Continuation of Local Wisdom in Weaving Reed Mats by Designing Patterns and Development at Community Enterprise of KokMat Transformation in Ban Sang District, PrachinBuri Province, Thailand.

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Abstract
This research was aimed to study context, ways of thinking, principle, wisdom evidence and knowledge management on weaving reed mats of the entrepreneur group and the continuation of adopted local wisdom through the decoration design and development the reed mat products of the Bang Pluang Reed-Mat-Transformation Community, Ban Sang District, PrachinBuri, Thailand. This research was an experimental research. The data analysis was conducted through documents, field study, discussion, observation and practice of participation. The satisfied questionnaires were collected from 50 consumers. The statistics used in the research were frequency, percentage, and average. Results revealed that the context, ways of thinking, principle and wisdom evidence in weaving reed mat were ways of life among people in the community that had been passed over from generation to generation. The production of reed-mat was aimed to sustain the wisdom of families and community that was dependent on in-home labor, local resources, one and other members in the community. In order to maintain this local wisdom in developing the product decoration with geometric shapes, they used archetypical designs of the reed-mat-transformation community entrepreneurs. The product decoration could be adapted and developed for an appropriation in changing tendency of consumption, where it was at a high level with an average of 4.36 and 4.32. It was found that an appropriation in the decoration was good enough to produce for sale, where it was in the highest level with average of 4.24.

Keywords: Continuation of Local Wisdom, Development of Reed Mat Decoration.
Introduction

Despite continuing and long economic development, Thailand’s economic status had been only considered a quantitative growth with inadequacy of standard quality and unbalanced, unsustainable basis. Throughout the last five decades, the economic and social changes had rapidly evolved. They caused people’s loss of confidence on their local wisdom. Apparently, the inappropriate adaptation of modern and so-called civilized culture, including the unbalanced economic development in both macro and micro levels seriously, had had effects on people’s loss of self-confidence and underestimation of their ancestors’ potentials and local wisdom. Basically, human beings’ local wisdom generated from learning and adapting everything around them for survival in natural surroundings. Meanwhile, they should establish and adjust relationship among themselves for equilibrium, mental security, and life smoothness.

Due to the fact that human beings were the special animals who used their own wisdom to solve problems. Incidentally, wisdom still played a pivotal role in accumulating and passing over, and enhancing their experiences. By this “local wisdom” is the core of culture.

Wisdom is body of knowledge, ability and skills of people; it was uniquely accumulated from experiences or clarity on life and local society. Wisdom seemed to be in accordance with locality rather than the outside. Therefore, local wisdom was our everyday experiences, and it had been passed a study process and observation and had crystalized from various kinds of knowledge. Incidentally, “mat” was regarded as weaving handicraft which was unique and could reflect the uniqueness of local wisdom that had been passed on for generations.

Mat weaving occurred from local wisdom which evolutionarily mixed with local resources, namely “reed”. It was used used by local people in their daily life. Formerly, the reed mat was used in home and when it could be produced in a large quantity, its purpose was changed to be a subject to exchange for other goods. Due to a reed mat could response local people’s need for their everyday use, especially those who were agriculturists because it was local utensil which made of local natural materials.

Incidentally, there were more than 350 Rais in Bansang District, Prachinburi Province used for reed plantation. Local people were agriculturists; and reed mat weaving reed was their extra job, part-time self-employment, which was passed down from their ancestors. For local people’s mat weaving, it was found that the reed mat still was mostly produced according to the old techniques which they had received from their ancestors—it was colorless and with no designs.

By this, their reed mat products could not be added for more values. As a result, the community enterprise group wished to develop the unique designs in order to response the current demands and to secure community income as well as to be proud in community uniqueness for sustainable development.
By this, the researcher was interested in local wisdom in reed mat weaving and its designing patterns development of the Reed Mat Enterprise Group in Bang Sarn District, Prachinburi Province in order to promote the members’ profession in reed mat weaving for more modern, beautiful and complicated designing patterns. It was accepted for local uniqueness and appropriate uses. Body of knowledge from local wisdom was used to increase community potential, standardize products, and bring more income to local community for sustainable self-reliance and nation’s secure foundation.

Objectives

- To study the local wisdom of knowledge management on mat weaving of the community enterprise group in Bangsang District, Prachinburi Province.
- To design and develop the unique way of mat weaving in the community through computer program of the mat-weaving community enterprise group in Bangsang District, Prachinburi Province.

Methodology

The present research was an action participation research. The research scope was conducted with sociological concepts and theories, concept of participation, community knowledge management, design development as well as researches on development of reed mat products.

- Research population were 5,719 people from 1,683 families at Bang Pluang Sub-district.
- Samples were 24 people: Chairman of The Ban Pluang Reed Mat Community Enterprise Group, reed mat makers, representatives of the female reed-mat weavers, representatives of reed mat handicraft, suppliers, community leaders, and local people. They were selected by purposive sampling. Also, 50 customers were used by convenience sampling.

Research process

1. Collect basic data from documents, study mat and how to enter community as main information source.
   - Study context, principle and concept of reed mat weaving in community.
   - Study history of community reed mat weaving.
   - Study community’s knowledge management.

2. Study the designs of reed mat
   - Concepts of designing patterns had developed to more complicated and beautiful patterns. It was behavioral process that could be counted from planning, material selection creation method.
   - A study visit from the real manufacturing places, interview of reed mat producers, and determine the concepts for mat designing patterns.
- Determine the design structure by pattern models.
- Set a placement for designs
- Paint in the prepared designs.

3. Try out the prepared design patterns for the field experiment
   - Check out the weaving instruments.
   - Adjust the patterns by changing the curved lines to the straight ones in order to make the designs appears easier.
   - Select the 4 patterns by participation process.

4. Conduct participation action research
   - Determine problems and action research plan.
   - Design instruments and apply for design patterns.
   - Conduct research.
   - Follow and summarize results.

Research instruments for data collecting

Research instruments for data collecting were as follows;
   - Unstructured Interview: It was an interview with open end questions in which the interviewees could express freely their opinions to the given questions. The questions were broad and flexible and a subject to be changed for appropriateness.
   - Adobe Illustrator Computer Program for design of mat patterns.
   - Adobe Photoshop CS Computer Program for design of mat decoration patterns.
   - Questionnaire on customers’ satisfaction: It consisted of two parts.
     Part 1: General information; it was check list on general status namely gender, age, educational background, salary, and occupation.
     Part 2: Satisfaction on the reed-mat design; it was beauty, modernity, colors and use appropriateness.
     Part 3: Opinion; it was a part in which customers could give their opinion freely.

Data Collecting and Checking

The researcher collected data through 4 steps: Study documents, observation, informal interview, and focus group. Also, validity and reliability were conducted through triangulation. It was done in 2 steps: 1) information checking, and2) data collecting.

Data Analysis
Data from documents were analyzed through content analysis approach. For data derived from observation, interview and focus group, they were done through data classification, data comparison, inductive summary, empirical data and action participation research.

Research results

1. According to the study of knowledge management on community’s reed mat weaving, it was found that the knowledge management on reed mat weaving was basic knowledge which had passed on from generation to generation within a family. Offspring received this local wisdom for process and techniques of mat weaving from their ancestors. When they were grown up, they became more skillful. Incidentally, the community’s learning had generated from locals’ intention to improve things for their living. Also, learning resulted from passing on from generation to generation. Improving and solving problems resulted in body of knowledge as follows;

- Knowledge identification: The reed mat entrepreneurs and those who were interested in weaving reed mat came to learn at the Reed Mat Weaving Learning Center, Moo 9, Prachinburi Province. The learning center was formally established under the purposes in boosting potential for group leaders, cultivating awareness on preservation of local wisdom, passing on various knowledge of reed plant in all aspects to youth and other communities.

- Knowledge organization: The reed mat entrepreneurs had joined several training courses organized by provincial government offices, district offices, and the sub-district administrative organizations. Workshops on imitation and applying techniques for development of products were organized for learning new knowledge and technology.

- Knowledge organization: The government and private sectors systematically organized in forms of document like planting process, harvesting, reed rolling, reed dying process, weaving, reed mat transforming process, marketing, supplying, product advertising, and the division of duties according to skills etc.

- Knowledge codification and refinement: The reed mat entrepreneurs created and adjusted the patterns, diminished some design patterns for more appropriateness and beauty, determined the jargon (specific vocabularies) for group’s recognition like plaiting, tie-ding, reed weaving, reed rolling, and reed flicking. Also, adjusting and improving the design patterns were done for product development in order to secure quality and customers’ confidence.

- Knowledge access: Group members were given opportunities to learn more techniques regarding mat weaving from the experienced ones. They covered website creation for product dissemination and access, information board arrangement on production process, income and expenditure board, producing and selling board.

- Knowledge sharing: Due to the reed mat makers would differently have their weaving techniques and development on their reed mat products, the Bang Puang Reed Mat
Enterprise Group played an important role to be the experience-exchange center among its members in order to provide opportunities to learn techniques and to promote skillfulness among its members.

- Learning: After learning from other group members, imitating and producing process would be occurred. Also, the recurrent learning and knowledge increase would be occurred. By this, local wisdom on reed mat weaving would be passed on and caused locals’ incomes.

2. Old Local wisdom with design and development on reed mat decoration

For the design of modern and beautiful decoration with local identity, the decoration of reed mat was done with fast and convenient. The designing patterns were not too big with the proper, beautiful sizes through Adobe Illustration program.

![Picture 2: Adobe Illustrator computer program for creating the mat design tables.](image)

![Picture 3: Placing the picture in the mat patterns and coloring as you wanted.](image)

![Picture 4: Placing the pictures in the mat design pattern and coloring as you wanted.](image)
Picture 5: Coloring all the parts until it was completely done.

These were other 12 designing patterns for reed mat weaving:

![Picture 6: Hearts](image)

Picture 6: Hearts

![Picture 7: Overlaid Edges](image)

Picture 7: Overlaid Edges

![Picture 8: Oval Shapes](image)

Picture 8: Oval Shapes
Picture 9: Lips

Picture 10: Cosmos Flowers

Picture 11: Edged Pearl

Picture 12: Dragonfly
Picture 13: Spider

Picture 14: Peacock Flowers

Picture 15: Nave

Picture 16: Makey
The designing pattern process was an academic creation. For the first step, the impression on nature and environment—plants, flowers, and animals—was developed for new decoration design through the use of geometrical shapes for creating mat designs. For the second step, it was an application of old design patterns into new unique and meaningful ones. For the third step, it was making the design-drawing instruments applied from old tools. By this, the researcher and Mr. Chum Yapadit, Chairman of the Reed Mat Enterprise Group, joined hands to plan an activity operation in accordance with the same objectives and opinions. For the fourth step, it was an action process on mat weaving and passing on knowledge by mat weaving into 4 designing patterns: Peacock Flowers, Crest of Royal Umbrellas, Relationship, and LeurmLawan Design

For analysis on customers’ satisfaction towards 4 new design patterns, it was found that the overall of products was appropriate and able to use in various ways. Customers’ satisfactory level was at 44.

Discussion

1. For the knowledge management on reed mat weaving of the Bang Pluang Sub-district Community, Bansang District, Prachinburi Province, it was found that the establishment of enterprise group was generated from the promotion of both government and private sectors. By this, the well-informed local scholars were put an importance on by community. The old natural decoration of reed mat weaving was developed to be the red and black intertwined stripes and the black and red ones. Afterwards, it was developed to be the chain patterns and flowing water patterns. Also, the techniques on dyeing for Mudmee, kind of Thai silk woven in northeastern Thailand and Takpear, pig tailing, were learnt. Interestingly, this developed local wisdom had been spread out to other interested sub-district communities. The dyeing process was developed for bright and modern design patterns. The study visit and the use of IT for news dissemination among the group members was done. Moreover, the creation of innovation based on old local wisdom was done like the reed mat bags in various shapes and other utensils. Such knowledge management radically caused the establishment of the Bang Pluang Reed Mat Enterprise Group, a community learning center for local people and students. Apparently, its members were enthusiastic to join to showcase their community products at many places like, Thailand’s Business Expo Arena Munag Thong Thani. Not only they took that opportunity to show and advertise their community products, but they also had an opportunity to learn from other product and apply them for their own local
materials. By this, they could develop, standardize, and stabilized their products. Incidentally, knowledge process was an important factor to facilitate organizations or communities for efficient knowledge management. It was obviously found that the management knowledge of the reed mat enterprise group consisted of 7 processes: knowledge identification, knowledge organization, knowledge organization, knowledge codification and refinement, knowledge access, knowledge sharing and learning. As it was earlier explained on the concept of knowledge management, the group members could enhance and exchange knowledge and experiences. Moreover, they could try out, continue to produce and learn for vivid clarity. It made their reed mat products well-known and it brought satisfied incomes for them.

2. Design and decoration development for reed mat: It was found that members of the reed mat enterprise group in Bang Pluang Sub-district, Bansang District, Prachinburi Province had been passed down the old patterns of reed mat weaving from their ancestors. Formerly, it was only the intertwine patterns with red and black colors. Afterwards, it was developed for chain design, three-stripe design, and eel design. Basically, the designs were generated from human beings’ observance to natural beauty; and it became the creative artworks. Concerning creating of design patterns and natural patterns of decoration, they virtually were an inspiration for mat decoration patterns. Anyway, the decoration patterns originally were created by the members of the enterprise group was only the simple ones. Later on, when the opportunities were permitted for them to be trained by the provincial public sectors through workshops and study trips; their designing patterns were complicatedly developed. They were like Mudmee design, plait design, Scot design etc. Also, these new design patterns were developed for others kinds of products. However, the development for new design patterns was very important to add values for products in the age of high commercial competition. For lifting up the local wisdom, the researcher used the concept of natural decoration patterns-plants, animals, and geometrical shapes- through Adobe Illustrator Computer Program for creating mat design tables. Moreover, Adobe Photoshop CS was used for design patterns as follows: Hearts, Overlaid Edges, Oval Shapes, Indian Cork Flowers, Cosmos Flowers, Edged Pearl, Ixora Flowers, Earthenware, Peacock Flowers, The Crest of Royal Umbrellas, Relationship, LeurmLawan design.

For names of designing patterns, the researcher considered from the shapes that they similarly looked like. Initially, names of design patterns would be considered from similarity, weaving, complication, and continuation of the shapes of the design patterns. Also, they could be considered from beauty and natural characteristics of living and non-living things.

Suggestion

1. The study revealed that the decoration design of the Bang Pluang Reed Mat Enterprise Group in Ban Sang District, Prachinburi, designers should put the first priority to the characteristics of product patterns. Due to the fact that the product patterns were a space indicator for decoration and weaving process. Generally, mat products were likely board and could be shown with big decoration patterns. Whereas, other products like bags, dish
mats, saucers, briefcases, tissue boxes, their spaces for design pattern were narrowly limited.

2. Government sectors should join hands to revive, promote and develop all kinds of the mat enterprise groups in Prachinburi Province and in other areas across Thailand. Also, the study of data collecting, group categorizing, producer directory, raw materials, domestic plantation area, consulting and advice, and workshops were in need for development of reed mat enterprise.

3. Government sectors and local organizations should promote their communities to build up and enlarge connection in community in both same and different profession groups. To provide knowledge to community, to promote the wisdom and cultural investment via various kinds of mass media in order to disseminate local wisdom to community, to pass on local wisdom to new generations, and to learn the new processes to solve the problems by themselves for sustainable development were recommended for development of Community’s reed mat enterprise.

**Suggestion for further research**

1. Researchers should study on researches and develop for guidelines for reed-stripe quality development like durability, standard quality, and more efficiency. Furthermore, to build equipment and other labor-saving devices like the reed mat dyeing machine, the reed-stripe dryer etc. were necessary to enlarge the production and marketing bases.

2. Researchers should study how-to for product design and development to community standard.

3. Researchers should study and conduct researches on customers’ specific information in order to secure a real information to respond the current customers’ needs. They were adult, teenage, and foreign customers.

4. Researcher should study and conduct researches to find guidelines of the widespread sale promotion for the reed mat weaving enterprise groups to new target groups.

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References


