competence, reflective agency, and leadership capacity, aligning with Nussbaum, (2011) human capabilities framework. As shown in Table 1, these capabilities were expressed through empathy, participatory decision-making, and social responsibility. Participants engaged in deep intercultural exchanges that facilitated critical self-awareness and broadened worldviews. Japanese students, for instance, reported enhanced understanding of social inequalities in rural Indonesia, while Indonesian students gained exposure to structured teamwork and planning approaches prevalent in Japanese educational culture. These findings align with (Tang et al., 2025), who emphasize the role of intercultural education in fostering self-reflection, adaptability, and empathy. The emergence of reflective agency defined by (Sen, 1999) as the freedom to reason and pursue valued life paths, was clearly illustrated in participants' post-program intentions to contribute to social change. This resonates with Pacheco-Velazquez et al., 2024, who underline that experiential and transdisciplinary learning cultivates civic engagement and empowerment.

Co-Creating Contextual Social Innovation

As visualized in Figure 1, the SUIJI Program generated locally grounded innovations—such as organic farming, community-based waste management, and sustainable livelihood training. These projects were co-designed with local communities, demonstrating responsiveness to specific socio-environmental contexts.

These initiatives embody the spirit of Grassroots Innovation as outlined by Belda-Miquel et al., (2020) (Domanski et al., 2020), emphasizing bottom-up, inclusive development. They also reflect (Sen, 1999) view that sustainable innovation must be rooted in local capabilities and agency. Importantly, these projects yielded both tangible (e.g., agricultural outcomes) and intangible benefits (e.g., trust, social cohesion), affirming (Malshe & Bapat, 2021) proposition that successful social innovations blend functional impact with community empowerment. The synergy between capability expansion and local ownership documented in Table 3. underpins the long-term value of participatory co-creation (Belda-Miquel, 2022).

Navigating Structural and Cultural Asymmetries

While intercultural engagement was largely fruitful, challenges rooted in structural asymmetries were also observed. As captured in Table 2, Japanese students' ideas were sometimes privileged over others, mirroring hierarchical tendencies in Global North-South collaborations (Turato et al., 2022). Language barriers also impeded effective communication, necessitating workarounds and negotiated understanding. (Van et al., 2021) emphasizes that linguistic inclusivity is central to successful cross-cultural partnerships.

Nevertheless, these challenges became opportunities for growth. As Bhabha, (1994) suggests, cultural disjunctures can foster creative learning if approached reflexively. The adaptive strategies employed by participants enhanced intercultural sensitivity and collaboration skills. Future programs should preemptively address such asymmetries through intercultural training, clear power-sharing protocols, and multilingual facilitation to ensure equitable participation.

Sustaining and Scaling Participatory Initiatives

Ensuring the continuity and replicability of innovations beyond the program emerged as a key concern. Projects with high local ownership and embedded capacity-building, such as the organic farming initiative, were more likely to continue after SUIJI ended. This reinforces Haxeltine, (2012) argument that grassroots innovation is most resilient when integrated with local governance systems and supported by institutional frameworks.By contrast, projects reliant on external expertise faltered post-program, exposing vulnerabilities to resource dependency (Varona & Gonzales, 2025). Hence, promoting community self-reliance alongside institutional support is essential for long-term sustainability.
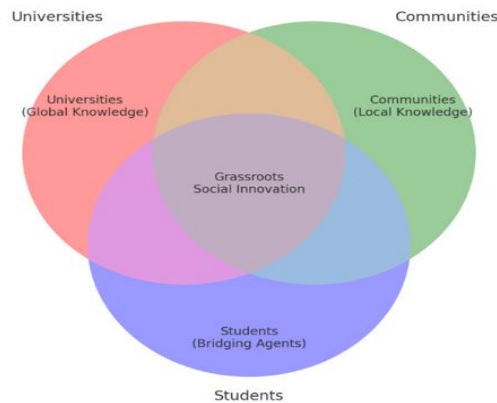

Fig. 11 SUIJI Collaborative Innovation Model

Figure 11 illustrates the SUIJI Collaborative Innovation Model, integrating global knowledge, intercultural collaboration, and local empowerment. This hybrid model serves not only as an evaluative lens but also as a scalable framework. Adaptability proved to be a key enabler of replication. As (Domanski et al., 2020) note, social innovations thrive when they are flexible, iterative, and context-sensitive principles inherent in the SUIJI design.

Implications for Program Design and Policy

Based on the findings of the SUIJI program evaluation, several critical implications arise for the design and policy of future international educational collaborations. First, integrating the Capability Approach into program evaluation offers a richer understanding of personal development that extends beyond traditional output metrics, such as academic achievement or project completion (Bucheli, 2024). This approach focuses on assessing the growth of participants' capabilities, such as agency, critical self-reflection, and adaptive leadership, which are crucial for long-term societal impact. Additionally, fostering intercultural competence should not be limited to language proficiency or technical skills; instead, it must also encompass reflexivity, empathy, and the ability to navigate cultural ambiguities. This will ensure participants are equipped with the necessary tools to collaborate effectively in diverse settings, thereby promoting mutual respect and understanding.

Another critical implication is the importance of embedding community ownership throughout all phases of a project. This involvement is key to ensuring the sustainability and resilience of initiatives, as communities with a vested interest in project outcomes are more likely to continue practices long after the program concludes. Finally, the strength of institutional partnerships between universities, governments, and civil society actors cannot be overstated. These collaborations help amplify the program's impact, provide necessary resources, and ensure continuity and scalability of successful initiatives. In sum, these strategies offer a robust

framework for designing international collaborations that not only address immediate educational goals but also foster lasting social innovation

Limitations of the Study

Several limitations of the study must be considered when interpreting its findings. Firstly, the relatively small sample size of 15–25 participants restricts the ability to generalize the results to a larger population. A larger sample would provide more robust data, allowing for a more comprehensive understanding of the impacts of the SUIJI program across diverse participants. Additionally, the focus of the study on Japanese perspectives in Indonesian settings leaves a gap in understanding the reciprocal experiences of Indonesian participants in Japanese contexts. This imbalance in perspectives means that the full scope of the cross-cultural exchange remains underexplored. Without considering the Indonesian experience in Japan, the study overlooks potential differences in how participants from each country perceive and engage with the program. These factors limit the ability to draw broad conclusions about the effectiveness of the program across both cultural settings and may lead to incomplete assessments of the program's overall impact.

Furthermore, the study's cross-sectional design presents another limitation, as it does not allow for the assessment of long-term transformation in participants' capabilities. By capturing data only at one point in time, the study cannot fully evaluate whether the skills, knowledge, and values acquired through the SUIJI program lead to sustained civic action and leadership in the long run. Longitudinal research would be necessary to track participants' development over time and determine whether the program's impact extends beyond the duration of the collaboration. Additionally, comparative studies across different SUIJI sites could shed light on how the program's impact varies in different geographical or cultural contexts. Future research should also explore the influence of policy ecosystems on the scalability of cross-national innovation, as understanding how policy environments affect the success and transferability of innovations could provide valuable insights into strengthening the program's global reach and sustainability.

4. Conclusion

This study has examined the SUIJI Program as a distinctive model of cross-national collaboration that fosters capability expansion and sustainable social innovation through community-based, intercultural educational initiatives. Grounded in the Capability Approach and informed by insights from Social Innovation (SI) and Grassroots Innovation (GI), the analysis provides a critical understanding of the program's transformative potential within the context of Japan-Indonesia partnerships.

The findings indicate that the program significantly enhanced participants' intercultural competence, reflective agency, and leadership capacities, enabling collaborative engagement with local socio-environmental challenges. These expanded capabilities supported the co-creation of context-specific innovations, such as organic farming, waste management, and sustainable livelihoods, that contributed to community empowerment and social cohesion. Importantly, the success of these grassroots innovations was underpinned by equitable collaboration, capacity-building, and institutional support. However, the study also highlights structural challenges, including power asymmetries, language barriers, and resource dependency, which can constrain participation and sustainability. Addressing these challenges requires intentional design strategies that foster reflexivity, mutual respect, and shared governance in international educational collaborations.

The SUIJI Model, conceptualized in this research, offers a scalable and adaptable framework that integrates global knowledge, intercultural engagement, and local empowerment as core drivers of

participatory innovation. This model provides valuable guidance for designing future international programs that seek to balance global learning goals with community-based impact. A key contribution of this study lies in its application of the Capability Approach as a transformative evaluative lens, shifting focus from output-based metrics toward human development, agency, and social inclusion. By bridging theoretical perspectives from SI and GI, the research advances a more nuanced understanding of how higher education can serve as a catalyst for inclusive innovation at the grassroots level.

Future research should explore the long-term impacts of such programs on participant trajectories, community transformation, and institutional change. Investigating the role of policy frameworks, governance structures, and cross-sectoral partnerships in enabling the scalability and resilience of grassroots innovation will also be essential. In closing, this study underscores the critical role of higher education institutions in advancing the Sustainable Development Goals through transformative, intercultural, and participatory learning. The SUIJI Program illustrates that when global collaboration is grounded in local realities and driven by inclusive values, it can generate meaningful, durable innovations that respond to both local needs and global challenges.

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