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Developing Innovations Leveraging the Cultural Capital of the Hmong Ethnic Group in Phop Phra District Tak Province

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Abstract

This research project, titled “Innovation Development from Hemp Based on the Cultural Capital of the Hmong Ethnic Group in Phop Phra District, Tak Province,” examines the potential of indigenous knowledge and cultural heritage as drivers for innovation and sustainable development. The study aimed to: (1) explore the cultural practices and traditional knowledge of the Hmong people in hemp cultivation, textile weaving, and product development; (2) co-develop hemp-based products utilizing all parts of the plant including roots, stems, and leaves through collaboration between educational institutions and local partners; and (3) enhance the capacity of entrepreneurs and cultural innovators in knowledge communication and product development. Using the Participatory Action Research (PAR) approach, the study involved local artisans, entrepreneurs, youth, returnees, and cultural innovators. It was guided by three principles: Engage (stakeholder participation), Enrich (cultural significance), and Enhance (capacity building). Findings revealed that hemp holds strong cultural and spiritual significance in the Hmong community. Considered a sacred plant, its cultivation and usage span the entire life cycle and are deeply embedded in Hmong traditions. Knowledge is passed down through elders and schools, and traditional fiber processing and weaving reflect distinctive cultural wisdom. The project led to the development of diverse hemp-based products that merged traditional craftsmanship with modern innovation. A dedicated website (www.hemp-tak.com) and the “Popkan” brand were launched, enhancing local business identity. A cultural mapping initiative and related publication documented Hmong hemp heritage, including routes, customs, cuisine, and rituals. A learning center, “Hemp and the Hmong Way,” was also established to support education, marketing, and community engagement. Lastly, a Social Return on Investment (SROI) analysis showed that every 1 baht invested yielded a social value of 3.22 baht, indicating strong social impact and long-term benefits.

Keywords: *Hemp Innovation, Cultural Capital, Hmong Ethnicity.*

Introduction

Thailand’s Twelfth National Economic and Social Development Plan (2017–2021) places high priority on leveraging local potential and cultural landscapes at regional and provincial levels to serve as key production and service bases. This strategy emphasizes the use of knowledge, technology, innovation, and creativity as principal tools to drive development across all sectors at local and community levels. A central tenet of the Plan’s strategy for building a knowledge and learning society is the development of human capital within strong social institutions. It advocates for the enhancement of human capital quality stemming from family, education, religion, and community as a vital social asset for national advancement. To maximize community development, an understanding of cultural capital is essential. Cultural capital refers to the values internalized through socialization that enable individuals to augment their own value. It comprises three forms: embodied capital, objectified capital, and institutionalized

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capital (Office of the National Economic and Social Development Council, 2020). Culture encompasses the ways of life arising from human interactions—among individuals, society, and nature and includes knowledge, practices, beliefs, and material artifacts passed down through generations (Pongwiritthon, K., 2018). Thus, local culture serves as a form of social capital, fostering collective identity, cultural continuity, and communal networks that support further development activities. Underpinned by existing economic, socio-cultural, and natural resource contexts, such culturally distinctive communities can achieve balanced development, well-being, and sustainability (Pongwiritthon, K., Kamchai, K., & Panturee, W., 2022). Hemp (*Cannabis sativa*) is recognized for its economic potential, as every part of the plant can be utilized in crafting, textiles, construction, automotive insulation, paper production, bioplastics, and health and beauty products (Office of the National Culture Commission, 2008). It also has medicinal applications and is now legally permitted for commercial use in Thailand since January 29, 2021, with registration required for cultivation (Royal Gazette, 2021). Among the Hmong, hemp is believed to be a divine gift that brings abundance. Beyond weaving fibers into clothing, hemp plays roles in rituals such as making funeral sandals for the deceased to aid their journey to the afterlife, creating ceremonial cords, and performing the “Ouaneng” ritual (spirit invocation). It is customary for deceased individuals to be buried with hemp items hats, shirts, or skirts believing it ensures their safe passage to ancestors. Women traditionally weave hemp cloth for use during the New Year festival; households begin planting in April, weaving from August to September, and dyeing with indigo failure to complete weaving invites social stigma, and may prevent marriage prospects (Rattayanapit Ratchatawan, & colleagues, 2018). These longstanding cultural textile traditions, anchored in rituals, beliefs, and artisanal weaving techniques unique to each village, constitute local wisdom combining knowledge, skills, values, and cosmological respect (Sumphanpanich, P., & Pongpanarat, K., 2019). Motivated by this heritage, researchers investigated hemp-based product innovation to disseminate Hmong cultural expressions while enhancing farmers’ livelihoods in Phop Phra District, Tak Province. They examined cultural capital related to hemp quality of life among Hmong elders, youth, and returnees. Interviews with local knowledge holders (e.g., Mr. Chalo Thao-Santichuchai, February 2022) revealed that Hmong in Tak descended from Mongolian tribes via China and Laos, settling across multiple districts including Phop Phra where hemp weaving is longstanding. A cooperative “Phop Phra Hemp Growers Cooperative” was established to support commercial hemp cultivation and processing into high-quality handwoven textiles. Since 2020, weaving groups of about five women per village were formed, with 25 trained artisans under the leadership of Mrs. Chong Thao-Santichuchai, chair of the “Pa Kha Mai Hemp Weaving Group” (Pa Kha Mai Community Development, January 2022). Despite these efforts, challenges remain: uniform product designs lacking innovation, limited marketing understanding, absence of diverse sales channels beyond tourism, and insufficient promotion of hemp’s varied uses from medicinal roots to fiber, food, and wellness products (Khunsong, K., 2016; Boonthian, S., 2021). This analytical study examined the value-chain activities involved in hemp products spanning upstream to downstream that leverage the Hmong community’s cultural capital. The findings reveal that every stage of the hemp production value chain from cultivation, processing, to distribution interconnects both direct and indirect practices that generate value. In the upstream segment, strengths lie in abundant local resources, rich cultural capital, community knowledge, and government support. However, limitations include a lack of motivation among younger generations to engage in production. In the midstream, community members focus on value-added processing, creating products that reflect Hmong ethnic identity. Yet they lack cost-reduction know-how, creative product design, and innovative technologies

that establish a distinctive market image. These gaps lead to weaknesses in the downstream segment, where there is a critical need to develop marketing knowledge and adopt information technology. This includes expanding distribution channels and communicating product identity effectively to consumers.

The value-chain activities are classified into, 1) Primary Activities, These directly generate value for hemp entrepreneurs and include cultivation, production/processing, and distribution: Cultivation: 66 farmers in Khiri Rat, Phop Phra District, Tak Province manage 235 rai of hemp. They divide into two groups those growing for raw material or seed, and those growing for processing. Production/Processing: Mostly Hmong women's cooperatives produce hemp-fiber textiles 100% natural hemp fiber into embroidered ceremonial clothing, festive garments, and saleable products. Other products include hemp fiber tea and balm. Distribution: Entrepreneurs lack marketing technology and expertise, primarily selling within the Hmong community via occasional community fair booths supported by provincial development and commerce offices. Annual revenue remains below 30,000 THB. COVID-19 has brought some returning youth who assist in cultivation and weaving. 2) Support Activities, These enhance primary functions and include infrastructure, technology development, and HR management, Firm Infrastructure: Lack of formal accounting systems, customer data management, and business/marketing competence among group leaders hampers operational effectiveness. Technology Development: There is minimal adoption of IT systems for manufacturing control, database management, accounting, inventory, and logistics. Fear of transitioning from traditional methods and lack of planning have become barriers. Human Resource Management: Traditional knowledge is strong, but there is a need for formal training programs for youth and returning locals to upskill them in cultivation, processing, and marketing, thereby improving livelihoods and product quality. These persistent challenges across the value chain limit the ability to transform hemp production into marketable, value-added products. Addressing these issues requires in-depth marketing skills development integrated into the value-chain processes.

Objectives

1. To study the cultural practices and indigenous knowledge of the Hmong ethnic community regarding hemp cultivation, hemp fiber weaving, and hemp product manufacturing in Phop Phra District, Tak Province.
2. To develop hemp-based products derived from the roots, stalks, and leaves through collaboration between academic institutions and local network partners.
3. To enhance the knowledge and skills of entrepreneurs and community innovators in communication and the development of hemp-based products.

Conceptual Framework of the Research

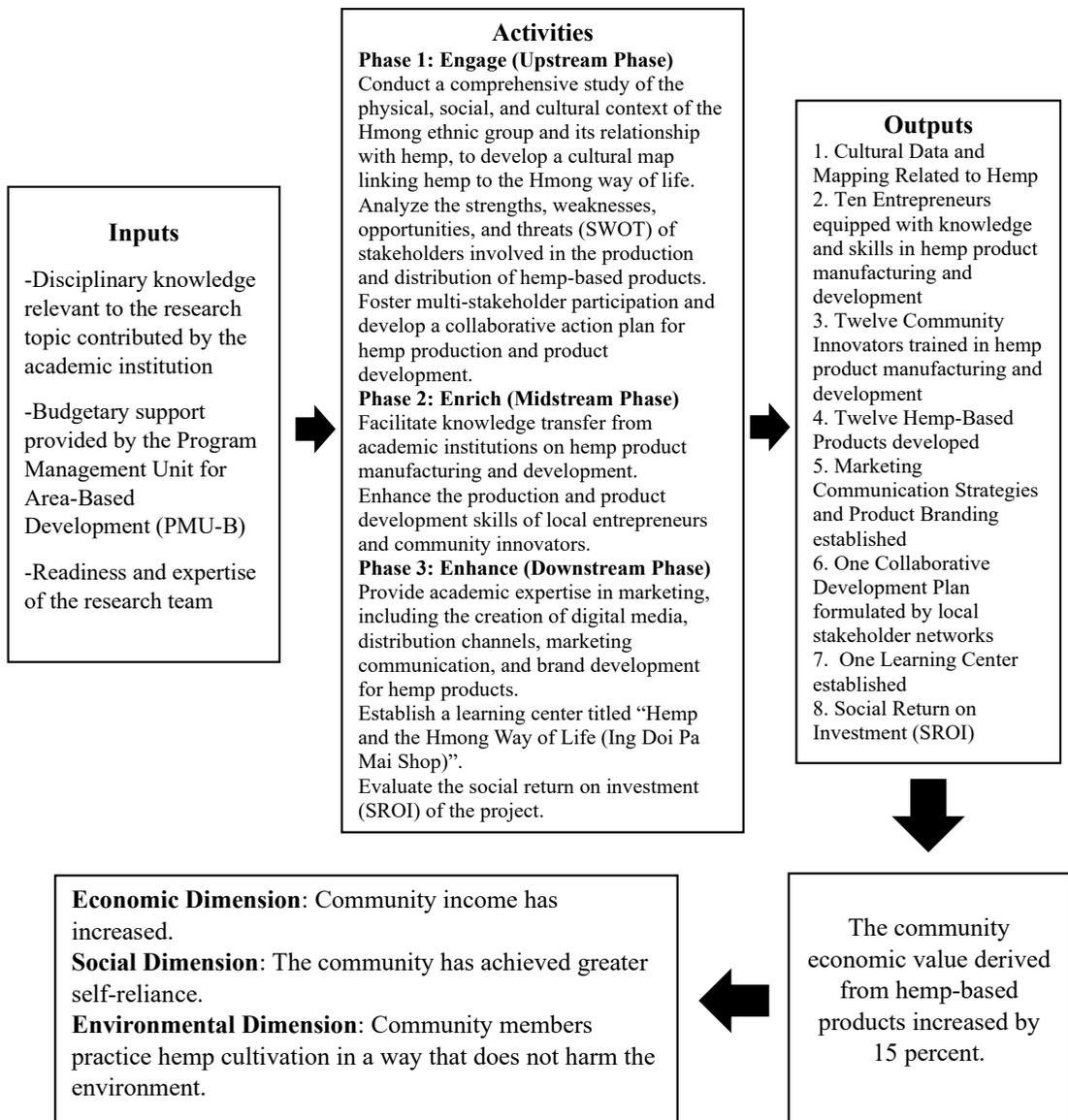


Figure 1: Research Conceptual Framework

Methodology

This Participatory Action Research (PAR) is divided into three phases as follows, Phase 1 (Upstream Phase): Building Collaboration (Engage), This phase consists of three steps, Step 1: Study the physical, social, and cultural contexts of the Hmong ethnic group and hemp cultivation, including the community’s existing knowledge, beliefs, lifestyles, potential, economy, and problems. Additionally, develop a cultural map linking hemp and the Hmong way

of life. Step 2: Analyze the strengths, weaknesses, opportunities, and threats (SWOT) of stakeholders involved in hemp product production and distribution. Step 3: Foster multi-stakeholder participation and develop a collaborative plan for hemp production and product development. Phase 2 (Midstream Phase): Creating Value and Meaning (Enrich), This phase includes two steps: Step 1: Transfer knowledge related to the production and development of products derived from various parts of the hemp plant by academic institutions. Step 2: Develop skills for hemp product manufacturing and enhancement. Phase 3 (Downstream Phase): Support and Reinforcement (Enhance), This phase involves two steps: Step 1: Transfer knowledge on marketing, including online media creation, distribution channels, marketing communication, and brand development. Step 2: Establish a learning center named “Hemp and the Hmong Way of Life (Ing Doi Forest Shop).” Study Area, Pa Kha Mai Village, Khiri Rat Subdistrict, Phop Phra District, Tak Province, Pa Kha Kao Village, Khiri Rat Subdistrict, Phop Phra District, Tak Province, Chiba Bo Village, Khiri Rat Subdistrict, Phop Phra District, Tak Province, Key Informants (N=31), Local sages 3 persons, Hemp entrepreneurs 10 persons, Community innovators (including elders, youth, and returnees), 12 persons, Representatives from Khiri Rat Subdistrict Administrative Organization 2 persons, Tak Provincial Community Development Officers 2 persons, Phop Phra Community Development Officers 2 persons.

Research Instruments, this study employed a variety of research tools, as follows, 1) In-depth Interviews: Conducted with key informants to explore the physical, social, and cultural contexts of the Hmong ethnic group in relation to hemp, including indigenous knowledge, belief systems, lifestyles, economic potential, and local challenges. 2) SWOT Analysis: Implemented through brainstorming sessions to assess strengths, weaknesses, opportunities, and threats relevant to hemp production and distribution among community stakeholders. 3) Participatory Brainstorming Using the A-I-C Process: A structured, creative participatory approach to engage diverse stakeholders in analyzing, envisioning, and planning development pathways collaboratively. 4) Hands-on Training Workshops: Conducted to build skills in hemp cultivation, product development, and value-added processing techniques. 5) Focus Group Discussions (FGDs): Organized in small groups of 6–10 participants, clustered according to participant affiliation and community groups involved in the project.

Data Analysis, Qualitative data were analyzed using Thematic Analysis, applying the following steps, 1) Transcription: The researcher transcribed verbatim the audio-recorded interviews into text. Transcripts were reviewed alongside repeated listening to ensure accuracy. The researcher re-read the transcripts multiple times to gain familiarity, revisit events, and fill in missing details. Each transcript was then coded line by line. 2) Data Categorization by Code: Data from each key informant were grouped based on codes. Similar codes were organized into clusters, and relevant excerpts were extracted and grouped accordingly. 3) Interpretation of Coded Data: The researcher examined the semantic content of each group of responses to identify patterns and interconnections among the key informants. Interpretation was conducted to form broader categories and thematic structures. 4) Development of Categories: Coded data were organized into subcategories, broader categories, and overarching themes. This step facilitated the construction of a hierarchical structure for the analyzed data. 5) Visual Mapping of Data Structure: A diagrammatic representation of categories and themes was developed to illustrate the results of the in-depth interviews. This helped convey the core messages and thematic findings more clearly and effectively. 6) Descriptive Interpretation: Categories and themes were explained in detail, supported by selected quotes from key informants that clearly represented each theme and aligned with its interpretation. 7) Research Report Compilation: The researcher

synthesized findings, highlighting relationships and connections among data to explain the patterns that emerged. And 8) Data Triangulation for Validation: To verify the accuracy of the findings, data triangulation (Janthavanit, S., 2009) was used. This included cross-checking information from multiple sources, Time-based Triangulation: Verifying whether data collected at different times remained consistent, Place-based Triangulation: Assessing the consistency of data collected from different locations, Person-based Triangulation: Determining whether similar information was obtained when different individuals provided the data.

Results

1) Community Context and Indigenous Knowledge of the Hmong Ethnic Group on Hemp Cultivation, Textile Weaving, and Product Development in Phop Phra District, Tak Province. The cultural traditions of the Hmong ethnic group are distinctively characterized by a deep-rooted connection to hemp, spanning from birth to death. Within their belief system, hemp is considered a divine gift. The community possesses a rich body of indigenous knowledge encompassing hemp cultivation and processing, passed down through generations. This includes local sages, community members, and educational institutions that support and transmit practical knowledge on hemp cultivation and processing to students. In particular, the traditional practices of hemp-based textile weaving in Khirirat Subdistrict, Phop Phra District, reflect deep cultural roots that embody beliefs, values, rituals, and unique weaving techniques specific to each Hmong village. This body of knowledge is classified as “local wisdom,” integrating technical skills with belief systems concerning the relationship between humans, nature, and supernatural forces. Through traditional customs, lifestyles, livelihood practices, and ceremonial rituals, this heritage has been preserved over time and symbolizes the community's identity and sustainable harmony with nature warranting recognition, preservation, and continued support. The Hmong are also deeply musical, especially in their use of wind instruments, which convey emotions through melody. Two traditional instruments are particularly noteworthy, (1) Ncas (or Jing Nong) a mouth harp-like instrument intimately associated with courtship and personal expression. Believed to be imbued with spiritual significance, this instrument allows Hmong youth to communicate emotions without words. (2) Qeej (Hmong mouth organ) an ancient instrument made from bamboo and hardwood, with over 3,000 years of history in Asia. The Qeej plays a central role in rituals honoring ancestors and is also performed during village festivals to promote unity, well-being, and agricultural prosperity. Today, however, few Hmong youth are skilled in playing this instrument, posing a risk to the continuity of this cultural practice. Regarding culinary culture, Hmong cuisine emphasizes the original taste of raw ingredients with minimal seasoning salt being the primary condiment. Popular dishes include pumpkin soup, pickled mustard greens with pork bones, spicy herb sausages (sai ua), coriander chili paste, and herbal chicken stew. The Hmong community in Phop Phra District holds in-depth knowledge of hemp cultivation, weaving, and product development. Cultivation practices are deeply entrenched in tradition and passed down intergenerationally. Each year, community members grow hemp using methods refined over time. The preparation of fibers for weaving differs significantly from that of other ethnic groups. The fibers, sourced from hemp stalks, are carefully selected for desired thickness and length, stretched into warp threads, and used in traditional looms. The unique setup of warp and weft threads distinguishes Hmong weaving methods. Excess fibers are repurposed to make spiritual ornaments such as wristbands, necklaces, and dolls. Other hemp-based innovations include tea (from leaves), oil (from seeds), body scrubs (from fibers), biodegradable straws (from stalks), and crispy snacks (from fried leaves). Hemp fabric is also transformed into handbags, wallets, and artisanal dolls reflecting a blend of

tradition and modern product innovation.

2. SWOT Analysis of Stakeholders in the Production and Marketing of Hemp Products. A strategic analysis of internal and external factors was conducted using SWOT and translated into TOWS matrix strategies, 2.1) Strength–Opportunity (SO) Strategy (Aggressive Strategy), Phop Phra's community benefits from access to arable land, favorable legal frameworks, and deep-rooted knowledge of hemp cultivation, processing, and distribution. Support from government agencies enhances local capabilities. Notably, the Pa Mai Uthit 4 School integrates hemp-related subjects into its curriculum, connecting cultural heritage to youth education. This reinforces the sustainability of hemp-based enterprises. Additionally, a growing consumer base for hemp products presents opportunities for market expansion. Strategic recommendations include enhancing product development, marketing, and the formation of a local hemp entrepreneurial network. It is essential to foster local innovators (especially youth) who can inherit traditional weaving skills and contribute to modern product design and branding, making “Phop Phra Hemp” nationally recognized. 2.2) Weakness–Threat (WT) Strategy (Defensive Strategy), Current hemp products lack diversity and modern appeal. There is limited use of production technology, resulting in high costs. To address this, product development should focus on diversifying offerings and broadening the customer base to boost competitiveness. 2.3) Weakness–Opportunity (WO) Strategy (Corrective Strategy), Hemp-based textile production involves labor-intensive and time-consuming processes. However, handmade goods appeal to niche consumer segments. A branding strategy emphasizing the uniqueness and craftsmanship of hemp products can increase perceived value. Moreover, enhancing design aesthetics and aligning product features with market preferences through design workshops can further improve marketability. 2.4) Strength–Threat (ST) Strategy (Adaptive Strategy), The region has access to local experts, cultural capital, and institutional support (e.g., Pa Mai Uthit School). However, the intricate hemp-weaving process demands specialized skills. Developing local innovators and transferring knowledge in weaving, batik, dyeing, and color theory are essential. Additionally, digital platforms must be integrated to expand distribution and support effective marketing.

3. Results from the Value Chain Development Process, the value chain of hemp within the Hmong communities in Phop Phra is categorized into three main segments, 3.1) Upstream Activities, This phase includes land preparation, seedling selection, soil management, and harvesting. These practices are based on traditional agricultural knowledge adapted to local environmental conditions. 3.2) Midstream Activities, Hemp fibers are manually extracted and woven into textiles. Each product reflects specific village-based patterns and techniques. Leftover fibers are repurposed into spiritual crafts (e.g., lucky bracelets, necklaces). Other byproducts roots, leaves, and tips are used in producing soaps, shampoos, facial masks, balms, matcha powders, wallets, and handbags. These innovations not only preserve cultural expression but also increase product diversity and commercial potential. 3.3) Downstream Activities, this phase includes branding and packaging. A new brand “Phop Kan” was developed along with redesigned packaging (boxes, bottles, bags). Products are sold through online platforms, and a learning center called Ing Doi Pa Mai Shop was established to promote knowledge exchange and community-based sales. This structured value chain model reflects a blend of cultural preservation and economic development, promoting resilience, innovation, and sustainability among the Hmong in Tak Province.

4. Results of the Development of Hemp-Based Products from Roots, Stalks, and Leaves Through Collaboration Between Educational Institutions and Local Networks. As a result

of knowledge transfer regarding the benefits and product development potential of hemp, a variety of innovative products were created, maximizing the use of all parts of the hemp plant. The developed products include hemp bar soap and liquid soap, hemp shampoo, hemp serum, hemp facial masks, hemp matcha, handmade spiritual crafts, garments such as coats and fashion wear, hemp balm, hemp-fiber embroidered wallets, and hemp-fabric handbags. Each product reflects spiritual cultural value, demonstrating the transformation of cultural capital into high-value, creative goods. These products express cultural identity rooted in traditional local wisdom, elevated into sustainable value-added commodities.

5. Results of the Development of Entrepreneurs and Community Innovators in Communication and Product Development Skills Related to Hemp in Tak Province.

Training on marketing strategies was provided to community innovators, resulting in the launch of the website: www.Hemp-tak.com. In collaboration with academic institutions, the innovators developed a product brand and logo through workshops focused on logo design, particularly using the Canva platform a versatile application for media creation. After the training, the innovators submitted logo designs for a group-wide competition. The selected logo, voted on by local hemp entrepreneurs, now represents the brand under the name “Phob Kan”, meaning “Discovering Hemp.”

6. Key Outputs, Outcomes, and Impacts of the Research and Innovation Project. 6.1) The project generated a comprehensive cultural capital database recorded in a cultural mapping information system. A handbook was produced detailing the cultural heritage and hemp-related product development rooted in the traditions of the Hmong ethnic group in Phop Phra District, Tak Province. The handbook highlights the origins of hemp as a cultural resource, mapping its cultural pathways, products, cuisine, and enduring customs passed down through generations. 6.2) The project fostered a collaborative framework among multiple stakeholders, with Northern College acting as the academic liaison to coordinate cross-cultural collaboration. This partnership involved three key sectors, 1) Public sector – including the Phop Phra District Community Development Office and the Subdistrict Administrative Organization of Khirirat; 2) Community sector involving returnee youth, local artists, and cultural entrepreneurs; and 3) Educational institutions, especially Pama-i Uthit 4 School. The project integrated local and academic knowledge through a process of cultural values extraction and cultural mapping, leading to cultural co-creation and reinvention of local cultural assets into innovative products and services. A cultural learning center was also established to preserve local identity and promote grassroots economic development and social cohesion. 6.3) The “Phob Kan” brand was developed through a culturally-sensitive design process that considered past, present, and future identities. The brand communicates authenticity and pride in the Hmong heritage through its colors and imagery, serving as a symbolic expression of local identity and spiritual legacy. 6.4) A digital communication and online marketing system was developed to promote hemp products under the “Phob Kan” brand. This included a website and digital media designed to reflect the Hmong community's context its knowledge, heritage, way of life, traditions, arts, and beliefs through a range of innovative hemp-based products, from root to leaf. This system aims to create sustainable economic value and strengthen cultural branding. 6.5) The “Hemp and Hmong Way of Life” Learning Center Ing Doi Pa Mai Shop was established through a consensus among public, private, academic, community, and civil society sectors. Located at Pama-i Uthit 4 School, a cultural hub of the Hmong ethnic group, the center exhibits the history, lifestyle, traditions, beliefs, and artistic expressions of the Hmong people. It highlights hemp-based innovations derived from ancestral wisdom, aiming to foster sustainable economic value. The

center also serves as a source of inspiration and learning for future generations.

7. Results of the Social Return on Investment (SROI) Evaluation. The social return on investment (SROI) during the first year of implementation (October 1, 2021 – May 15, 2023) was valued at 3.22 THB. This means that for every 1 THB invested, the project yielded 3.22 THB in social value. The results indicate the high social impact and investment efficiency of the project. The SROI rate is subject to variation based on participant numbers and project duration, implying that social and economic benefits are likely to grow further in the future.

Discussion

The findings from this study highlight the intricate relationship between the Hmong ethnic group and hemp cultivation, textile weaving, and cultural production. The evidence reveals that hemp plays a central role in the spiritual, economic, and cultural lives of the Hmong people in Phop Phra District. These cultural practices align with the concept of indigenous knowledge systems, which recognize that traditional knowledge is not merely historical but dynamic and adaptive to contemporary innovation (Battiste, 2002; Smith, 2012). The integration of traditional hemp cultivation with local education, particularly through institutions like Pa Mai Uthit 4 School, demonstrates a successful case of cultural transmission and curriculum-based preservation. This finding is consistent with the perspective that educational institutions play a crucial role in sustaining local knowledge systems and enhancing community resilience (McCarter & Gavin, 2011). The SWOT and TOWS analysis further supports the strategic development of hemp-based enterprises. The SO strategy shows strong alignment with asset-based community development (ABCD) approaches, emphasizing strengths within communities, such as cultural capital and institutional support (Kretzmann & McKnight, 1993). Importantly, the presence of supportive legal frameworks and a growing consumer market for hemp products presents unique opportunities for cultural entrepreneurship and rural economic development (Altman et al., 2020). The challenges identified in the WT and WO strategies underscore the need for design innovation and market diversification. These observations reflect previous research suggesting that traditional crafts can remain competitive if artisans receive support in product design, branding, and access to technology (Basu, 2011; UNCTAD, 2018). Additionally, the unique handwoven characteristics of hemp textiles may be positioned within niche luxury or heritage markets where authenticity and cultural narrative are valued (Throsby, 2001). The value chain analysis of the hemp industry in Phop Phra illustrates a community-led model of cultural reinvention. The model of upstream, midstream, and downstream activities highlights how indigenous raw materials can be transformed into high-value commodities while preserving cultural identity. The establishment of a local brand “Phop Kan” and the learning center “Ing Doi Pa Mai Shop” reflects the concept of cultural co-creation and social innovation (UNESCO, 2021), promoting not only income generation but also intergenerational knowledge transfer. This community-based model reflects sustainable development principles, integrating economic, social, and cultural dimensions (United Nations, 2015). It also aligns with the goals of promoting local participation, cultural continuity, and environmental stewardship core tenets of community-based natural resource management (CBNRM) (Berkes, 2009).

The development of hemp-based products through collaborative efforts between educational institutions and community networks in Tak Province demonstrates the effective transformation of traditional knowledge into innovative, value-added goods. As argued by Throsby (2001), cultural capital when strategically leveraged can lead to both economic and symbolic value. In this case, hemp was not merely a raw material, but a medium through which cultural identity

and indigenous knowledge were embedded into tangible products, such as handmade soaps, clothing, crafts, and wellness items. These products reflect what UNESCO (2021) refers to as intangible cultural heritage, reinterpreted through a contemporary entrepreneurial lens. The process of cultivating local entrepreneurs and community innovators further reinforces the concept of inclusive innovation (Heeks et al., 2014). By equipping community members especially youth with skills in communication, branding, and digital tools such as Canva, the project enhanced both their creative capacities and market readiness. The launch of the “Phob Kan” brand through participatory logo design is emblematic of cultural co-creation (UNESCO, 2013), enabling communities to take ownership of their narratives while aligning traditional imagery with modern branding strategies. The establishment of a digital communication system and online marketing platform marks a significant advancement in the visibility and sustainability of local hemp enterprises. As supported by Altman, Rehfeld, and Thompson (2020), the creative industries’ success increasingly relies on the integration of digital technology and authentic cultural content. In this context, the project’s digital outputs—such as the website and promotional media—are not only tools for commerce but also instruments for preserving and disseminating Hmong cultural heritage. Importantly, the project yielded a robust knowledge base, including a cultural mapping system and a comprehensive handbook. These efforts align with the principles of community-based participatory research (CBPR), where community voices are central in data collection and knowledge production (Minkler & Wallerstein, 2008). The resulting “Hemp and Hmong Way of Life” Learning Center exemplifies this approach by serving as a living archive of cultural wisdom and a site for intergenerational learning. The social return on investment (SROI) rate of 3.22 THB per 1 THB invested illustrates the efficiency and impact of the project in socioeconomic terms. SROI, as a framework, emphasizes not only financial returns but also broader social benefits, including cultural preservation, skill development, and community empowerment (Nicholls et al., 2012). The reported rate suggests a promising trajectory for the scalability of similar community-driven cultural innovation projects in other regions. In summary, the findings validate the theoretical proposition that cultural assets, when supported by institutional frameworks and participatory innovation processes, can generate both economic value and social cohesion (Borup, 2006; UNCTAD, 2018). The case of “Phob Kan” provides a replicable model for heritage-based development, contributing to both local livelihoods and cultural resilience.

Recommendations for Future Research

Building on the findings of this study, several avenues for future research are recommended to deepen the understanding of cultural entrepreneurship, community-based innovation, and sustainable development grounded in indigenous knowledge systems.

1. **Longitudinal Evaluation of Cultural Enterprise Impacts**, While the current study provides promising evidence of socio-economic and cultural benefits from hemp-based cultural enterprises, future research should undertake longitudinal studies to evaluate long-term impacts on income generation, cultural preservation, youth engagement, and environmental sustainability. Such studies can track changes in community well-being, intergenerational knowledge transmission, and market performance over time.

2. **Comparative Studies Across Ethnic Communities**, Further research should compare the experiences of other ethnic or indigenous groups engaging in similar value-added cultural production to examine shared challenges, strategies, and outcomes. Comparative analyses could illuminate how contextual factors such as governance, resource access, and cultural norms shape

the development of grassroots cultural industries.

3. **Youth Engagement and Digital Innovation**, Given the role of digital tools and branding in enhancing market reach and identity expression, future studies could explore the specific impact of digital capacity-building among youth. Investigations might focus on how digital literacy training, participatory media design, and e-commerce integration affect young people's participation in cultural entrepreneurship.

4. **Assessment of Environmental Sustainability in Hemp Production**, although hemp is known for its ecological benefits, further empirical research should assess the environmental implications of increased hemp cultivation at the community level. This includes soil health, water use, biodiversity, and carbon sequestration. Such studies can inform policy frameworks that promote sustainable agroecological practices in line with climate resilience goals.

6. **Exploration of Cultural Branding and Consumer Perceptions**, Future research could investigate how consumers perceive and value hemp-based products that incorporate cultural narratives and indigenous aesthetics. This may include studying the effectiveness of cultural branding strategies, market segmentation, and consumer willingness to pay for ethically and culturally sourced products.

7. **Scalability and Replicability of Community-Based Models**, Finally, future work should assess the scalability of community-based value chain models like “Phob Kan.” Case studies and pilot programs in other regions could provide insight into how such models can be adapted while maintaining cultural integrity. Research should also consider the role of public-private partnerships, legal frameworks, and financial mechanisms in supporting wider adoption.

These research directions aim to contribute to the interdisciplinary body of knowledge at the intersection of culture, sustainability, and development. A continued focus on participatory methods, cultural respect, and localized innovation will be vital to ensuring the relevance and ethical grounding of future studies.

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References

- Altman, M., Rehfeld, D., & Thompson, G. (2020). *The Economics of Cultural Industries: Innovation, New Consumption and Governance*. Springer.
- Basu, P. (2011). Cultural heritage as a business opportunity: The case of craft development in India. *International Journal of Heritage Studies*, 17(6), 512–530.

- <https://doi.org/10.1080/13527258.2011.618244>
- Battiste, M. (2002). Indigenous knowledge and pedagogy in First Nations education: A literature review with recommendations. National Working Group on Education.
- Berkes, F. (2009). Community conserved areas: Policy issues in historic and contemporary context. *Conservation Letters*, 2(1), 20–25. <https://doi.org/10.1111/j.1755-263X.2008.00040.x>
- Kretzmann, J. P., & McKnight, J. L. (1993). Building communities from the inside out: A path toward finding and mobilizing a community's assets. ACTA Publications.
- McCarter, J., & Gavin, M. C. (2011). Perceptions of the value of traditional ecological knowledge to formal school curricula: Opportunities and challenges. *Journal of Ethnobiology and Ethnomedicine*, 7(1), 38. <https://doi.org/10.1186/1746-4269-7-38>
- Smith, L. T. (2012). *Decolonizing methodologies: Research and indigenous peoples* (2nd ed.). Zed Books.
- Throsby, D. (2001). *Economics and Culture*. Cambridge University Press.
- UNCTAD. (2018). *Creative Economy Outlook: Trends in international trade in creative industries*. United Nations Conference on Trade and Development.
- UNESCO. (2021). *ReShaping policies for creativity: Addressing culture as a global public good*. United Nations Educational, Scientific and Cultural Organization.
- United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. <https://sdgs.un.org/2030agenda>.
- Boonthian, S. (2021). Human development based on cultural identity of the Hmong way of life: A case study of Ban Chedi Ko, Maha Wan Subdistrict, Mae Sot District, Tak Province. *MCU Journal of Social Development*, 6(1), 1–13.
- Chantavanich, S. (2009). *Qualitative research: Guidelines and data analysis* [In Thai]. Bangkok, Thailand: Chulalongkorn University Press.
- Janthavanit, S. (2009). *Qualitative research: Guidelines and data analysis* [In Thai]. Bangkok, Thailand: Chulalongkorn University Press.
- Khunsong, K. (2016). A study of cultural identity and beliefs of the Ko Yo community. *Parichat Journal, Thaksin University*, 28(3 Special Edition), 82–103.
- Office of the National Culture Commission. (2008). Definition of culture. Retrieved October 16, 2024, from <http://www.openbase.in.th/node/5954>.
- Office of the National Economic and Social Development Council. (2020). Report on the results of economic and social development of the country. Bangkok, Thailand: Office of the National Economic and Social Development Board.
- Pongwirithon, K. (2018). Development of information system for enhancing the competency in the competitiveness of small and medium enterprises in northern region of Thailand. *WMS Journal of Management Walailak University*, 7(2), 47–63. [In Thai].
- Pongwirithon, K., Kamchai, K., & Panturee, W. (2022). Social return on investment assessment from operations of community-based innovation and career development fund: Information systems for managing community financial institutions. *Res Militaris*, 12(2), 1174–1184.
- Rattayanapit Ratchatawan, & colleagues. (2018). Community participation processes in well-being development. *Southern Technology Journal*, 11(1), January 2018.
- Sumphanpanich, P., & Pongpanarat, K. (2019). Hemp: The root of the Hmong cultural way of life. *Environmental Journal*, (3), July–September 2019.