

Research Article

Enhancing community products through cultural capital to increase economic value in Khlong Nam Sai subdistrict, Sa Kaeo province

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Abstract: The research entitled "Enhancing Community Products Based on Cultural Capital to Increase Economic Value in Khlong Nam Sai Subdistrict, Sa Kaeo Province" had two main objectives. The first was to develop community products from local wisdom and resources to add value and a unique local identity. The second was to enhance the income and quality of life of grassroots communities in Khlong Nam Sai Subdistrict for sustainable self-reliance. The study used Participatory Action Research (PAR). The target group included 25 participants. It consisted of women's weaving groups, elderly groups, OTOP Nawatwithi groups, community leaders, and network partners, who were selected through purposive sampling. The research instruments were in-depth interviews, focus group discussions, and observation forms. Data were analyzed using content analysis. Data reliability was checked through methodological triangulation. The findings revealed that the Khlong Nam Sai community has strong cultural capital and local wisdom. These could be effectively used to develop community products, especially using coconut husks for natural fabric dyeing and local herbs such as Chaya leaves (*Cnidioscolus aconitifolius*). These resources were used to develop prototype products. Examples include batik shirts, Lai Khor patterned fabric bags, herbal compress balls, and Chaya herbal tea. The products reflected local identity and increased product value. The integrated collaboration among the university, local government, and network partners improved the community's income and quality of life. The community set up occupational groups to commercialize prototype products. These are marketed as cultural tourism souvenirs and sold through online platforms. These initiatives generate income, reduce local inequality, and build management skills and shared entrepreneurship among community members. This forms a strong foundation, enabling the community to become self-reliant and sustainably support the grassroots economy.

Keywords: Community products; Cultural capital; Economic value; Participatory Action Research (PAR)

1. Introduction

Khlong Nam Sai Subdistrict, Aranyaprathet District, Sa Kaeo Province, is a community abundant in cultural and social capital. The local economic and community development is actively driven by key grassroots mechanisms, including the women's weaving group, the elderly group, and the Moo 1 Khlong Nam Sai OTOP Nawatwithi group. Furthermore, the area features a major cultural attraction, Prasat Khao Noi Si Chomphu, an ancient monument and an important architectural symbol of Sa Kaeo Province. This tactical asset offers the area significant potential to synergistically link community products, local wisdom, and cultural tourism, thereby promoting sustainable rural development [1,2].

From past operations, the Khlong Nam Sai community has continuously initiated and carried out various product development and income-generating projects. Prominent examples include the "Smiling Frog, Smiling Chicken" project, the promotion of chicken feed made from Chaya leaves (*Cnidioscolus aconitifolius*), and the innovative utilization of agricultural waste materials, such as coconut husks, to develop natural fabric dyes. Those eco-friendly dyes have been successfully utilized to

produce fabric face masks, coffee cup carrier bags, and cloth bags. This successful transformation of local resources reflects the community's adaptive capacity to generate economic added value while minimising environmental impacts, consistent with the principles of the circular economy [3,4].

However, to improve community products toward sustained viability, further comprehensive development is required in product quality, contemporary design, product patterning, packaging, digital marketing, and public relations [5,6]. In particular, there is an urgent need to add value and upgrade prototype products, specifically batik shirts, "Lai Khor" patterned fabric bags, Chaya leaf pakama herbal compress balls, and Chaya herbal tea to ensure they possess a distinct local identity, satisfy modern market requirements, and smoothly integrate into community-based tourism circuits [1,7].

Therefore, to ensure continuity from previous developmental research and to establish stable, sustainable livelihoods for local citizens, this research builds off prior efforts by launching new products naturally dyed with coconut husks, specifically shirts and bags. Additionally, the royal "Lai Khor" pattern, graciously granted to weaving groups across Thailand, has been integrated as a prototype motif designed for the unique and authentic local way of life. This merging of royal heritage with indigenous knowledge creates a highly marketable and singular cultural identity [2,8].

Research on the development of community products in Khlong Nam Sai Subdistrict assesses considerable academic and practical significance. It explores strategic guidelines for developing high-potential products with local capital, increasing economic value, generating supplementary income, and developing community self-reliance. This approach relies heavily on the participatory action research framework and on joint networks spanning the government, private, and public sectors [9,10]. Ultimately, this joint process functions as a crucial engine for grassroots economic resilience and strengthening the community's overall quality of life in a secure and sustainable way [11].

2. Research Objectives

1. To develop and upgrade community products by integrating local cultural capital (coconut husk natural dyeing, "Lai Khor" motifs, and Chaya leaves (*Cnidioscolus aconitifolius*) with contemporary design to establish a distinct local identity and increase tangible economic value.
2. To evaluate the outcomes of participatory capacity building on the income generation, management skills, and sustainable self-reliance (quality of life) of grassroots community groups in Khlong Nam Sai Subdistrict.

3. Scope of Research

1. The spatial scope of the research is Khlong Nam Sai Subdistrict, Aranyaprathet District, Sa Kaeo Province.
2. The content scope of the research studies the background and opinions of stakeholders regarding the community's cultural capital and local wisdom in weaving, dyeing with natural materials, and community product development.

4. Research Methodology

This research is participatory action research (PAR) conducted using the PAOR cycle [10], divided into four main phases to facilitate collaborative learning:

- 1) Planning (P): The research team, together with 25 target groups (women's weaving group, elderly group, OTOP innovative group, and community leaders), held a focus group meeting to analyze cultural assets (asset mapping), explore problems and needs in product development, and jointly define success indicators.
- 2) Acting (A): Implementation was carried out through a 5-Day Capacity Building Workshop, inviting experts in design and natural dyeing to share technology with local wisdom keepers. They used coconut husks to extract dye, developed batik fabrics with a hook pattern, and processed chaya leaves (*Cnidioscolus aconitifolius*) into tea and herbal compresses.
- 3) Observing (O): The research team and community leaders jointly observed learning behaviors, production skills, and technology acceptance. And record the results of the prototype development process, including cost estimation and online marketing channels.

4) Reflecting (R): Organize a forum to reflect on the results of the operation, jointly check the quality of the prototype, improve the packaging, and summarize lessons learned (AAR) to plan for the establishment of occupational groups and the equitable distribution of income.

4.1 Population and Sample

This research is a Participatory Action Research (PAR) focusing on the participation of citizens, community leaders, network partners, and relevant agencies in analyzing problems, planning, developing, and upgrading community products in Khlong Nam Sai Subdistrict, Aranyaprathet District, Sa Kaeo Province, in order to create added value for community products and improve the quality of life of the people in the area.

The target population and sample for this research consisted of the Khlong Nam Sai women's weaving group, the elderly group in the community, the OTOP Innovative Lifestyle Group of Village 1, Khlong Nam Sai, community leaders and residents in the Khlong Nam Sai Subdistrict Administrative Organization, the project team, and related network partners, totaling 25 people. Purposive sampling was selected as the sampling method in order to deliberately recruit participants who have direct involvement and firsthand experience in community product development and tourism. This approach enabled the research to focus on individuals best positioned to provide relevant insights and practical knowledge, thereby enhancing the validity and applicability of the study's findings.

4.2 Research Tools

This study is a qualitative research method. The researcher has determined the tools used to collect data in this study as follows: in-depth interviews and questionnaires.

1) Focus Group Meetings and Discussions: Focusing on community background information and community product potential, meetings were held with community leaders and network partners to analyze community problems and needs.

2) Observational Methods for Community Product Development Activities: A 5-day training program was conducted, and community products such as batik shirts and patterned fabric bags were developed. The results were monitored and evaluated in collaboration with the community and network partners.

4.3 Data Collection Methodology

The research team collected data following these steps:

1) Focus group discussions were held with residents on topics related to community background information and community product potential. Meetings were also held with community leaders and network partners to analyze community problems and needs.

2) Observational assessments of community product development activities were conducted. A five-day training program was implemented to develop community products, including batik shirts and patterned fabric bags. Follow-up and evaluation were conducted in collaboration with the community and network partners.

4.4 Data Analysis

Content analysis was used to analyze data from interviews, focus group discussions, and observations. The data were summarized, categorized, and interpreted descriptively to reflect the process of upgrading community products and the outcomes in the area.

5. Data Reliability Verification

Triangulation was used to verify data, comparing information from interviews, observations, and focus group discussions. Data was also verified with community leaders and network partners to ensure accuracy and reliability.

5. Research Findings

The research on upgrading community products in Khlong Nam Sai Subdistrict, Aranyaprathet District, Sa Kaeo Province, revealed that the community possesses cultural capital, local wisdom, and local resources that can be leveraged to add value to community products. In particular, traditional knowledge in weaving, natural dyeing with coconut husks, and the use of local medicinal plants such as chayote leaves have been developed into new community products.

The results showed that the community successfully developed prototype products, including batik shirts, patterned fabric bags, herbal compresses made from chayote leaves and cotton, and chayote herbal tea. This integrates local identity with the concept of creating added value for community products, resulting in distinctive products that clearly reflect the unique identity of Khlong Nam Sai Subdistrict.

Furthermore, the participatory approach between the university, the Subdistrict Administrative Organization, the women's weaving group, the elderly group, and the OTOP Innovative Way group resulted in a strong network of cooperation for community development. The community participated in analyzing problems, planning, and developing products that meet the area's needs. The products are made by hand, allowing them to be sold at higher prices, and the groups can produce them without the need for industrial machinery.



Figure 1. The process of boiling coconut husks to create dye. The intensity of the color depends on the boiling time.



Figure 2. Dyeing batik fabric with coconut husk using a hook pattern.



Figure 3. Drying clothes after dyeing



Figure 4. Sewing into products



Figure 5. Products from the women's weaving group.

Overall, the integrated collaboration among universities, local government organizations, and partner networks to upgrade community products in Khlong Nam Sai Subdistrict has led to tangible improvements in residents' incomes and quality of life. The community has formed groups to create new livelihoods and has successfully sold its prototype products, both as souvenirs for cultural tourism and by expanding its customer base through online marketplaces. This initiative is also a crucial approach to community development, grounded in local identity and sustainable self-reliance. It promotes management skills and co-ownership among community members, forming a vital foundation for self-sufficiency and the sustainable growth of the grassroots economy.

6. Discussion

The research on upgrading community products based on cultural capital to increase economic value in Khlong Nam Sai Subdistrict, Sa Kaeo Province, found that the community has potential in cultural capital and local wisdom that can be further developed to create appropriate community products. In particular, the use of coconut husks for fabric dyeing and the development of batik shirts, fabric bags with traditional patterns, and herbal products from chayote leaves reflect the community's identity and can create additional economic value. This may be due to the Khlong Nam Sai community having a strong cultural capital base and the application of local resources in conjunction with community wisdom, resulting in unique local products. This aligns with the concept of cultural capital, which views wisdom, way of life, and community resources as capital that can be used to sustainably develop the community's economy and society. This is consistent with the research by Patcharaporn et. al. [12] which studied the development of herbal compress products for the elderly group in Khlong Nam Sai Subdistrict, Aranyaprathet District, Sa Kaeo Province, and found that applying local herbs such as chayote leaves in conjunction with the community's weaving wisdom can increase the value of the product, as well as promote occupations and generate income for the elderly in the community. It also helps develop knowledge in packaging design and online marketing for the community in tangible ways.

In addition, the research also found that... Developing community products from natural materials and community waste resources, such as coconut husks, can increase product value and create market differentiation. This is because natural materials are low-cost resources, readily available locally, and can be developed into products that clearly reflect the community's identity. This aligns with the research by Surapha Wongsuwan and Thani Sukontachart [3], which examined the use of agricultural waste materials to create tourism souvenir products in line with the circular economy concept. They found that developing community products from agricultural waste materials can reduce production costs, increase product value, and create product differentiation. It also aligns with the circular economy concept, which focuses on the efficient use of resources and reducing waste from the production process.

The study also found that the participation of network partners, including universities, sub-district administrative organizations, women's weaving groups, senior citizen groups, and OTOP innovative groups, is a key factor in the successful development of community products. This is because all sectors jointly analyzed problems, planned, and developed products to meet community needs, fostering cooperation and a sense of shared ownership. This is consistent with the participatory development concept of Cohen and Uphoff [9], which holds that effective development should provide opportunities for people to participate in decision-making, implementation, and benefit-sharing. The research also incorporated collaborative evaluation and Participatory Action Research (PAR), modeled after Kemmis and McTaggart [10], which emphasized public participation in all development processes. This approach enabled communities to sustainably develop products and manage their resources, focusing on collaborative learning between researchers and the community through planning, implementation, observation, and reflection to achieve tangible change.

In terms of product design, the research found that designing contemporary patterns and developing products while maintaining local identity helps products stand out and better meet market demands. This aligns with the research by Napasorn Thupkaew et. al. [2], which examined the development of hand-woven fabric products to add value and promote the community economy of Ban Noen Kham, Chainat Province. The study found that integrating local wisdom with contemporary design concepts can help develop products that are modern, beautiful, and responsive to contemporary consumer needs while appropriately preserving the community's cultural identity.

Although the community has developed prototype products that reflect the area's identity, further development is needed across several areas, including product standardization, packaging design, branding, and expanding online marketing channels to enhance market competitiveness and create long-term economic sustainability for the community.

7. Research Suggestions

1. The community should develop quality and consistency standards for its community products to build consumer trust and enhance market competitiveness.
2. Packaging and branding should be designed to reflect the unique identity of Khlong Nam Sai subdistrict to increase value and create brand recognition for community products.
3. Government agencies and educational institutions should promote knowledge in digital marketing, online sales, and social media promotion to expand market channels for community products.
4. Linkages between community products and cultural tourism and community-based tourism should be developed to generate income and increase economic opportunities for local people.
5. The community should promote the transfer of local wisdom in weaving, natural dyeing, and product processing to younger generations to preserve knowledge and ensure the continuity of sustainable community development.

8. Limitations and Future Research

This research is limited by the scope of its target group (purposive sampling of 25 people) and the long-term follow-up period, which focuses on prototype development and short-to-medium-term evaluation. Furthermore, the consistency of color shades in fabrics dyed with coconut husk remains variable due to natural factors such as the age of the coconut and the boiling temperature, impacting product quality control in the industrial system.

9. Future Research Directions

1. Future research should consider developing and conducting experimental research to find suitable natural mordants to ensure commercially stable color fastness of coconut husk-dyed fabrics.
2. Quantitative research should be conducted to measure consumer behavior, brand satisfaction, and the long-term economic value (Return on Investment: ROI) of community enterprises after the full implementation of a digital marketing system.
3. The study model should be extended to other communities in Sa Kaeo Province with diverse cultural capital to create a connected cultural tourism supply chain network.

10. Patents

Author Contributions: S.P., P.J., and N.S. conceptualized and conducted the study, performed data curation, formal analysis, and prepared the original draft. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest: The authors declare that they have no known financial or personal conflicts of interest that could have influenced the work reported in this paper.

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