Grassroots Learning and Innovation in Award-Winning Agrotourism Community Enterprises in Thailand

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Received: April 27, 2025 Accepted: May 23, 2025 Online Published: June 2, 2025

doi:10.5430/wje.v15n2p41 URL: https://doi.org/10.5430/wje.v15n2p41

Abstract

Innovative success in community-based agritourism often hinges not only on creative ideas but also on how community members learn, share knowledge, and build entrepreneurial capacity. This qualitative study investigates 11 award-winning Agrotourism Community Enterprises (ACEs) across Thailand, focusing on the educational processes that underpin their innovative practices. Data were collected through in-depth interviews, site observations, and document analysis, emphasizing nonformal and informal entrepreneurship education—such as community-based knowledge sharing, experiential learning-by-doing, and local mentorship. The findings reveal that these ACEs engage in a rich tapestry of grassroots learning activities: farmers and community entrepreneurs learn experientially through running homestays and farm tours, informally mentor one another in developing new products, and participate in nonformal training workshops facilitated by government extension programs and NGOs. These learning processes have enabled continuous innovation, from cultural heritage tourism and organic farming techniques to sustainable resource management and human resource development initiatives. Drawing on experiential learning theory (Kolb), community-based learning principles, and transformative learning theory, the discussion illustrates how iterative cycles of experience and reflection lead to new entrepreneurial ideas, how shared learning in the community fosters collective innovation capacity, and how these processes transform individuals and empower communities. The ACEs' innovations are thus not only economic or environmental but deeply educational—strengthening entrepreneurial capacity, sustaining innovation, and fostering community empowerment from within. The study contributes to understanding how nonformal and informal education in rural communities can drive sustainable entrepreneurship. It concludes with recommendations for integrating experiential and community-based learning in rural enterprise development policies.

Keywords: agrotourism, community enterprises, informal learning, nonformal education, experiential learning, entrepreneurship education, innovation, community-based tourism, Thailand, empowerment

1. Introduction

Agrotourism community enterprises (ACEs) have emerged as a promising model for sustainable rural development in Thailand, combining agricultural livelihoods with tourism-based income while preserving cultural and ecological heritage. These enterprises, often managed by grassroots groups, offer homestays, local food experiences, and heritage-based activities that attract visitors and generate community benefits. While several ACEs have been recognized nationally for their innovative practices, there remains limited understanding of the learning processes that underpin such success. Previous studies have emphasized the role of community participation, leadership, and government support in rural tourism development (Zollet & Monsen, 2022), but have rarely examined how community members acquire the skills, knowledge, and entrepreneurial mindset necessary to innovate and adapt in dynamic environments.

In rural contexts, especially in the Global South, formal entrepreneurship education is often inaccessible to small-scale farmers and community leaders. However, learning occurs through alternative routes—namely informal and nonformal learning. Informal learning refers to unstructured, experience-based learning that arises in the course of everyday life, while nonformal learning involves structured, intentional educational activities outside formal

institutions, such as workshops, training programs, and community exchanges (Kodom-Wiredu et al., 2022; Hasan et al., 2025). These two learning modes are particularly important in grassroots settings, where context-specific knowledge and hands-on experience often carry more weight than theoretical instruction.

To understand how learning drives innovation in ACEs, this study draws on three interrelated theoretical perspectives. First, experiential learning theory (Kolb, 1984) emphasizes the cyclical process of learning through concrete experience, reflective observation, abstract conceptualization, and active experimentation. This theory is particularly relevant to community enterprises, where members often learn by "trying things out" in real settings—developing tourism products, improving customer service, or introducing sustainable farming techniques. Second, the theory of communities of practice (Lave & Wenger, 1991) highlights the importance of social learning through shared participation in community activities. Within ACEs, peer mentorship, collaborative reflection, and intergenerational knowledge exchange help reinforce entrepreneurial skills and sustain innovation over time. Finally, transformative learning theory (Mezirow, 2000) sheds light on how individuals shift their self-perception—such as from subsistence farmer to community entrepreneur—through critical reflection and engagement in new roles. These shifts are not only personal but also collective, contributing to broader empowerment and resilience at the community level (Vujko et al., 2024). Recent empirical research in Southeast Asia has further affirmed these learning-based dynamics. In Thailand, Damnet et al. (2023) found that ACEs demonstrated remarkable adaptability in the post-COVID-19 context by engaging in informal peer learning and digital experimentation. Likewise, Hasan et al. (2025) emphasized that informal experiential learning—through mentorship, observation, and reflection—was a key driver of innovation and competitiveness among agriculture-based entrepreneurs. Such findings are echoed in broader tourism literature, which suggests that community-based tourism thrives in environments where knowledge is shared socially, learning is continuous, and innovation emerges from the ground up (Zollet & Monsen, 2022; Kodom-Wiredu et al., 2022).

This study builds on these insights by investigating the learning processes that support innovation and empowerment in 11 award-winning ACEs across Thailand. Specifically, the research aims to address three guiding questions: (1) What innovative practices characterize Thailand's award-winning ACEs? (2) What informal and nonformal learning processes support these innovations? (3) How do grassroots learning processes contribute to entrepreneurial capacity, sustained innovation, and community empowerment?

Through in-depth interviews, field observations, and document analysis, this study examines how Thai communities learn, adapt, and innovate collectively. The findings aim to deepen our understanding of the educational dimensions of rural entrepreneurship, offering insights that are relevant not only to researchers and practitioners in entrepreneurship education and rural development, but also to policymakers designing inclusive and context-responsive support systems for grassroots enterprises. Ultimately, this research advances the argument that innovation in rural enterprises is not merely a technical or economic process, but fundamentally an educational one. By foregrounding the role of informal, nonformal, and experiential learning, this study contributes to a more holistic understanding of how communities build entrepreneurial capacity, sustain innovation, and achieve empowerment from within. To conceptualize the relationship between grassroots learning processes and transformative outcomes in award-winning ACEs, a framework was developed based on experiential learning theory (Kolb, 1984), communities of practice (Lave & Wenger, 1991), and transformative learning theory (Mezirow, 2000). Figure 1 illustrates how learning activities at the community level contribute to innovation, empowerment, and sustainability.

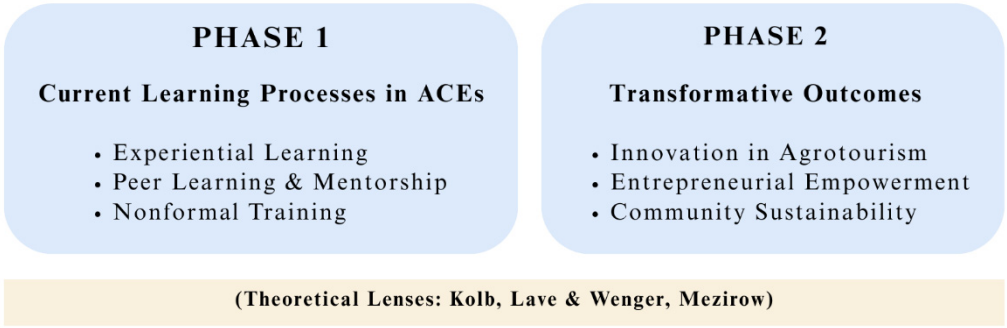

Figure 1. Conceptual Framework of the Study

2. Methods

2.1 Research Design

This study employed a qualitative multiple-case study design to explore innovative practices and learning processes within 11 award-winning Agrotourism Community Enterprises in Thailand. A case study approach was suitable because the research questions required an in-depth understanding of complex social processes (innovation and learning) in real-life community settings. By examining multiple cases, we aimed to identify both unique innovations in each community and common themes or patterns across the cases. The qualitative design allowed us to capture rich descriptions of experiences, behaviors, and perceptions from the community members themselves, providing insight into how they learn and innovate in context.

2.2 Case Selection

The 11 ACEs were selected through purposive sampling based on their recognition for excellence in agrotourism. In 2022, Thailand's Department of Agricultural Extension (DOAE) and Tourism Authority of Thailand organized awards for outstanding agrotourism community enterprises. From the national award listings, we identified community enterprises that had won provincial or national awards for agrotourism excellence. The sample was further refined to ensure a diverse representation of Thailand's regions and types of innovations. Table 1 below lists the 11 selected ACE cases, their location, and a brief description of their context. The cases span all major regions of Thailand (North, Northeast, Central, East, and South), reflecting a broad geographic scope (Uttaradit, Kalasin, Nakhon Ratchasima, Trat, Nakhon Nayok, Phetchaburi, Lopburi, Ayutthaya, Ang Thong, Songkhla, and Krabi provinces). Each case has a unique focus – for example, cultural heritage tourism, organic farming, or environmental conservation – providing a rich variety of innovative practices to study.

Table 1. Profile of the 11 Award-Winning Agrotourism Community Enterprises (ACEs) in Thailand.

ACEs (Province)	Year Est.	Notable Features & Focus
Hat Song Khwae Agrotourism (Uttaradit)	2009	Heritage-based tourism (Lao folk culture), living farm museum, traditional homestays. Winner of cultural tourism awards.
Phetchinda Organic Agriculture (Kalasin)	2015	Integrated organic farm (Young Smart Farmer-led); 13 educational stations (water conservation, organic inputs, etc.); Provincial Agrotourism Award 2022.
Pak Chong Agrotourism (Nakhon Ratchasima)	2017	Agri-tourism farm in dairy region; developed *Wolffia* "superfood" products and solar-powered irrigation; emphasizes bio-circular economy.
Ban Thammachart Lang Community Tourism (Trat)	2010	Coastal fishing village enterprise; known for community-originated music and performance arts (traditional *Likay* shows); produced eco-bricks from waste for community use.
Ban Wang Ri Betel Nut Dish (Nakhon Nayok)	2019	Agro-culinary tourism centered on local betel nut cuisine and orchard tours; collaborates with vocational colleges for hospitality training.
Ban Dong Huai Luang Palmyra (Phetchaburi)	2013	Palm sugar and Palmyra palm products-focused enterprise; improved traditional sugar processing and diversified Palmyra-derived goods; offers cultural tours on local craft.
Baimon Farm (Lopburi)	2017	Smart farm and learning center; innovated vacuum-frying for fruit chips and introduced edible insect (cricket) products; hosts youth farm camps.
Tha To Maha Rat Community Tourism (Ayutthaya)	2016	Community tourism in a historical area; enhanced local performing arts shows for tourists; implemented solar water pumps for farming; focuses on job creation for local youth.
Ban Suan Thanawat Agrotourism (Ang Thong)	2018	Agro-education tourism site; continuous staff training and learning trips; integrated scientific knowledge with local food processing wisdom; showcases smart irrigation and crop rotation experiments.
Ban Nhod–Ban Pian Agrotourism (Songkhla)	2014	Twin-village enterprise in southern Thailand; developed innovative coffee and natural dye products; community homestay with cultural exchange; engaged local women's group in skincare product making.
Ban Nai Nang Agrotourism (Krabi)	2011	Mangrove ecotourism and beekeeping enterprise; pioneered a mangrove forest conservation + honey production model; offers kayaking tours and "Kok Nong Na" educational tourism (integrated farming learning).

Sources: Community profiles from DOAE award documentation and field interviews.

Each selected ACE had demonstrated innovative practices in agrotourism that earned formal recognition (e.g., "Outstanding Agricultural Tourism Award") and often serve as regional models. This recognition indicated that these communities likely underwent significant learning and adaptation to achieve success, making them ideal subjects for examining educational processes in entrepreneurship.

2.3 Data Collection

Field research was conducted between May and October 2024. Data collection methods included:

2.3.1 In-Depth Interviews

Semi-structured interviews were carried out with key informants from each community enterprise. Typically, the chairperson or a founding member of the ACE was interviewed, along with additional members such as tour guides, product developers, or elder mentors in the group (totaling 2–3 interviews per community, for 25 interviews overall). The interviews probed topics such as the history of the enterprise, major innovations introduced, challenges faced and solutions found, and importantly, *how members learned the skills or knowledge* to implement those innovations. For instance, we asked questions like "Can you describe how your group learned to start this new tourism activity or develop this product?" and "Were there any trainings, workshops, or people who taught you along the way?" Interviews were conducted in Thai, with translation to English for analysis where needed. Each interview lasted approximately 60–90 minutes and was audio-recorded with permission.

2.3.2 Observations

The researcher conducted site visits to all 11 communities (in some cases virtually, if travel was restricted) to observe the enterprises in action. Observations focused on any educational interactions – e.g., a community guide explaining farming techniques to tourists, villagers training each other on using new equipment, or meetings where knowledge was shared. Field notes were taken detailing these instances. In one village, for example, the researcher observed a weekly meeting where members discussed how to improve their homestay services and a senior member coached a newer host on managing guest feedback.

2.3.3 Document and Archival Analysis

We collected available documents such as community brochures, training materials, social media pages, and award nomination forms, which often contained valuable information on community activities and milestones. Educational-related documents were especially important (e.g., workshop schedules or posters showing collaboration with educational institutions). We also reviewed secondary sources, including a doctoral thesis on Thai agrotourism enterprises (providing background statistics and policy context) and news articles highlighting key achievements (e.g., Ban Nai Nang's beekeeping for mangrove conservation). To ensure accuracy and depth, interviews were transcribed and, along with field notes and documents, managed using qualitative data analysis software (NVivo). All participants gave informed consent, and pseudonyms are used for individuals to protect privacy, while community names are real due to their public recognition.

2.4 Data Analysis

We utilized thematic analysis to identify patterns in both innovation practices and educational processes across the cases. The analysis proceeded in two stages:

2.4.1 Coding and Categorizing Innovations

First, we coded all data for descriptions of *innovative initiatives or practices* mentioned by participants or observed in communities. Through iterative coding, these were grouped into thematic categories. Four broad categories of innovation emerged from the data: (a) *Cultural & Heritage Innovations*, (b) *Agricultural & Product Innovations*, (c) *Sustainable & Environmental Innovations*, and (d) *Community Engagement & Human Resource Innovations*. Each community's specific initiatives were mapped onto these categories. Table 2 presents a categorized summary of the innovative practices identified in the 11 ACEs (combining interview and document evidence). This step established *what* the innovations were.

2.4.2 Coding Learning and Knowledge Processes

Next, we focused on *how* those innovations came about and were sustained. We coded instances where participants talked about learning, training, knowledge exchange, skill development, problem-solving processes, or changes in mindset. We applied codes such as "informal learning (by doing)", "nonformal training (structured)", "knowledge sharing meeting", "mentorship", "external support (extension)", "experimentation", etc. From these, we derived key themes regarding educational processes: experiential learning-by-doing, peer-to-peer learning and mentorship,

community training and workshops, integration of local knowledge with external knowledge, and transformative personal development. We then examined how these learning themes intersected with the innovations categories for each case. For example, if an innovation was the introduction of organic farming, we checked what learning processes were mentioned (perhaps a training by an NGO, plus trial-and-error in the field, plus knowledge passed from an elder farmer). Through analysis, we used techniques to enhance trustworthiness. We triangulated data sources: if a participant claimed, "we learned this technique from a workshop", we looked for evidence of that workshop in documents or confirmation from another member. We also conducted member checks by sharing summary findings with a contact person in a few communities to verify accuracy. Peer debriefing was done with academic colleagues familiar with rural entrepreneurship to reduce researcher bias in interpreting the community members' accounts. The qualitative analysis is supplemented by descriptive quantitative data (e.g., counts of communities engaging in specific learning activities) to highlight patterns. Although depth was prioritized over breadth, these counts provide an overview of prevalence. By integrating thematic insights with learning theories (applied in the Discussion), we aimed to construct a coherent narrative linking innovation and learning. Results are presented in two parts: (1) Innovative Practices in ACEs—summarizing community achievements by theme, and (2) Learning Processes Facilitating Innovation—detailing the educational dimensions behind those achievements. Selected participant quotes, with Thai translations where necessary, illustrate each theme. All findings are contextualized with relevant literature to enhance understanding and credibility.

3. Results

3.1 Innovative Practices in Thailand's Award-Winning ACEs

The 11 studied ACEs exhibited a remarkable range of innovative initiatives that have contributed to their success in agrotourism. Despite differences in local context, we found that their innovations could be grouped into four thematic categories: (1) Cultural & Heritage Innovations, (2) Agricultural & Product Innovations, (3) Sustainable & Environmental Innovations, and (4) Community Engagement & Human Resource Innovations. These categories emerged from the data and aligned with the multiple objectives that community enterprises often pursue (cultural preservation, economic diversification, environmental stewardship, and social development). Table 2 provides an overview of these categories with specific examples from the cases.

Table 2. Categorization of ACEs' Innovative Initiatives

Category	Innovative Initiatives (Examples from Cases)
Cultural & Heritage Innovations	• *Hat Song Khwae:* Developed a "living museum" of traditional farm tools and practices; created cultural heritage tourism experiences leveraging the village's Lao migrant heritage (traditional music, dance, and storytelling). • *Ban Thammachart Lang:* Community-originated musical performances (revival of Likay folk theater) for tourists; promotion of local coastal culture and cuisine. • *Ban Wang Ri:* Organized community heritage tours highlighting unique local recipes (e.g., betel nut dishes) and historical migration stories. • *Ban Dong Huai Luang:* Designed cultural tourism routes that showcase indigenous knowledge of Palmyra palm sugar making and local crafts, involving elders as guides. • *Tha To Maha Rat:* Enhanced local performing arts shows for visitors (traditional dance/drama) thereby preserving and sharing cultural heritage while generating income.
Agricultural & Product Innovations	• *Phetchinda*: Introduced raised-bed organic farming and Wolffia superfood products; used drip irrigation via smartphone. • *Pak Chong*: Branded Wolffia-based items and installed solar-powered irrigation, blending tradition with clean energy. • *Ban Wang Ri*: Created snacks from underused crops—herbal fish, banana chips, betel nut dishes. • *Ban Dong Huai Luang*: Enhanced Palmyra sugar via improved boiling for better taste and shelf-life. • *Baimon Farm*: Pioneered vacuum-frying and flavored cricket snacks. • *Ban Suan Thanawat*: Applied scientific processing (e.g., rice crackers) and rotated crops with pumpkins. • *Ban Nhod–Ban Pian*: Blended coffee with herbs and dyes; produced skincare from botanicals. • *Ban Nai Nang*: Developed wild honey products and mangrove-based snacks, linking beekeeping with conservation.

Table 2. Categorization of ACEs' Innovative Initiatives (Continued)

Category	Innovative Initiatives (Examples from Cases)
Sustainable & Environmental Innovations	• *Pak Chong:* Embraced bio-circular economy principles – e.g., turning farm waste into biogas or fertilizer (reducing costs and pollution); implemented solar panels for energy on the farm. • *Ban Thammachart Lang:* Produced ECO-BRICKS by upcycling plastic waste into building materials used for community construction projects, simultaneously raising environmental awareness among residents. • *Ban Nai Nang:* Initiated a mangrove conservation program including a blue crab bank (breeding and releasing crabs to sustain fisheries) and guided kayaking tours through mangrove forests to educate visitors on ecology; the community's sustainable beekeeping is tied to forest preservation. *(Other communities also practiced environmental stewardship, but the above were distinctive flagship initiatives.)*
Community Engagement & Human Resource Innovations	• *Ban Wang Ri:* Formed collaborations with nearby educational institutions (vocational colleges and agricultural extension centers) to host student interns and vocational training on hospitality and farm management for community members. • *Tha To Maha Rat:* Improved community employment processes by setting up a local job center to involve youth in the enterprise; provided skills training for multi-skilling staff so that any member could handle various tasks (interchangeable roles). Also installed solar water pumps through communal effort, doubling as a demonstration of renewable tech for villagers. • *Ban Suan Thanawat:* Implemented continuous HR development, sending members on educational trips to other successful farms and tourism sites, and conducting regular in-house workshops to ensure knowledge sharing; explicitly aims to keep "knowledge parity" among members so all can take on responsibilities. • *Ban Nai Nang:* Designed customized community tourism programs where activities (like beekeeping workshops or rice farming experience) double as educational for visitors and locals; adopted the government's "Kok Nong Na" model farm as a live demonstration site for learning (integrating water retention *kok*, field *nong*, and rice paddy *na* for resilience). The community enterprise thus positions itself as a local learning hub for sustainable farming practices.

As shown in Table 2, innovation across all cases emerged not as a one-time event but as a continuous process. Many ACEs started with a single focus (e.g., homestay tourism) and over time diversified their offerings by learning and experimenting. For instance, Ban Nai Nang initially organized ecotours in the mangroves, then through reflection and community meetings, realized the potential of beekeeping as both an income source and environmental strategy – an idea sparked when an NGO introduced bee colonies for pollination. They learned the beekeeping techniques, adapted them to local conditions (informally learning from trial and error and occasional expert advice), and eventually integrated beekeeping into the tourism experience as an educational attraction. Such evolution of services was common: all 11 ACEs had added new elements to their enterprise in the past 3–5 years, showing a dynamic capability to innovate.

It is worth noting that many innovations were context-specific (rooted in local culture or ecology) yet potentially transferable to other communities through learning networks. For example, the Wolffia product innovation in Phetchinda and Pak Chong could inspire other farming communities to valorize indigenous plants, while Ban Thammachart Lang's eco-brick practice has already been shared via workshops to other villages interested in waste management. This inter-community transfer is itself an educational process, which we will discuss later. First, we turn to describing the learning processes that enabled these innovations within the communities.

Figure 2 provides a visual summary of these innovation categories, illustrating the breadth of initiatives undertaken by the ACEs. Each community enterprise typically engaged in multiple categories – for example, a single ACE often combined cultural tourism with new product development and some form of sustainability project. This multifaceted innovation approach is a hallmark of community enterprises, which seek to add value on several fronts (economic, social, environmental).

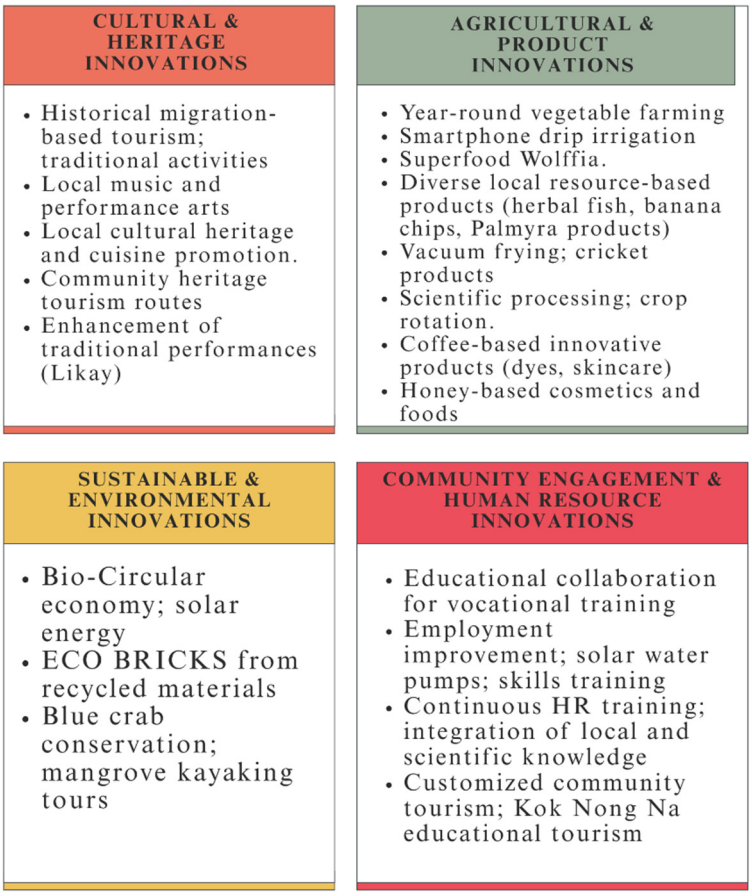

Figure 2. The ACEs' Innovative Initiatives Are Grouped in Four Categories. Each category encapsulates how Thai community enterprises innovate in tourism: through culture, agriculture, sustainability, and community development (Diagram created by the researcher).

3.2 Learning Processes Facilitating Innovation in ACEs

A core finding of this study is that innovative practices in ACEs did not emerge in a vacuum; they were fostered by deliberate and incidental learning processes. ACE members constantly acquired and exchanged knowledge through hands-on experience, peer learning, and organized training. Several key modes of learning were identified:

Learning by Doing (Experiential Learning): Community members gained skills largely through direct experience and experimentation. Nearly every interviewee emphasized "we learned from trying it ourselves," often following cycles of action, observation, reflection, and adjustment, mirroring Kolb's experiential learning model. For instance, Baimon Farm perfected vacuum-frying banana chips through numerous trials adjusting temperature and slice thickness. Similarly, homestay hosts improved hospitality skills by repeatedly hosting guests and refining practices based on observations. This on-the-job learning was fundamental across all ACEs, highlighting experiential learning as the primary mode of capability development.

Peer Learning and Mentorship: Knowledge sharing within communities was extensive. Senior members often mentored younger ones informally, as seen in Hat Song Khwae, where experienced cultural performers coached newcomers. In Ban Dong Huai Luang, women skilled in palm sugar processing informally trained their neighbors. Peer learning extended horizontally through exchange visits to other ACEs, such as Ban Suan Thanawat gaining insights on crop rotation from a model farm in Chiang Mai. These practices reflect communities of practice (Lave & Wenger, 1991), where novices learn from seasoned practitioners, strengthening community networks and accelerating skill dissemination.

Workshops, Training Programs, and External Knowledge: All 11 ACEs benefited from nonformal education, including workshops on food safety, customer service, and digital marketing, often provided by government agencies,

NGOs, or universities. Survey results showed 89.2% of ACE members identified increased training as a key strategy for enterprise improvement. External knowledge was adapted locally; for instance, farmers modified composting techniques learned in workshops with advice from local elders. Some communities institutionalized continuous learning—Ban Suan Thanawat, for example, established an "Education Division" to organize regular training—demonstrating that structured learning input, blended with local adaptation, was crucial for sustained innovation.

Community Meetings and Deliberation: Regular community meetings, held monthly or quarterly, served as platforms for collective reflection and knowledge sharing. Beyond administrative tasks, members discussed experiences, identified lessons learned, and brainstormed improvements, embodying the reflective observation phase of experiential learning. Inter-generational dialogues were notable: youth introduced modern ideas (e.g., social media promotion), while elders ensured cultural appropriateness, resulting in creative yet context-sensitive innovations.

Integration of Local Knowledge and External Knowledge: Innovations often emerged from blending indigenous and external knowledge. Ban Nai Nang's beekeeping practices, for instance, integrated traditional ecological knowledge of the mangrove forest with modern beekeeping techniques. Similarly, Phetchinda combined local pest management practices with scientific biofertilizer methods. This synthesis ensured that innovations remained contextually appropriate and sustainable.

Transformative Learning and Empowerment Outcomes: Many participants experienced transformative learning, shifting their self-perception and expanding their capabilities. Narratives revealed personal growth, such as individuals gaining confidence to manage businesses or becoming local cultural experts. Collective empowerment was also evident, as communities transitioned from dependency to proactive innovation. This shift reflects perspective transformation (Mezirow, 2000), where critical reflection and active participation fostered a new entrepreneurial mindset crucial for sustained development.

The interplay of these learning modes can be visualized as a learning ecosystem within the community enterprises. Figure 3 provides a conceptual model of how experiential learning, peer sharing, and external training inputs all converge to drive innovation and outcomes in ACEs. As shown, the community's innovation practices (new products, services, processes) are fueled by multiple learning sources: direct experience, informal peer learning, and nonformal education, which together enhance entrepreneurial capacity and lead to sustainable community enterprise outcomes.

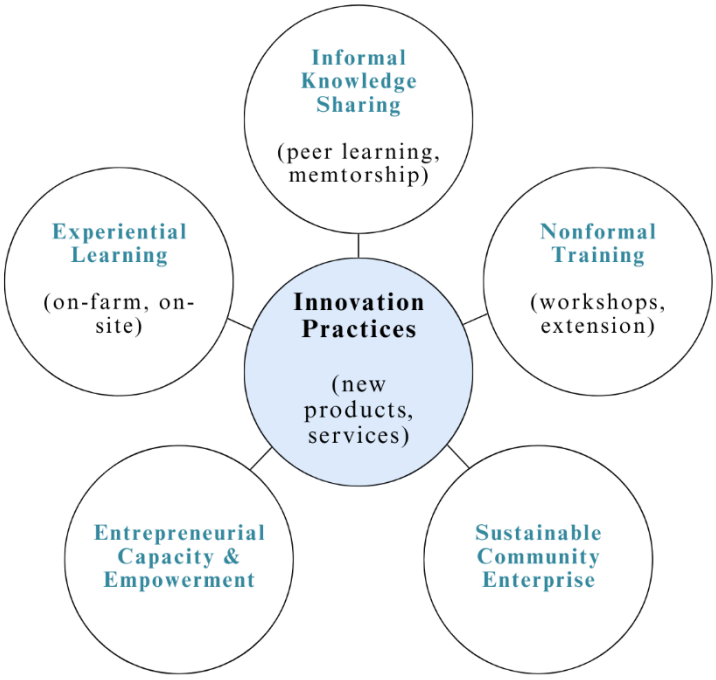

Figure 3. Conceptual Model of Grassroots Learning Driving Innovation in ACEs

As shown in Figure 3, experiential "learning-by-doing", informal knowledge sharing (peer learning, mentorship), and nonformal training inputs all feed into the community's innovative practices. These, in turn, bolster entrepreneurial capacity & empowerment and contribute to a sustainable community enterprise.

Table 3. Examples of Learning-Focused Activities in ACEs

ACEs	Learning Activities Observed
Hat Song Khwae	Elders taught youths traditional songs/dances for cultural tours (informal mentorship); hosted a workshop by the tourism authority on homestay standards (nonformal); iterative development of "living museum" content via trial runs with villagers as test audience (experiential).
Phetchinda	Regular farm school visits and educational stations where members take turns teaching visitors (reinforcing their own knowledge); exchange visits to model organic farms in other provinces; invited agricultural experts for on-site training in composting and branding (nonformal), followed by community practice sessions.
Pak Chong	Hands-on experimentation with new crops (Wolffia in ponds) guided by a university agronomist (blending external and experiential learning); weekly peer support meetings among farm members to share observations; and participation in a provincial agritourism certificate program.
Ban Thammachart Lang	Community workshops on waste upcycling to create eco-bricks (led by an NGO, then local youth continued innovating designs); informal apprenticeships in performing arts – older performers coached children, ensuring continuity of cultural knowledge; reflection meetings after each tourist season to incorporate feedback.
Ban Wang Ri	Collaboration with vocational college: members attend short courses (e.g., cooking hygiene, tour guiding) and students intern at the community (mutual learning); mentorship chain where founding members deliberately mentor two new members each year; learned new recipe variations by networking with other communities at fairs.
Ban Dong Huai Luang	Training by a local businesswoman on product packaging and marketing (nonformal); community tasting events to gather feedback on new palm sugar products (learning from community input); revived a nearly lost craft (palm leaf weaving) by inviting a neighboring village expert to train interested villagers.
Baimon Farm	Internal workshops run by the more tech-savvy members on using social media for marketing; constant on-farm trials (from cricket rearing techniques to experimenting with fruit drying methods); partnership with a university's agricultural extension program that provided a series of trainings on sustainable farming, which the team then applied and finetuned at their site.
Tha To Maha Rat	Leadership training sessions for youth in the community (some members attended a regional youth entrepreneur camp); skill rotation practice – each member had to learn another's role every few months (on-the-job cross-training to ensure interchangeable skills); community theater rehearsals served as peer learning for improving the cultural show.
Ban Suan Thanawat	Maintains monthly in-house training, where members who attend external workshops return to retrain others (cascade learning); organizes frequent educational field trips, visiting at least five other communities over three years; and pairs older farmers with younger apprentices to transfer knowledge of local herbal recipes.
Ban Nhod – Ban Pian	Hosted a NGO-led entrepreneurship course for women (covering budgeting, marketing of their coffee/skincare products); communal learning garden where they experiment with plant-based dyes (all members contribute observations); informal network established via LINE app where members share daily tips or market info (facilitating constant communication and learning).
Ban Nai Nang	Intensive nonformal beekeeping training by the Mangrove Action Project followed by local adaptation, with community members now hosting workshops for other villages (role reversal indicating mastery); youth involvement in kayak tours paired with senior guides to learn environmental knowledge; and participatory evaluation meetings on the conservation program reinforcing collective learning and buy-in.

From these examples, it is evident that the educational dimension is interwoven with daily operations of the ACEs. In practice, there may not be a sharp line separating "working" and "learning" – running the enterprise is itself a learning journey. This seamless integration is a strength, as it creates a feedback loop: as the community innovates, they learn, and as they learn, they are able to innovate further. To enhance the analytical depth and move beyond

quotations, Table 4 below synthesizes the types of learning processes observed across the 11 ACEs and links them directly to the corresponding innovative outcomes. This cross-case matrix demonstrates patterns of convergence and divergence, thereby reinforcing the findings' trustworthiness through structured comparative analysis.

Table 4. Learning Processes and Corresponding Innovations across Selected ACEs

ACE Community	Experiential Learning (EL)	Peer Mentorship / CoPs	Nonformal Training	Example of Innovation Outcome
Ban Nai Nang	Kayak guiding; beekeeping through trial-and-error	Youth-elder pairing	NGO training on beekeeping	Mangrove conservation + honey enterprise
Phetchinda	Organic farming stations; composting	Community field trips	Agricultural experts invited	Superfood (Wolffia) product development
Baimon Farm	Product experimentation (banana chips, crickets)	Peer demos on tech use	University-led farm tech workshops	Smart snack innovation; edible insect farming
Ban Suan Thanawat	Herbal farming trials	Cascade learning model	Monthly in-house workshops	Improved traditional food products
Ban Dong Huai Luang	Product iteration (palm sugar)	Elder-led demonstrations	Packaging & branding training	Enhanced palm sugar & marketing

Note: EL = Experiential Learning; CoPs = Communities of Practice

By presenting structured cross-case data alongside illustrative quotations, this section strengthens the credibility of the findings through data triangulation and pattern recognition. The alignment between learning modes and innovation types also reinforces the conceptual framework proposed earlier.

4. Discussion

This study's findings highlight that innovation in community enterprises is not just a technical or economic process, but fundamentally an educational process. The award-winning ACEs in Thailand demonstrate how nonformal and informal learning opportunities can cultivate a community's entrepreneurial capacities. In this section, we interpret the results in light of relevant educational and entrepreneurship theories, and discuss implications for sustaining innovation and empowering communities.

4.1 The Community as a Learning Organization

The ACEs function as learning organizations at the community level, continuously facilitating learning and transformation (Senge, 1990). They show openness to new ideas, collective reflection, and adaptation, exemplified by Ban Suan Thanawat's incorporation of external training, Ban Nai Nang's shift from receiving to providing training, and regular meetings to reflect on tourist feedback. These practices align with Argyris and Schön's (1978) double-loop learning, where organizations not only solve immediate problems but also adjust underlying values and processes, as seen in Ban Wang Ri's shift to multi-skilling members. Viewed through Wenger's (1998) concept of communities of practice, ACE members share a domain (agrotourism entrepreneurship), engage in joint activities, and build communal knowledge through participation. Newer members gradually move from peripheral to full roles, such as teenagers at Hat Song Khwae evolving from support tasks to lead hosts, highlighting situated learning through social interaction (Lave & Wenger, 1991). High levels of social capital, characterized by trust and mutual support, further facilitate knowledge sharing, confirming that rural entrepreneurship thrives on collective learning rather than individual competition. The ACEs' innovative capacity thus emerges from relational networks and shared experiences, suggesting that fostering community cohesion and peer learning structures is crucial for sustaining and replicating success.

4.2 Experiential Learning in Rural Entrepreneurship

The heavy reliance on learning-by-doing among ACEs highlights the relevance of experiential learning theory (ELT) in informal entrepreneurship contexts. Kolb's (1984) model—concrete experience, reflective observation, abstract conceptualization, and active experimentation—was evident at the community level, where launching a new tour, reflecting on outcomes, extracting lessons (e.g., tourists prefer hands-on activities), and adjusting future practices

became a continuous cycle of improvement. This aligns with entrepreneurial learning research emphasizing experience as a primary teacher (Cope, 2005; Politis, 2005), with ACEs engaging in exploration (e.g., introducing cricket farming) and exploitation (e.g., enhancing cultural museums). A notable extension observed was group reflection: collective discussions enriched the reflective phase, deepening learning through diverse perspectives (Schön, 1983; Mezirow, 2000). Failure was openly framed as a learning opportunity, fostering resilience and a growth mindset; for instance, COVID-19 challenges drove ACEs to acquire digital marketing skills through necessity-driven learning. Additionally, transformative learning emerged, as community members, through critical reflection and confronting disorienting experiences, shifted perspectives, developed entrepreneurial confidence, and redefined their roles—for example, farmers becoming cultural ambassadors. ACEs that embraced frank dialogue and critically evaluated assumptions demonstrated greater cohesion and adaptability, illustrating the deep integration of experiential and transformative learning processes in rural entrepreneurship.

4.3 Nonformal Education as a Catalyst for Innovation

The involvement of formal and semi-formal training programs in ACEs underscores the role of nonformal education as a catalyst for grassroots innovation. Community workshops and certifications provided critical knowledge inputs and legitimacy, with training often sparking new ideas (e.g., product techniques, marketing strategies) and boosting community credibility. This reflects the extended role of informal entrepreneurship education, where entrepreneurs learn from diverse informal educators and mentors (Williams & Gurtoo, 2017). Survey data showed ACE members highly value expert training (mean ~3.45/5), highlighting a demand for structured learning to complement informal experience. The most effective innovations occurred when training was quickly applied, as seen in Phetchinda's practices, while some innovations (e.g., eco-bricks in Ban Thammachart Lang) would not have emerged without external inputs. This synergy between external and internal knowledge was vital: external training introduced techniques, while local adaptation refined them. Vygotsky's zone of proximal development (ZPD) offers a useful lens; trainers provided scaffolding that expanded community capabilities, with examples like Ban Nai Nang evolving from NGO-guided learners to self-sufficient mentors. This illustrates that collaborative, capacity-building programs effectively expand communities' potential. From an education policy perspective, ACEs exemplify community-based learning, aligning with Hill and Kuhn's (2012) emphasis on learning through real projects and Freire's (1970) concept of problem-posing education, where communities critically address local challenges (e.g., adding value to farm products) and move from being passive recipients to active agents of change, fostering empowerment and critical awareness.

4.4 Contributions to Entrepreneurial Capacity, Innovation Sustainability, and Empowerment

The findings strongly indicate that grassroots learning processes in ACEs have enhanced entrepreneurial capacity at both individual and community levels, encompassing skills (technical and managerial), knowledge (market, product, organizational), and personal traits (initiative, risk-taking, creativity). Individuals built transferable human capitals such as bookkeeping, marketing, and farming skills—while communities developed organizational and project management capabilities essential for entrepreneurship. The presence of ongoing learning mechanisms, including continuous training and idea exchanges, suggests ACEs have cultivated dynamic innovation capabilities, allowing them to pivot and adapt, crucial for sustainability. This learning competence was evident during external shocks like COVID-19, where communities agilely adopted digital marketing and shifted to domestic markets. Furthermore, innovations co-created and tested by community members ensured local relevance and ownership, enhancing sustainability—as seen in Ban Nai Nang's integration of conservation with enterprises. On empowerment, the study shows that learning and successful innovation increased control over resources, confidence, and external recognition, shifting internal dynamics to more inclusive participation and elevating communities' bargaining power with authorities and markets. These outcomes align with transformative learning theory (Taylor, 1998), where critical reflection fosters autonomous, empowered learners, and extend to a collective entrepreneurial self-efficacy (McGee et al., 2009), visible in community networks advocating for shared interests and taking entrepreneurial initiatives beyond tourism.

4.5 Integration with Formal Education and Policy Implications

These findings offer valuable implications for educational structures and policies, particularly in the context of the World Journal of Education. One insight is that nonformal education programs should leverage existing informal learning, recognizing communities' experiential knowledge rather than treating rural learners as blank slates. Incorporating experiential projects during training and providing follow-up support can better bridge formal instruction with community practice, as seen when extension officers acted as facilitators rather than lecturers. Vocational and higher education curricula related to rural development could further integrate community-based

projects, creating two-way learning environments where students gain experiential knowledge while communities' benefit from new ideas, as exemplified by collaborations with Ban Wang Ri and Ban Suan Thanawat. From a policy perspective, ministries of education, agriculture, and tourism could jointly support Community Learning Centers focused on entrepreneurship and innovation, formalizing successful peer-teaching models already emerging among ACEs. Inviting experienced ACE members to serve as resource persons could inspire other communities, aligning with Hamburg's (2014) findings on mentoring's role in fostering entrepreneurial skills. Additionally, recognizing and certifying nonformal and informal learning, such as through UNESCO's Recognition, Validation, and Accreditation (RVA) framework, would validate community-acquired competencies, enhance confidence, and open further opportunities, enabling experienced individuals like homestay hosts to formalize their skills for broader roles as trainers or consultants.

4.6 Link to Sustainable Development and Lifelong Learning

The experiences of Thai ACEs align closely with the principles of lifelong learning and education for sustainable development (ESD). Lifelong learning is evident as farmers in their 60s acquire new tourism skills while youth engage with traditional knowledge, demonstrating continuous, intergenerational learning essential for adapting to social and economic change. The ACEs also embody ESD principles by integrating learning related to environmental conservation, cultural preservation, and inclusive growth. They exemplify how communities can act as both learners and educators in advancing sustainable development, driven by local knowledge and initiative. These efforts directly contribute to achieving the Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 11 (Sustainable Cities and Communities).

5. Limitations and Further Research

While this study provides valuable insights, it has limitations. Its qualitative focus on award-winning communities presents exemplars rather than typical ACEs; less successful enterprises may struggle with learning due to internal conflict or limited resources, suggesting the observed model may be idealized. Future research should compare high- and low-performing communities to explore whether differences in learning culture or educational engagement explain divergent outcomes. Moreover, the data is largely self-reported and cross-sectional; longitudinal studies tracking enterprises over time—including leadership transitions and generational change—would yield deeper insights into learning and innovation dynamics. Quantitative studies could further strengthen findings by examining correlations between training activities and outcomes such as financial performance or enterprise longevity. Additionally, applying social network analysis could formally map peer learning networks, which this study described narratively. From an educational theory perspective, these cases offer a foundation for developing a formal framework of community entrepreneurial learning that integrates experiential learning, communities of practice, and transformative learning, with further cross-cultural research needed to refine the proposed model.

6. Conclusion

This study examined 11 award-winning Agrotourism Community Enterprises in Thailand to understand how their innovative practices are intertwined with educational processes, particularly nonformal and informal learning. The findings revealed that these successful community enterprises are vibrant learning environments where experiential learning, peer-to-peer knowledge sharing, and external training converge to build entrepreneurial capacity. The communities' ability to continuously innovate – in cultural tourism offerings, product development, sustainable practices, and organizational improvements – is rooted in their collective learning culture. Moreover, these grassroots learning processes have empowered individuals (increasing skills, confidence, and changing mindsets) and strengthened community self-reliance, thereby contributing to the sustainability of both the innovations and the community enterprises themselves. Key conclusions highlight that innovative outcome in ACEs emerged through iterative learning processes, with new agrotourism products, services, and sustainable techniques developed via cycles of action, reflection, and a "fail forward" mentality that fostered resilience. Nonformal education, including workshops and expert guidance, effectively complemented informal learning, providing critical knowledge that, when adapted by communities, catalyzed significant innovation. Mentorship and peer learning also proved to be powerful, low-cost tools for disseminating skills, with local experts playing a crucial role in scaling knowledge across generations. Importantly, the educational processes themselves contributed to empowerment, enhancing human and social capital by building skills, confidence, and collective community action, representing both a means to and an end of sustainable development.

7. Recommendations

Building on these insights, several recommendations are proposed for practitioners, policymakers, and educators aiming to foster innovation and entrepreneurship in rural communities. First, development programs should integrate experiential learning opportunities by incorporating pilot projects, simulations, and hands-on workshops into program designs, enabling participants to learn through action and reflection. Establishing peer learning networks among communities is equally critical; successful ACEs can mentor emerging ones through exchange visits, mentorship systems, or tourism networks. Supporting the creation of community learning centers or innovation hubs can further sustain learning, providing practical training spaces and demonstration projects. Additionally, documenting and sharing local knowledge through community-led research or storytelling can help preserve valuable traditional practices and serve as sources of future innovation.

Second, programs should incorporate transformative learning elements into adult education, focusing not only on technical skills but also on mindset, leadership development, and critical reflection activities that promote empowerment and sustained initiative. Recognizing and accrediting skills acquired through nonformal education, such as issuing micro-credentials or community-based certifications, would further motivate learners and enhance their access to economic opportunities. Partnerships with educational institutions could formalize prior learning, allowing experienced community members to pursue advanced education. Moreover, a system of sustained follow-up and reflective monitoring, involving periodic community visits post-training, is recommended to reinforce continuous learning and adaptation rather than relying on one-off interventions.

Finally, encouraging youth involvement through education-enterprise linkages is vital to ensuring the long-term sustainability of innovations. Schools and vocational institutions should collaborate with ACEs to offer service-learning projects, internships, and entrepreneurial clubs focused on community enterprise development. Such partnerships can provide youth with practical experience and incentives, while simultaneously revitalizing rural areas with new energy and reducing youth outmigration. By embedding innovation and entrepreneurship in both the current and next generations, communities are more likely to sustain and expand their achievements over time.

By implementing these recommendations, stakeholders can create an enabling ecosystem that treats communities not as passive beneficiaries, but as active learners and innovators. The success of Thailand's award-winning ACEs can serve as a blueprint: invest in people's capacity to learn and collaborate, and innovation will follow.

Final Reflection: The intersection of innovation and education observed in this study carries a hopeful message. In an era where rural communities worldwide face rapid changes and uncertainties, the Thai ACEs demonstrate that with the right support and a strong culture of learning, communities can navigate change creatively and assert control over their destinies. They embody the proverb, "Give a man a fish, he eats for a day; teach a man to fish, he eats for a lifetime." We would extend it further – these communities are now teaching others to fish, and finding new ways to fish, ensuring prosperity for generations to come. For policymakers and educators, the task is to nurture many more such community "classrooms" where innovation and learning go hand in hand.

References

Cope, J. (2005). Toward a dynamic learning perspective of entrepreneurship. *Entrepreneurship Theory and Practice, 29*(4), 373-397. https://doi.org/10.1111/j.1540-6520.2005.00090.x

Cope, J. (2011). Entrepreneurial learning from failure: An interpretative phenomenological analysis. *Journal of Business Venturing, 26*(6), 604-623. https://doi.org/10.1016/j.jbusvent.2010.06.002.

Damnet, A., Sangnak, D., & Poo-Udom, A. (2023). Thailand's innovative agritourism in the post COVID-19 new normal: A new paradigm to achieve Sustainable Development Goals. *Research in Globalization, 5*, 100171. https://doi.org/10.1016/j.resglo.2023.100171

Freire, P. (1970). *Pedagogy of the Oppressed*. New York: Herder and Herder.

Hamburg, I. (2014). Improving young entrepreneurship education and knowledge management in SMEs by mentors. *World Journal of Education, 4*(5), 51-60.

Hasan, M., Supatminingsih, T., Tahir, T., et al. (2025). Sustainable agricultural knowledge-based entrepreneurship literacy in agricultural SMEs. *Journal of Open Innovation, 11*(1), 100466. https://doi.org/10.1016/j.joitmc.2025.100466

Hill, S., & Kuhn, L. (2012). *Learning in social action: A contribution to understanding informal learning in social*

movements. (Report). Calgary: University of Calgary Press.

Kodom-Wiredu, J. K., Coetzer, A., et al. (2022). Informal learning in hospitality and tourism: A systematic review. *Journal of Hospitality and Tourism Management, 52*, 13-28. https://doi.org/10.1016/j.jhtm.2022.05.011

Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice-Hall.

Lave, J., & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge, UK: Cambridge University Press.

McGee, J. E., Peterson, M., Mueller, S., & Sequeira, J. (2009). Entrepreneurial self-efficacy: Refining the measure. *Entrepreneurship Theory and Practice, 33*(4), 965-988. https://doi.org/10.1111/j.1540-6520.2009.00304.x

Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education, 74*, 5-12.

Mezirow, J. (2000). *Learning as Transformation: Critical Perspectives on a Theory in Progress*. San Francisco: Jossey-Bass.

Politis, D. (2005). The process of entrepreneurial learning: A conceptual framework. *Entrepreneurship Theory and Practice, 29*(4), 399-424. https://doi.org/10.1111/j.1540-6520.2005.00091.x

Senge, P. M. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday.

Taylor, E. W. (1998). *The theory and practice of transformative learning: A critical review*. (Information Series No. 374). Columbus, OH: ERIC Clearinghouse on Adult, Career, and Vocational Education.

UNESCO UIL. (2012). *Guidelines for the Recognition, Validation and Accreditation of the Outcomes of Non-formal and Informal Learning*. Hamburg: UNESCO Institute for Lifelong Learning.

Vujko, A., Karabašević, D., et al. (2024). Women's empowerment in rural tourism. *Sustainability, 16*(23), 10412. https://doi.org/10.3390/su162310412

Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge, UK: Cambridge University Press.

Williams, C. C., & Gurtoo, A. (2017). The institutional environment for informal entrepreneurship: Evidence from the Czech Republic, India, Pakistan and Tanzania. *International Journal of Entrepreneurial Behavior & Research, 23*(5), 708-725. https://doi.org/10.1108/IJEBR-03-2017-0102.

Zollet, S., & Monsen, E. (2022). Rural entrepreneurship education: A panorama and future prospects (Editorial). *Entrepreneurship Education (Special Issue on Rural Entrepreneurship Education)*, *5*(1), 1-7. https://doi.org/10.1007/s41959-022-00060-0.

Acknowledgments

We greatly appreciate the valuable contributions of our community advisory committee members. We would also like to thank the Agrotourism Community Enterprises and local stakeholders who generously shared their time, experiences, and insights throughout the course of this study.

Authors contributions

Md. Fahad Pervez Bosunia and Dr. Pattarawat Jeerapattanatorn were responsible for the study design, data collection, data analysis, and overall manuscript preparation. Dr. Chintana Kanjanavisutt and Dr. Thanapat Sripan contributed to drafting and revising the manuscript. All authors read and approved the final manuscript.

Funding

Not applicable.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Sciedu Press.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.