



A Develop Hand Woven *Madmee* Cotton Fabric Dyed with Natural Dyes Based on Wisdom, to the Creative Economy of Khok Charoen District, Lopburi Province

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Received: 2 March 2020; Revised: 18 May 2020; Accepted: 25 May 2020

Abstract

The purpose of this research was to develop hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom, to the creative economy of Khok Charoen sub-district, Khok Charoen district, Lopburi province. It is a participatory action research focusing on empowerment until mutual learning and development in five components; observation, feedback, planning, implementation, and learning exchange with 20 stakeholders, which consists of a group of wise man of Khok Charoen hand woven, a group of community product design experts, and a group of community product marketing experts. The concept of extending wisdom to the creative economy was used as a research framework. The data was collected by participatory observation, interview and group discussion, analyzed and continuously reflected throughout the research. Important results were: 1) the hand woven *Madmee* cotton fabric, dyed with natural dyes of Khok Charoen Subdistrict, was able to build a reputation and generate income continuously for the community, but needed further development; 2) stakeholders could develop hand woven *Madmee* cotton fabric, dyed with natural dyes based on wisdom, to the creative economy of Khok Charoen with 15 patterns, 28 styles and one package; and 3) stakeholders could develop opportunities and increase marketing channels of hand woven *Madmee* cotton fabric, dyed with natural dyes based on wisdom, to the creative economy of Khok Charoen by promoting various forms of marketing.

Keywords: Hand Woven *Madmee* Cotton Fabric, Wisdom, Creative Economy

Introduction

Creative Economy is value creation from human ideas (Howkins, 2002). It is economy that supports producing products and services by utilizing cultural assets; namely, history, tradition, way of life, livelihood, blending with knowledge, creativity and suitable technology level, in order to differentiate to products and services. Moreover, it can respond to the need of consumers by benefit from cultural assets. The creative products and services share some remarkable features; identity, difficulty of duplication and value based price. The concept is guideline to expand economy growth based on knowledge and culture, and blended with Thai identity that can increase commercial value and cover economic activities in Thailand (Pornpipat, 2010). In addition, Laisattruklai (2009) proposes that achievement factors for creative economy development include: 1) skill and talent of craftsmen who have deep knowledge and ability to extend it in other works; 2) history, culture and tolerance that people share in the society; and 3) social basic requirements that facilitate education, communication technology, logistics, quality production and intellectual property production system. Furthermore, creative products and services share some remarkable features, identity, difficulty of imitation and value based on price. The concept is a guideline to expand economy growth based on knowledge and culture, and blended with Thai identity that can increase commercial value and cover economic activities in Thailand.

Jonpradit et al. (2014) studied the influence of creative economy implementation, factors that propel creative economy, and qualification of entrepreneur leading to marketing success of five star One Tambon One Product



(OTOP) products in Thailand. The study showed that creative economy implementation in the area of difficulty of imitation had direct influence on marketing success, and the area of product uniqueness and local culture had indirect influence on marketing success. This is related to Chaipinchana (2017) who studied strategy for creating competitive advantage in creative economy of ceramic product group in Chiang Mai Province, and found that one important strategy was a design of new products with its uniqueness by blending culture and local wisdom. In addition, Rothaisong et al. (2016) studied development of endemic patterns of woven reed mats and Phanomrung Reed mats by handicraft groups in Chaleom Phra Kiat District, Buriram Province, and found that there were five areas of distributors and consumers' satisfaction towards woven reed mat products with endemic patterns: namely, utilization, usage convenience, durability, endemic magnificence, and transport.

There are many diverse groups of races and cultures such as Mon, Phuan, Thai Bueng, Yuan, Lao Vieng, Chinese, who migrated to settle with Thai people living around river basins in Khok Charoen sub-district, Khok Charoen district, 81 kilometers from the north of Lopburi Province. Most of people living in Khok Charoen sub-district migrate from the Northeastern region. They are familiar with and skillful in agriculture. Moreover, they are wise in fabric weaving, and this wisdom has been transferred to many generations. This includes cotton cultivation of silk worm rearing to produce thread for weaving and using them in household. After flood disaster, Khok Charoen people, along with support from many government agencies, revive weaving as a supplementary career. At the initial period, former patterns and designs are wisdom transferred from Northeastern region until Mr. Winai Patchim, a former arts teacher at Anubankhokcharoen School, studied and gained deep understanding on weaving wisdom in Khok Charoen sub-district. He has applied and tried weaving innovation on artwork. Then he became an expert in applying weaving innovation to artwork that he studied, invented and practiced. Currently, weaving design of Khok Charoen sub-district has been developed. The designs, patterns and colors are remarkably unique and contemporary. The woven products are value-added with unique and magnificent art. Besides, this work is recognized and well known nationwide. The community has gained extra income constantly until present. Many designs: Louis, Night at Pranarai Rajaniwet Palace, Sun Flower, and Pikul Flower (Lopburi Province Symbolic Pattern), are praised as local wisdom of Lopburi Province, Industry and handicraft sector (2002). In addition, *Madmee* weaving with the pattern of Phra Prang Sam Yot, Pranarai Rajaniwet Palace and Thai Phuphan, were awarded the First Prize for Best Product of Lopburi Province. *Madmee* weaving with the pattern of Night at Pranarai Rajaniwet Palace and Kho Bai Thet were awarded the First Prize for Best Product of silk and cotton fabric wisdom in the central region. *Madmee* weaving with the pattern of Louis was awarded the First Prize for Best Product of OTOP products in the central region. Pikul Flower pattern was awarded the Prize for Five and Four Star National OTOP in Lopburi Fabric Pattern Competition (2004). Furthermore, Thai wisdom teacher, Class 5, in the area of industry and handicraft, Office of the Education Council, Ministry of Education, and Khok Charoen sub-district, assign "*Madmee* Weaving" as one of identity as in, "Big Corn Cob, Traditional Sky Rocket, Fine Beef Cattle, Magnificent *Madmee* Weaving, Cultured People" (W. Pachim, interviewed, October 16, 2018).

Hand woven *Madmee* cotton fabric, dyed with natural dyes based on wisdom, is obviously valuable for spirits, society (proud community) and economy (There are income distribution and stable economy). The integration between economy and culture has an important role in income distribution. Consequently, the development of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom, is very crucial in terms of local society and economy. Local community has more potential to extend the products to creative economy that could add more commercial value. This can be implemented by emphasizing on: 1) new forms of product development by

transforming form of product to be more modern and attractive that suit current daily usage (Product Design); 2) product transformation to have different functional usage from the past (Functional design); and 3) packaging design development by the developing cooperation from three important sectors: 1) weaving wisdom holders in Khok Charoen sub-district, 2) community product design experts, and 3) community product marketing experts. Participatory Action Research (PAR) (Ampansirirat & Wongchaiya, 2017) was applied to study for insightful understanding and develop co-action under self-discovered circumstance. Hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom can be extended by having more modern design for more outstanding identity and registered for patent. Furthermore, marketing and distributing channel for hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom, should be varied and reach to target consumers. The aforementioned target consumers are medium and high-purchasing power consumers and foreign consumers. Therefore, Thepsatri Rajabhat University, as a higher education institution for local development, decided to conduct the research and development project for hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom. The aim is to improve the creative economy of Khok Charoen sub-district, Khok Charoen district, Lopburi province, according to economic growth on the foundation of cultural knowledge and local wisdom that can create commercial value added. This could also lead to economic propelling on the foundation of knowledge and creativity application by utilizing intellectual property linked to cultural root. This development and creativity, extended from wisdom foundation and community potential, increase competition potential at international level, and develop strong foundation of community and nation.

The research objectives are to develop hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom, to the creative economy of Khok Charoen sub-district, Khok Charoen district, Lopburi province, which included three sub-objectives as follows:

1. To study cultural assets and development necessity of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom, to the creative economy of Khok Charoen sub-district, Khok Charoen district, Lopburi province
2. To develop hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom, to the creative economy of Khok Charoen sub-district, Khok Charoen district, Lopburi province
3. To create marketing and distributing channels for hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom, to the creative economy of Khok Charoen sub-district, Khok Charoen district, Lopburi province

Tools and Methodology

Research Conceptual Framework

The development of hand woven *Madmee* cotton fabric, dyed with natural dyes based on wisdom in the creative economy of Khok Charoen sub-district, Khok Charoen district, Lopburi Province, applied Participatory Action Research (PAR) which is the synergy among three development sectors (triangle that moves the mountain) in accordance with the research conceptual framework as follows:

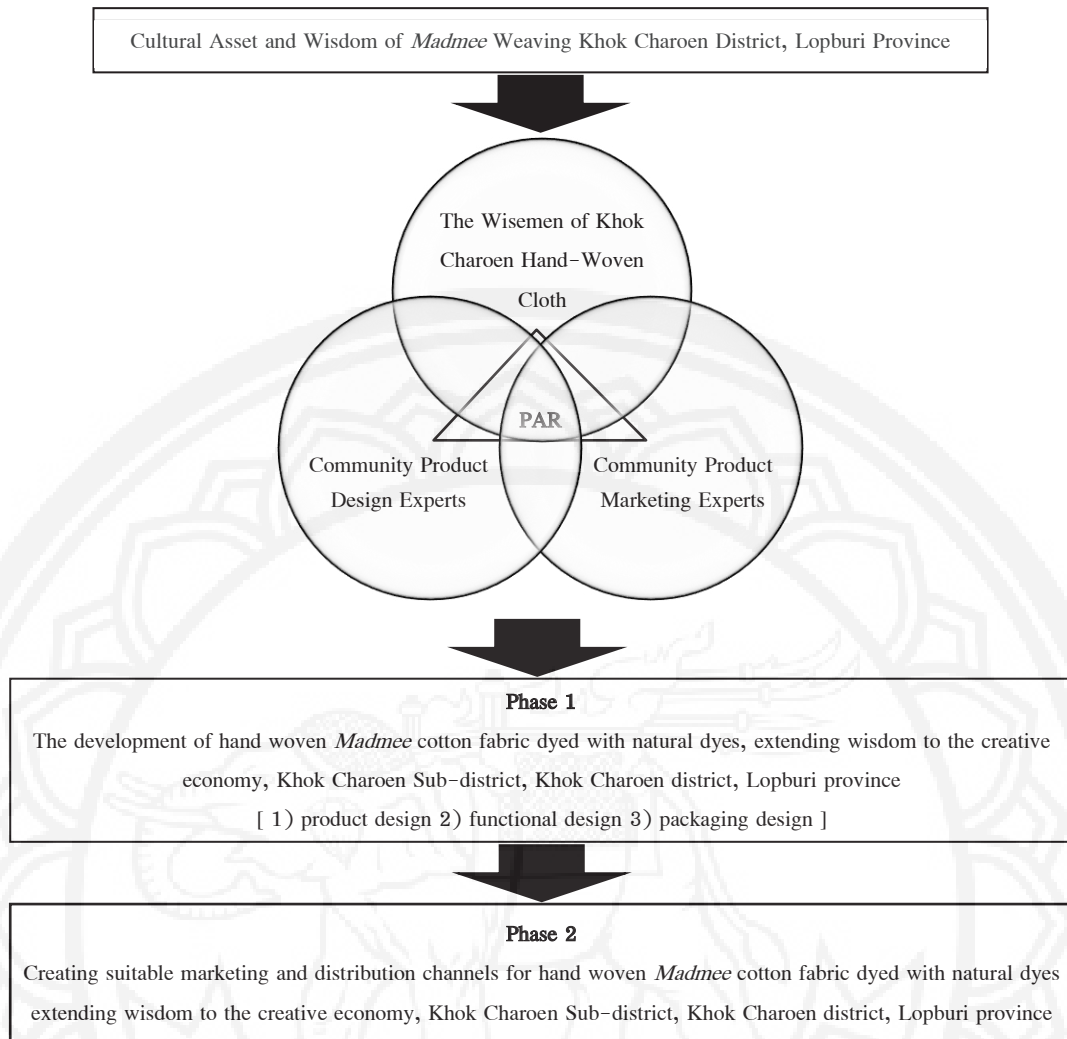


Figure 1 Conceptual Framework

Research Methodology and Development

Participatory Action Research (PAR) was applied according to five important elements of the circle: observation, feedback, plan, action, and sharing (Ampansirirat & Wongchaiya, 2017).

Target Population

According to Participatory Action Research (PAR), the target population is developing stakeholders. The participation is going to be efficient when all sectors are encouraged to participate in learning and taking action (Ampansirirat & Wongchaiya, 2017). Therefore, this research is Participatory Action Research (PAR) with three groups of stakeholders in the development, 20 people in total, as follows;

1. Wisdom holders of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen included three groups of people who were expert on hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen. Eight wisdom holders were selected by snowball sampling. Three wisdom holders were expert in pattern design of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen, who won many prizes at provincial level. Three wisdom holders were expert in development and management of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom.



2. Three experts in community product design were the experts who had community product accomplishment in designing area and experiences in transferring concept and design process. They were selected by snowball sampling from instructors in Department of Product Design, Thepsatri Rajabhat University.

3. Three experts in community product marketing were the experts who had community product accomplishment in marketing area and experience in transferring concept and design process. They were selected by snowball sampling from instructors in Department of Marketing and Computer Science, Thepsatri Rajabhat University.

Methodology and Tools Utilized for Data Collection

According to Participatory Action Research (PAR), the methodology and tools for collecting data usually include at least three methods in order to overcome some limitations and triangulate data. This research therefore collected the data with three methods; participant observation, interview and focus group discussion.

1. Participant observation was utilized to systematically collect and record the data in the context of community, way of life, behavior of people in community, production potential, cultural assets, and wisdom of hand woven *Madmee* cotton fabric dyed with natural dyes. Participant observation was utilized prior and during research process.

2. Interview was utilized for two purposes: first, interaction development by several meeting between researcher and participants until both parties were familiar with and respectful to each other; second, the interview that encouraged participants to explain their situation and experience until matters concerning the research were clear.

3. Focus group discussion was based on group interviews with specified general questions and additional issues added during data collection. The interview was consistent with research objectives by providing opportunity for stakeholders in sharing knowledge and aspect with equality and respect. All focus group participants were provided opportunity and encouragement to take part in giving data and reflecting their aspect. The focus group discussion was conducted for four sessions and there were 10–14 participants in each session as follows:

- 1st session that reflects ideas and aspects on “cultural assets” and “necessity in the development of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy”
- 2nd session that reflects ideas and aspects, and collaboratively plans on “the development for hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy”
- 3rd session that reflects ideas and aspects, and collaboratively plans on “cultural assets” and “necessity in the development of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy”
- 4th session that exchanges knowledge on “the development result of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy”

Data Validation

Reliability in Participatory Action Research (PAR) was considered and verified from 1) ability to truly support all sectors in learning and participating in the research – In this research, there was participation from 20 people in three sectors of important stakeholders in the development; 2) various data sources and study methods – in this research, the initial process was three different methods of data collecting, participant observation, interview and focus group discussion. This data turned into empirical data from systematic study and analysis. The data presented in the group discussion was transparent with independent feedback of ideas, experiences and concepts. The environment and atmosphere encouraged participants to fully express which led to collaborative analysis and interpretation. Finally, the data obtained was accurate and reliable.



Data Analysis

Some data analysis was conducted along with data collecting, and initial result was utilized in designing additional questions for the completeness of research questions. Data analysis is continuous process, happening at the beginning of data collection until the end of data collection. It was conducted according to five elements circle of Participatory Action Research (PAR) (Ampansirirat & Wongchaiya, 2017).

1. Observation applies the systematically collected and recorded data to analyze and depict real situation and behavior. The information and field record must be well understood.

2. Feedback is understanding of real situation and behavior by stepping back and reflecting what has happened. Adequate time must be spent to participate and listen to stakeholders as each has different aspect and interpretation; for example, different development demand. The data on real situation and behavior were discussed for sharing opinion and organized by providing and encouraging opinion sharing with respect. The observation result was compared (from 1st element) to the occurrence and reality by making question, for instance, What is the development that meets our requirement? How can we extend our hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy? After obtaining the explicit conclusion and development direction, the research initial report was published to reflect the ideas to the public.

3. Plan is the data analysis of focus group participants to obtain explicit conclusion to the research questions: “What is the development that meets our requirement?”, “How can we extend our hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom, to the creative economy?” “What are channels for marketing and distribution hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy?” After obtaining clear answers for each research question, participants brainstorm to specify development activities that require implementing, action plan, duration, and person in charge for each step.

4. Action is when the person in charge systematically do according to each step and plan by focusing on the development of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy, marketing and distribution channels, and constant communication to stakeholders to generate understanding, analyze data and follow work progress.

5. Sharing is a very important steps in data analysis to generate opportunity for the stakeholders in this research. The data presented in the group discussion was transparent with independent feedback of ideas, experiences, and concepts. The environment and atmosphere encouraged participants to fully express which led to analysis and interpretation together. Finally, the data obtained was accurate and reliable.

Study Findings

The development result of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom, to the creative economy of Khok Charoen sub-district.

Participatory Action Research was applied according to important circle from observing all occurrences concerning the research issues, reflecting feedback to stakeholders to present the independent aspect and interpretation, analyzing the interpretation to get the same understanding for planning each working steps, doing according to the plan with constant communication and knowledge sharing. In addition, the working progress was analyzed and monitored to improve, reanalyze and reassess the data. This circle is explicit guidelines for the research and development. The stakeholders have participated in all steps from defining problems (development necessity) planning, action (development), and assessment following up to reach to the development. That is, all

research and development process, the stakeholders equally and fairly participated in learning and developing under the research design that generate fair space and relationship.

In the research and development process, especially focus group discussion, the environment and atmosphere were organized to encourage all participants in fully expression. The data presented in the group discussion was transparent with independent feedback of ideas, experiences, and concepts. That is to say, wisdom holders of hand woven *Madmee* cotton fabric of Khok Charoen, share their experiences and expertise. Moreover, experts in community product design and community product marketing shared the feedback from their aspect based on individual knowledge and expertise. This process creates knowledge sharing process and finding resolution for development and interpretation for the same understanding. This process took place formally (focus group discussion) and informally (conversation), and led to satisfaction agreement from all parties as follows.

1. The wisdom of hand woven *Madmee* cotton fabric of Khok Charoen has been improved its outstanding uniqueness of pattern and color. The new contemporary arts patterns were developed to reflect art value and deliberate identity. The fabric is admitted in national level and constantly generates fame and income for the community. Many praises and awards were granted. However, the main problem is economic deceleration. Thus it is necessary to develop hand woven *Madmee* cotton fabric and extend it into creative economy.

2. Wisdom of hand woven *Madmee* cotton fabric dyed with natural dyes is able to be extended and developed according conceptual framework to creative economy. In other word, the product should have great variety of patterns and colors with multi usage purposes than in the past. The packaging should be suitable and show Thai uniqueness combining with internationality, in order to add different value by elaborate packaging. All mentioned is value adding and currently, there are 15 patterns, 28 styles and one design of packaging as follows:

2.1 Four patterns and eleven styles of hand woven *Madmee* cotton shawl dyed with natural dyes have been developed from historical evidence and local archaeology:

- 1) "Thawarawadee Si Thep Pattern" (5 styles from pattern at Si Thep archaeological sites, Petchabun Province)
- 2) "Kankhod Pattern" (3 styles from pattern appeared at the edge of tray with pedestal named Wan Fah, situated at Srisuriyothat Circle, Lopburi Province)
- 3) "Uba Pattern" (1 style from pattern at Wat Phra Sri Rattana Mahathat temple; symbolic temple of Lopburi)
- 4) "Elephant Pattern" (2 styles from archaeological evidences which proved that Lopburi used to be elephant habitat during King Narai the Great period)



Figure 2 Cotton *Madmee* Cloth, Hand Woven,

Thawarawadee Si Thep Pattern

Source: Photo by Researcher



Figure 3 Cotton *Madmee* Cloth, Hand Woven,

Kankhod Pattern

Source: Photo by Researcher



Figure 4 Cotton *Madmee* Cloth, Hand Woven, Uba Pattern

Source: Photo by Researcher

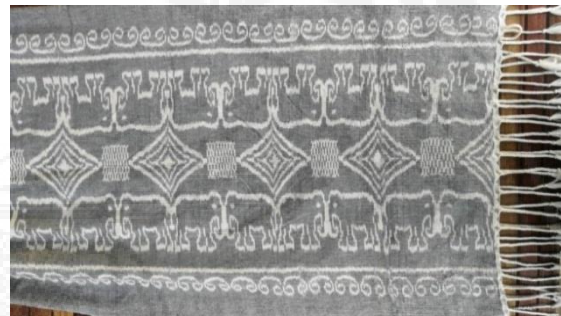


Figure 5 Cotton *Madmee* Cloth, Hand Woven, Elephant Pattern

Source: Photo by Researcher

2.2 Ten patterns and fourteen styles of hand woven *Madmee* cotton shawl dyed with natural dyes have been developed from local weaving wisdom of Khok Charoen sub-district as follows:

- 1) “Louis Pattern” (2 styles)
- 2) “Naga Khokcharoen Pattern” (1 style)
- 3) “Khokcharoen’s Jar Pattern” (1 style)
- 4) “Khokcharoen’s Pine Tree Pattern” (1 style)
- 5) “Kho Khokcharoen Pattern” (1 style)
- 6) “Krajang Khokcharoen Pattern” (2 styles)
- 7) “Sun Flower Pattern” (3 styles)
- 8) “Prajamyam Khokcharoen Pattern” (1 style)
- 9) “Pranarai Rajaniwet Gate Pattern” (1 style)
- 10) “Daokrajay Pattern” (1 style)



Figure 6 Cotton *Madmee* Cloth, Hand Woven, Louis Pattern

Source: Photo by Researcher



Figure 7 Cotton *Madmee* Cloth, Hand Woven, Naga Khokcharoen Pattern

Source: Photo by Researcher



Figure 8 Cotton *Madmee* Cloth, Hand Woven,
Khokcharoen' jar Pattern

Source: Photo by Researcher



Figure 9 Cotton *Madmee* Cloth, Hand Woven,
Khokcharoen' Pine Tree Pattern

Source: Photo by Researcher



Figure 10 Cotton *Madmee* Cloth, Hand Woven,
Kho Khokcharoen Pattern
Source: Photo by Researcher



Figure 11 Cotton *Madmee* Cloth, Hand Woven,
Krajang Khokcharoen Pattern
Source: Photo by Researcher



Figure 12 Cotton *Madmee* Cloth, Hand Woven,
Sunflower Pattern
Source: Photo by Researcher



Figure 13 Cotton *Madmee* Cloth, Hand Woven,
Prajamyam Khokcharoen Pattern
Source: Photo by Researcher



Figure 14 Cotton *Madmee* Cloth, Hand Woven,
Pranarai Rajaniwet Gate Pattern
Source: Photo by Researcher



Figure 15 Cotton *Madmee* Cloth, Hand Woven,
Doakrajay Pattern
Source: Photo by Researcher

2.3 One patterns and three styles of hand woven *Madmee* cotton shawl dyed with natural dyes have been developed independently as “Lifestyle Pattern” (3 styles).



Figure 16 Cotton *Madmee* Cloth, Hand Woven, Life Style Pattern, 3 Styles

Source: Photo by Researcher

2.4 Packaging for hand woven *Madmee* cotton shawl dyed with natural dyes (1 style)



Figure 17 Packaging for Cotton *Madmee* Cloth, Hand Woven

Source: Photo by Researcher

The result of Marketing and Distribution Channels Creation for Hand Woven *Madmee* Cotton Fabric Dyed with Natural Dyes Based on Wisdom to the Creative Economy of Khok Charoen Sub-District

In the research and development process, especially focus group discussion, the environment and atmosphere were organized to encourage all participants in fully expression. The group of experts in development, management and distribution of hand woven *Madmee* cotton fabric of Khok Charoen, presented their experiences and knowledge in marketing and distribution, consumer behavior in each group, and marketing trend and deceleration. Moreover, experts in community product marketing shared the feedback from their aspect based on individual knowledge and expertise. This process created knowledge sharing process and finding resolution for development and interpretation for the same understanding. This process took place formally and informally, and leaded to satisfaction agreement



from all parties. The marketing and distribution channels for hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen Sub-District, were created as follows;

1. Reputation and reliability must be built from certifications and awards from government agencies and others. The products were developed until four of them were selected as five-star products of Lopburi Province in OTOP Product Champion Project 2019. The four products were Thawarawadee Si Thep Pattern, Prajamyam Pattern, Life Style Pattern, and Kankhon Pattern.

2. To be certified for the development of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen Sub-District, the product design of Thawarawadee Si Thep Pattern was requested.

3. Marketing must be promoted by advertising, public relation, and customer accessible media to raise customers' product awareness and demand for hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen Sub-District by:

3.1 publishing 1,000 pieces of pamphlet to publicize the products

3.2 putting two billboards (5.90 meters x 2.90 meters) at the village entrance (signage in front of village) and group's office

3.3 creating 9.30 minutes of animated videos to present the story of community and hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen Sub-District. The video was officially published on 12 December 2019. The video can viewed at <https://www.youtube.com/watch?v=aNSLNin8o1c&feature=share&fbclid=IwAR1ADTisZU45XtwJRYPwd6vqtgyEVgj5ZppgdWCL8DBnsOdgc-KvTkzUEQw>

3.4 selling at the production site: Office of OTOP Weaving Artist Group, Moo 4, Khok Charoen Sub-District, to provide an opportunity for interested people to meet and get information from executives and producers for more accurate and profound information (or the other retail and wholesale distribution: Local Weaving Learning Centre, Moo 4, Khok Charoen Sub-District)

3.5 setting up a booth at trade fairs, research conferences and academic conferences at provincial and national areas (e.g. Thepsatri Rajabhat University and during 15–23 December 2019, hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen Sub-District, was selected to be exhibited and sold at OTOP CITY 2019, Challenger 1–3, IMPACT Muangthong Thani)

4. forming business groups in the same supply chain; for example, selling with community products/ local wisdom products, and community product center, for community products/ local wisdom products exhibition organized on special occasions or festivals, and in other local communities

5. selling via e-commerce channels by creating a homepage for OTOP Weaving Artist Group in order that customers can widely access to products at any time (i.e. due to the fact that OTOP Weaving Artist Group lacked specific knowledge, instructors from Thepsatri Rajabhat University were hired to give some advice, initial operate some work, design, and also training to members of OTOP Weaving Artist Group in data updating)

6. publicizing the product development of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen Sub-District in a form of exhibition (e.g. it was held at Main Auditorium, Thepsatri Rajabhat University, and Vice Governor of Lopburi was an honor president of the event with some interested visitors).



Criticism

1. The wisdom of woven *Madmee* local cotton fabric of Khok Charoen Sub-District is a cultural asset that migrants from the Northeast, developed continuously until it became magnificently unique. It is valuable artwork for society, spirit and economy. The best accomplishment has been approved nationwide, generating good reputation and income for the community. The products receive many praises and awards in many stages and become one of identity for Khok Charoen Sub-District. However, the main current problem is market deceleration; therefore, the hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom need to be developed for the creative economy. This is in accordance with Wasi (2004) who pointed out that attributes of culture and wisdom are varied and unique, depending on each origin in the past. If the communities' culture and wisdom value are well-regarded, it could create pride to own community. Income would be distributed, and economy would be stable; Thai culture is an advantage for the country, and local wisdom and culture is advantage for communities. It is suggested that economy and culture should be combined to play a role in distribution of income. Therefore, the development of hand woven *Madmee* cotton fabric, dyed with natural dyes based on wisdom, has social and economic importance for Khok Charoen Sub-District. This is the opportunity to utilize the advantages of diversity, wisdom identity and culture for generating Creative Economy and Creative Society and further competing other countries in international level.

2. The participation is the most efficient when all sectors concerned provide support, leading to collaborative learning and working (Ampansirirat & Wongchaiya, 2017). Participatory Action Research (PAR) process applied in this research, provided environment and atmosphere that encourage all stakeholders in fully expression. The data presented in the group discussion was transparent with independent feedback of ideas, experiences, and concepts. Wisdom holders of hand woven *Madmee* cotton fabric of Khok Charoen shared their experiences and expertise. Moreover, experts in community product design and community product marketing shared the feedback from their aspect based on individual knowledge and expertise. This process created knowledge sharing process and finding resolution for development and interpretation for the same understanding. This process took place formally (focus group discussion) and informally (conversation), and led to awareness of cultural assets and wisdom of hand woven *Madmee* cotton fabric dyed with natural dyes of Khok Charoen people. The problem and need for development of hand woven *Madmee* cotton fabric dyed with natural dyes were realized, and the development plan and action were done. In addition, the marketing and distribution channels for hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom, to the creative economy of Khok Charoen Sub-District, were created. Finally, all stakeholders collaborate in sharing throughout the research which led remarkable changes.

3. The development result of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy could significantly add commercial value: 1) its outstanding uniqueness of pattern and color have been improved for proper usage of the present time; 2) the products were transformed to meet different usage purposes of present time; and 3) the packaging has been developed to be suitable, showing Thai uniqueness combined with internationality to add different value by elaborate packaging. All mentioned are value adding and currently, there are 15 patterns, 28 styles and 1 design of packaging. This could generate work and income for the community approximately 10,000 baht/month from cultural assets, namely, history, tradition, way of life, livelihood, knowledge and creativity, related to *Madmee* weaving technology of skillful villagers. All of these give Khok Charoen Sub-District uniqueness, wide range of patterns, styles and colors that respond to the need of



consumers and difficulty to imitate. The concept is a guideline to expand economy growth based on knowledge and culture, blended with Thai identity that can increase commercial value and cover economic activities in Thailand. This is relevant to the findings of Chaipinchana (2017) who studied strategy for creating competitive advantage in creative economy of ceramic product group of Chiang Mai Province, and found that one important strategy is the design of new product with its uniqueness by blending culture and local wisdom. In addition, Ngamsakoo & Phollawan (2018) studied knowledge and product development from Thai Song Dum's native textiles in Bandon Subdistrict, U Thong District, Suphanburi Province, and found high level of satisfaction towards the product design and usage proposes from satisfaction survey.

4. The result of marketing and distribution channels creation for hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen sub-district, emphasized marketing promotion by advertising, public relation, and customer accessible media. The aim is to raise customers' product awareness and demand for hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen Sub-District. Various marketing channels and media were utilized, especially creating animated videos to present the story of community and hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen Sub-District. This includes selling via e-commerce channels by creating homepage for OTOP Weaving Artist Group in order that customers can widely access products at any time. In addition, training for members of OTOP Weaving Artist Group in data updating, was organized. This builds competitive advantages in accordance with Petprasert (2007) who suggested that there were many factors affecting career group products. Besides, production factors, the comparative advantages on raw materials, skill and producers' expertise are marketing factors. If the market is unable to be reached, it tends to be unsuccessful. This is related to the findings of Kattiyawara et al. (2017) who studied the development of marketing promotion model with the participation of the community enterprise: a case study of antique oil lamp products in Pongyangkok Sub District, Hang Chat District, Lampang Province. The research revealed that one of suitable marketing promotion was the development of digital media to access new customer groups. In addition, the findings of Chaliewsak et al. (2019) who examined designing and adding value to local products, printed sarong and northeastern sarong, showed that one of important marketing channels was online distribution.

Summary

This Participatory Action Research demonstrated that stakeholders, who are "tri- power for development," actively participate in equal and fair learning and developing under the research design that generates fair space and relationship throughout the whole research process. From observation, feedback, plan, action and share, the problems and needs for development are able to be identified. The development of hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen Sub-District, Khok Charoen District, Lopburi Province, currently includes 15 patterns, 28 styles and 1 design of packaging. The patterns and colors are varied, and the usage purposes are different. The packaging is unique and suitable to its products. More importantly, there are opportunities for developing and creating more marketing channels for hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy, by marketing promotion, form group of business in the same supply chain, selling via e-commerce and propagation.



Acknowledgement

My special thanks of gratitude go to Mr. Winai Patchim who receives “Princess Maha Chakri Award Teacher, Lopburi province”, “Model Person Award in Right Livelihood”, and “Global Teacher Award” from the 3rd Princess Maha Chakri Award Foundation, 2019. My thanks are also passed to the members of local textile weaving group in Khok Charoen Sub-District, including all stakeholders who collaboratively learned from doing and successfully developed hand woven *Madmee* cotton fabric dyed with natural dyes based on wisdom to the creative economy of Khok Charoen Sub-District, with pride. My great thanks are given to Thailand Science Research and Innovation (TSRI) who supported research and development budget for this project. Finally, thanks to Thepsatri Rajabhat University for all the support by allowing instructors and students to participate in the research.

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