

# **Empowering Rural Communities Through International Academic Collaboration: A Case Study Of Trigona Honey Development And Digital Marketing In Salut Village, North Lombok, Indonesia**

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## **Abstract.**

*This study presents an international community service initiative implemented in Salut Village, North Lombok, Indonesia, through collaboration between the University of Mataram and Shangrao Normal University, China. The program aimed to empower local Trigona honey producers by enhancing their technical knowledge and equipping them with digital marketing skills. Employing a qualitative case study approach, the initiative combined experiential learning, cross-cultural engagement, and capacity-building strategies to promote sustainable rural development. Results indicate increased local knowledge, digital literacy, and entrepreneurial motivation. Despite challenges such as language barriers and limited infrastructure, the program demonstrated the transformative role of higher education institutions in fostering inclusive development through global academic partnerships. The study offers practical recommendations for sustaining impact and serves as a replicable model for university-led rural innovation initiatives aligned with the Sustainable Development Goals.*

**Keywords:** *Community Service; Digital Marketing; Rural Development; Cross-Cultural Collaboration and Sustainable Development Goals.*

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## **I. INTRODUCTION**

Universities are increasingly recognized as critical actors in not only generating knowledge but also in shaping more equitable and sustainable societies. The role of higher education today extends beyond the traditional "ivory tower" to embrace what is now referred to as the "third mission"—community engagement. This involves the application of academic expertise to address real-world problems, particularly within marginalized or underdeveloped communities (Bringle & Hatcher, 2002; Hart & Northmore, 2011). Through community service, universities act as catalysts for social transformation. They foster inclusive development by bridging the gap between theoretical knowledge and practical needs, equipping students with experiential learning opportunities while addressing socio-economic disparities at the grassroots level (Saltmarsh & Hartley, 2011). This symbiotic relationship benefits both the academic institutions and the communities they serve, creating a dynamic platform for mutual growth and learning (Kezar, 2005). In the era of globalization and digital transformation, international community service emerges as a vital strategy for cross-cultural collaboration and global citizenship development (Braskamp, 2008). Initiatives that incorporate international partners not only bring new perspectives and resources to local challenges but also promote intercultural understanding and solidarity. These programs align with the Sustainable Development Goals (SDGs), particularly in fostering partnerships (Goal 17), reducing inequalities (Goal 10), and promoting inclusive economic growth (Goal 8) (United Nations, 2015).

The integration of digital tools in such community-based initiatives is becoming increasingly crucial. In rural economies, where infrastructure and market access are often limited, digital marketing can serve as a transformative tool to expand market reach, increase income, and preserve local heritage products (Salemink et al., 2017; Heeks, 2009). When community empowerment is coupled with technological capacity-building, the outcome is not only economic improvement but also a strengthening of local agency and resilience (Gomez & Pather, 2012). This paper presents an international community engagement initiative conducted in

Salut Village, North Lombok, Indonesia. The program was a collaborative effort between the University of Mataram and Shangrao Normal University, China, aiming to empower local honey producers by enhancing their understanding of Trigona bee cultivation and by equipping them with essential digital marketing skills. The focus on Trigona honey—a niche and sustainable product—adds environmental and economic value to the region, while the digital training aligns with broader goals of rural innovation and inclusion. Through this case study, the paper highlights the transformative potential of international academic-community partnerships in addressing localized development challenges. It also reflects on the significance of experiential learning, interdisciplinary collaboration, and global engagement in fostering sustainable, inclusive community development.

## II. THEORETICAL FRAMEWORK

The international community service initiative conducted in Salut Village is conceptually grounded in four key theoretical perspectives that intersect development practice, higher education engagement, and digital transformation. These include; Community-Based Development, University Social Responsibility (USR), Experiential Learning Theory, and Digital Inclusion for Rural Development.

### **Community-Based Development**

Community-Based Development (CBD) emphasizes participatory approaches that involve local stakeholders in identifying problems, formulating solutions, and implementing strategies that are contextually appropriate (Mansuri & Rao, 2013). CBD is rooted in the belief that development is most effective and sustainable when it is driven by the community itself, with external actors serving as facilitators rather than decision-makers. In the case of Salut Village, the engagement of local beekeepers and farmer groups ensures that knowledge transfer is culturally relevant and aligned with existing practices. This participatory approach aligns with the critiques of top-down development models, which often overlook local knowledge and capacity (Chambers, 1997). By integrating local agency, the initiative supports self-reliance and reinforces the socio-economic structures that underpin long-term rural resilience.

### **University Social Responsibility (USR)**

University Social Responsibility refers to the ethical and strategic obligation of higher education institutions to contribute to society through teaching, research, and community service (Vallaey, 2014). It expands the traditional university missions—education and research—by adding a third dimension: social engagement. USR includes environmental sustainability, social equity, and economic inclusiveness. The program between the University of Mataram and Shangrao Normal University represents a model of transnational USR, whereby academic institutions collaborate across borders to deliver localized impact. Such engagements also build institutional capacity and international visibility while fulfilling moral and civic obligations of the academic sector (Bringle & Hatcher, 2002; GUNI, 2015).

### **Experiential Learning Theory**

Kolb's Experiential Learning Theory (1984) posits that learning is a cyclical process grounded in concrete experience, reflective observation, abstract conceptualization, and active experimentation. This model is particularly relevant in community-based programs, where students and faculty gain hands-on insights that reinforce and deepen academic knowledge. The service activities in Salut Village provided fertile ground for experiential learning: international students interacted directly with local farmers, observed bee farming techniques, reflected on digital marketing challenges in rural Indonesia, and participated in designing practical interventions. These learning outcomes not only benefit students academically but also cultivate cross-cultural empathy, leadership, and problem-solving skills (Kolb & Kolb, 2009).

### **Digital Inclusion for Rural Development**

Digital inclusion—the equitable access to and use of digital technologies—is increasingly viewed as a prerequisite for rural development (Salemink et al., 2017). In rural Indonesia, barriers to digital literacy and connectivity hinder the full participation of communities in emerging digital economies. By incorporating digital marketing training into the community service program, this initiative contributes to narrowing the digital divide and enabling small producers to access broader markets.

### **Alignment with the Sustainable Development Goals (SDGs)**

This initiative also supports the United Nations Sustainable Development Goals (SDGs), particularly:

- Goal 1 – *No Poverty*, by enhancing income generation through value-added honey products.
- Goal 4 – *Quality Education*, through community learning and student engagement.
- Goal 8 – *Decent Work and Economic Growth*, by promoting sustainable entrepreneurship in rural settings.

Higher education's role in achieving the SDGs is widely recognized, especially when such efforts are embedded in community partnerships and international collaboration (UNESCO, 2017; Sachs, 2015).

### **III. METHODS**

This study utilized a qualitative descriptive case study approach to examine the design, implementation, and outcomes of an international community service program held on May 8, 2024, in Salut Village, North Lombok, Indonesia. A case study is particularly appropriate for capturing the real-life context and processes of a localized intervention involving multiple stakeholders (Yin, 2018). The methodology was structured in three phases: preparation, execution, and evaluation.

#### **Preparation Phase**

In the preparation phase, project organizers from the University of Mataram and Shangrao Normal University collaboratively designed the intervention by identifying community needs and aligning them with institutional capabilities. Key activities included:

- **Location Selection:** The team selected a well-managed Trigona honey bee farm in Salut Village known for its sustainable practices and openness to collaboration.
- **Stakeholder Coordination:** Organizers established communication with local honey producers and community leaders to ensure mutual understanding of the program's objectives. Academic participants from management and agricultural faculties were mobilized to co-design content on both beekeeping and marketing.
- **Curriculum Design:** Based on a needs assessment, the team developed a field-based learning module combining practical knowledge about Trigona bee cultivation with digital marketing techniques relevant to rural contexts.

This stage reflects principles of community-based development (Mansuri & Rao, 2013) and ensures that interventions are co-created rather than externally imposed.

#### **Implementation Phase**

The community service was implemented through a series of interactive, field-based activities, combining education, demonstration, and participatory practices. These included:

- **Educational Presentations:** The team delivered interactive sessions on the life cycle of Trigona bees, colony management, honey harvesting, and quality assurance. The materials were adapted to the local context and delivered in a bilingual format to ensure accessibility.
- **Farm Tours and Hands-on Practice:** Participants visited live bee colonies to observe firsthand the techniques used in Trigona honey farming. Under the guidance of experienced farmers, participants practiced honey extraction and hive maintenance.
- **Digital Marketing Workshop:** A key innovation in this phase was the introduction of a digital marketing module, focusing on the use of mobile-friendly platforms such as WhatsApp Business, Instagram, and Facebook for promoting honey products. The training was tailored to match local digital literacy levels.

This integrated approach follows Kolb's experiential learning theory (Kolb, 1984), enabling participants to move from conceptual understanding to real-world application.



### Evaluation Phase

Post-implementation, the project team conducted a systematic evaluation to assess participant learning, program effectiveness, and areas for improvement. The evaluation process included:

- **Focus Group Discussions (FGDs):** Small-group discussions were held with farmers and students to gather deeper feedback on the perceived relevance, challenges, and future potential of the program. Themes were documented and categorized using thematic analysis (Braun & Clarke, 2006).
- **Field Observations:** Observational notes recorded during the program were reviewed to assess engagement levels, cross-cultural interaction, and logistical effectiveness.

The triangulation of these data sources increased the credibility and depth of the evaluation (Creswell & Poth, 2018). Ethical considerations were respected throughout the process, including verbal informed consent, cultural sensitivity, and data confidentiality.

## IV. RESULTS AND DISCUSSION

The international community service program in Salut Village led to observable and measurable improvements in community capabilities and mindsets, particularly in areas related to sustainable agriculture, digital marketing, and entrepreneurial motivation. This section synthesizes those findings within the scope of current development and innovation theories. The training and hands-on fieldwork significantly increased local participants' understanding of Trigona bee cultivation. Participants demonstrated improved knowledge in hive management, harvesting schedules, and production hygiene. These outcomes align with more recent perspectives on co-produced innovation in rural development, where knowledge flows not unidirectionally from academia to community, but through mutual learning and joint problem-solving (Lemos et al., 2018). This participatory format reflects the need for "*place-based innovation strategies*" that integrate scientific and local expertise for sustainable development in non-urban areas (Neumeier, 2017). A major contribution of the program was the digital marketing module, which addressed significant gaps in the community's use of digital tools for product promotion. Prior to the intervention, the use of mobile apps like WhatsApp Business or Instagram was minimal. Post-training responses indicated growing confidence in setting up digital storefronts and sharing product content online. This development resonates with rural digital inclusion frameworks that emphasize not just infrastructure access, but also digital literacy, perceived usefulness, and socio-cultural relevance of tools (Roberts et al., 2017; Philip et al., 2017).

By grounding the workshop in community realities, the program enhanced not just skills but digital agency. Beyond technical learning, participants expressed heightened motivation to professionalize their honey production—improving packaging, branding, and exploring broader markets. This is consistent with recent findings that community empowerment is linked to "*transformative capacity*", where individuals reframe their role from passive beneficiaries to proactive entrepreneurs (Bennett et al., 2016). Such motivation is often sparked when communities are given both *tools* and *recognition*—elements reinforced through interactions with international faculty and students who treated local knowledge with respect and curiosity. A key driver of the program's success was its international dimension. The involvement of Shangrao Normal University provided not only technical input but also symbolic value, affirming the worth of local practices in a global context. Cross-institutional collaboration created a richer learning ecosystem for all parties. These partnerships are increasingly recognized as impactful models of "global-local academic



engagement”, which foster sustainable capacity-building, mutual trust, and long-term impact (Bamber & Pike, 2019; Jones & Killick, 2021). Such programs represent the evolution of university social responsibility into transnational and reciprocal frameworks.

### **Challenges and Limitations**

Despite the successful outcomes of the international community service program in Salut Village, several challenges and limitations emerged during planning and implementation. These constraints are common in transnational development efforts and offer important lessons for future replication and scaling.

#### **Language and Cultural Barriers**

The presence of international faculty and students introduced rich intercultural dynamics; however, language differences occasionally limited the depth of discussion and participant engagement, especially during technical sessions. To mitigate this, bilingual facilitation and culturally responsive pedagogy are essential. Future programs should include preparatory sessions on cross-cultural communication and consider co-developing materials with local educators to bridge gaps in understanding.

#### **Limited Internet Access and Digital Infrastructure**

A key barrier to the effectiveness of digital marketing workshops was inconsistent internet connectivity in the rural setting. This not only restricted the use of online platforms during training but also affected participants’ post-workshop implementation of digital strategies.

This limitation highlights ongoing digital divides that persist in rural Southeast Asia, where infrastructural and socio-economic factors restrict equitable access to digital tools (Roberts et al., 2017; Philip et al., 2017). While digital literacy is often emphasized, physical connectivity remains a fundamental prerequisite for rural digital inclusion. Future interventions should consider hybrid models that blend online and offline strategies and provide post-training support via low-bandwidth tools.

#### **Need for Ongoing Mentorship and Institutional Continuity**

Another key limitation was the short duration of the intervention. While participants gained useful skills, several expressed the need for continuous mentoring to refine their practice, troubleshoot challenges, and maintain motivation. Without sustained institutional engagement, there is a risk that skills gained will not be fully translated into long-term behavior change. To address this, universities could consider establishing community-based hubs or remote mentorship platforms where participants can access ongoing support from faculty and alumni.

## **V. RECOMMENDATIONS**

Based on the outcomes and challenges identified during the implementation of the community service program in Salut Village, several strategic recommendations are proposed to ensure the long-term effectiveness, scalability, and sustainability of similar initiatives. These recommendations are aligned with global best practices in rural innovation, digital inclusion, and community-based education.

### **Develop Sustained Training Programs on Advanced Digital Marketing and Packaging**

While introductory digital marketing skills were introduced, a structured follow-up training program is essential to deepen local producers’ competencies in areas such as content creation, search engine optimization (SEO), branding, product photography, customer engagement, and packaging innovation. High-quality packaging is critical not only for product preservation but also for market perception, especially when targeting urban or international buyers.

Training should be modular, contextually relevant, and integrated with ongoing mentorship. Collaboration with design schools, local universities, or professional marketers could provide practical, real-world insight while building local capacity.

### **Encourage Partnerships with E-Commerce Platforms to Broaden Product Reach**

To enable broader market access, partnerships with national and regional e-commerce platforms—such as Tokopedia, Bukalapak, Shopee, or niche ethical marketplaces—should be pursued. These platforms provide ready-to-use logistics systems, payment gateways, and marketing exposure that can dramatically increase visibility and sales volume. Facilitating local producers’ inclusion in these ecosystems will require not only technical training but also legal assistance for business registration, understanding of taxation, and

compliance with product certification standard. Academic institutions can serve as intermediaries or advocates in initiating these partnerships.

### **Establish Follow-Up Mechanisms to Monitor Post-Training Progress**

Monitoring and evaluation (M&E) are often overlooked in short-term outreach programs. Establishing simple but consistent feedback mechanisms—such as quarterly check-ins, digital surveys, or community reflection sessions—can help track the real impact of training over time. This also allows facilitators to identify barriers, provide tailored support, and iterate on training models. Use of mobile-based platforms like WhatsApp groups or community dashboards can help maintain communication without overburdening rural participants. Embedding M&E into program design is also crucial for long-term impact assessment and institutional learning.

## **VI. CONCLUSION**

The international community service initiative conducted in Salut Village demonstrates the strategic potential of higher education institutions as agents of rural transformation. Through the integration of academic knowledge, practical community engagement, and transnational collaboration, the program contributed to skill development, economic empowerment, and digital inclusion in a marginalized area. More importantly, it positioned the university not merely as a knowledge provider, but as a co-creator of change embedded within local realities. The dual emphasis on Trigona honey production and digital marketing reflects an innovative model that blends traditional livelihoods with modern tools—addressing both economic and technological gaps. Such a hybrid approach is especially relevant in post-pandemic development contexts where resilience, adaptability, and local entrepreneurship are critical for recovery.

Additionally, the involvement of international academic partners enriched the learning experience for both students and local participants. Students engaged in experiential, culturally immersive learning, gaining real-world insights into community dynamics, while local actors received global perspectives and validation of their indigenous practices. This mutually beneficial exchange exemplifies the evolving role of universities in achieving UN Sustainable Development Goals (SDGs), particularly those focused on poverty reduction, education, and inclusive economic growth. However, the initiative also underscored several areas for improvement, including the need for long-term mentorship, infrastructure support, and culturally adaptive program design. Addressing these challenges is essential for sustaining impact and ensuring that community service efforts are not episodic, but transformational. Moving forward, institutionalizing such programs within academic curricula, leveraging digital technologies for sustained engagement, and building formal partnerships with local industries and policy actors will be crucial. This case serves as a replicable framework for universities worldwide seeking to fulfill their social responsibility while enhancing the relevance and reach of global education.

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