

THE BAMBOO HANDICRAFT DEVELOPMENT FOR QUALITY LIFE IMPROVEMENT OF THE YOUTH IN THREE BROADER PROVINCES, THAILAND

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ABSTRACT

This research aims to study the needs of bamboo handicraft occupation of the youth, the transmission of knowledge development in potential enhancing of bamboo handicraft, the prototype development of bamboo handicraft products, and the cost analysis and benefits of bamboo handicraft. The research is qualitative, collected data by interview and participants observation. The keys 33 informants came from the representative of a government agency, the youth caregiver, and the youth of Ban Na Kor, Ayer Weng Sub-district, Batong District, Yala Province. The data was analyzed by interpretation method. The results of the research found that 1) the youth interest in bamboo handicrafts occupation. The inspiration is to work in town, take care of and develop the community, gain more revenue, and have a better life quality. 2) the transmission of knowledge to develop the potential of bamboo handicrafts. The youth need knowledge of bamboo handicrafts as follows; 1) production knowledge, 2) online marketing knowledge, 3) financial management knowledge, 4) accounting knowledge, and 5) knowledge of cost analysis and benefits. The transmission of body knowledge is defined as a "Workshop Training Course under the subject of Business Administration Principles for Community Handicrafts", with 40 hours. 3) the model development of bamboo handicraft products which has designed eight items, namely 1) Yeti glass sleeve, 2) Curved dessert container, 3) Long-shaped dessert container, 4) Square-shaped dessert container, 5) Round dessert container, 6) Storage water cylinder, 7) Lamps, and 8) Bags, and 4) The cost analysis and benefits of bamboo handicraft products found that the average total product cost was 12.39 baht per item. The selling price was set at 25 baht per item, resulting in 12.61 baht, and from the initial investment 3,275 baht, will pay back in a short time. It could be a security occupation for better life quality.

Keywords: Quality Life, Thai Youth, Bamboo Handicraft

INTRODUCTION

Thailand has struggled with an economic crisis, Tom Yum Kung, which occurred in 1997. The people in the country became impoverished and incapable of living standards, which led to changes. Therefore, Thailand's government recognized the distribution of income and enhanced the economy by focusing on local wisdom and sufficiency economy philosophy for population development. The community can produce products and be self-reliant in terms of the local wisdom, which is the knowledge that comes from people's experience through the process of studying, observing, thinking, and analyzing. The wisdom was born and crystallized into a body of knowledge. However, the body of knowledge is dynamic and depends on each era. (Kittipattanawat, 2014). Therefore, the products from local wisdom are created from the knowledge, thoughts, beliefs, and abilities of people in the community, which have been inherited and applied continuously. The products have cultural costs that are worth conservation and development (Manee-oud, 2018). However, the national

development strategy under the 12th National Economic and Social Development Plan (2017-2021) keeps an eye on solving poverty problems and improving the quality of life by focusing on community potential and strength (Bodeerat, 2018).

The key factors of development in Thailand are focusing on enhancing the potential of our youth to be "Virtue Intelligent and Happy" (Smattha, Inthawong & Wong Khamchan, 2009). The 2nd National Child and Youth Development Plan (2017-2021) provide the framework for the children and the youth by improving the quality of life appropriate with their age, physical, mental, emotional, social, and intellectual health, including learning skills creative citizenship, having public consciousness and social development. The children and youth are secure in life (National Child & Youth Development Promotion Board, 2018). However, the youth is the Nation's future who can push our country in progress or step it backward. They are transition period which may have risky behaviors that can have a detrimental effect on their own life and others, and this is due to lack of knowledge, lack of experience, lack of decision-making skills, including family issues, quality of life problems, especially in particular areas, quality of life problems is exacerbated.

The particular area is known as "The Three Southern Border Provinces," which are Yala Province, Pattani Province and Narathiwat Provinces adjacent, and most of the population are Muslims. They are considered the particular area because the insurgency has been known worldwide for more than 15 years. The conflicts cause the population living in remote areas to need to improve their quality of life. The government has to set the poverty solution and improve youth to develop the three southern border provinces (Yotatip et al., 1969). Ban Na Kor community, Ayer Weng Sub-district, Betong District, Yala Province are gathered together to enhance their quality of life, community, and tourism. The tourist attractions such as "Ban Na Kor Hot Spring" are raised to be the main focus, bringing bamboo in the area to create handicrafts such as bamboo beds, chairs, bamboo carriages, bamboo arches to generate income for living. The group consisted of 30 members aged between 18-28 years. The group interview found that the youth in the community intends to improve knowledge and skill to use in the career. Therefore, there is a research question: Are the youth genuinely interested and want to pursue a career in bamboo handicrafts? What knowledge is needed to apply in the development of potential in bamboo crafts? Moreover, what kind of bamboo handicrafts that want to produce and developed? The purpose of this research was to study the needs of bamboo handicraft occupation of the youth in Ban Na Kor, transfer the knowledge to develop the potential of bamboo handicrafts of the youth in Ban Na Kor, develop a prototype product of bamboo handicraft of the youth in Ban Na Kor, Ayer Weng Sub-district, Betong District, Yala Province, and cost and benefits analysis of bamboo handicraft products of Ban Na Kor community. Ayer Weng Subdistrict, Betong District, Yala Province.

The purpose of this research is aimed to study 1) the need for bamboo handicraft occupation of the youth's group, 2) transferring knowledge to develop the potential of bamboo handicrafts, 3) the development of bamboo handicraft prototypes for the youth in particular areas, and 4) the cost and benefits analysis of bamboo handicraft of Ban Na Kor community, Ayer Weng Sub-district, Betong District, Yala Province. This study is in order to a body knowledge and to create value for local wisdom. The youth will be able to secure self-reliance as prosperous and sustainable with a good quality of life.

LITERATURE REVIEW

Handicraft

Thailand handicrafts inherited from the past to the present, developing raw material with practical design and suitable pattern (Leesuwan, 1996). The north, northeast, and central regions have spectacularly designed woven fabric according to local wisdom and wood

carvings, which are outstanding. However, focusing on the south, the handicrafts are typically not outstanding. People do not recognize the value of identity. Therefore, the handicrafts of southern should be inherited or more focusing on promoting the identity value. (Pruek-Udom & Boonyananta, 2020). Handicrafts are an enduring reflection of the local wisdom because each locality has various cultures and traditions. However, wisdom is continually adapted and changed according to the transition era (Kattiyawara, Sombhoo & Samerjai, 2012). The wicker handicrafts are presented in all regions of Thailand (Leesuwan, 1996). They are made in large numbers in the local communities, namely bamboo wicker products, because bamboo is locally sourced. In the past, bamboo was used for household appliances. It is a tool for catching animals. Currently, some groups are made as supplementary occupations as their primary occupations. Producers are gathered to form community products that generate income for families and communities (Rodchuen, 2017).

The development of handicrafts is a process of creative ideas selected for practical use. There are three approaches for developing wicker handicraft products: 1. Develop by focusing on adhering to the traditional identity. There are two aspects; 1) Modify the existing products to be feasible with the present, and 2) Applying what is helpful in the product application with the present. 2. Developed by rearranging the story, and 3. developed by focusing on current usability. It can be divided into; 1) development based on the identity of the original form, which is the development of patterns and usefulness which can maintain the traditional art as much as possible, and 2) the development by rearranging story for example; combined the local basketry with untraditional basketry consistent with usefulness (Kulmala, 2009). The products are invented from the knowledge, thoughts, beliefs, and ability inherited and applied continuously. The product has a cultural cost worthwhile for conservation and development (Manee-oud, 2018). This research applied the traditional identity-based development concept to develop handcrafting products which represents local people's lifestyle and customs in the present time. Even though they have been newly decided, they still have the same or similar utility. It can be stated, however, that the handcrafting products have lesser values in their utilities as a result, other materials are brought to improve their strength, making them more interesting for selling propose.

The Bamboo and Thai Cultural Living

Thailand is a country rich in natural resources with unique cultures and traditions. The culture of living in Thailand is enduring reflect the relationship between human and nature especially the bamboo. The bamboo is the yield of wild which have been used since prehistory. There is evidence from the pottery decorated with bamboo wicker (Suree, 2014). Bamboo in Thailand is classified as 42 species of local bamboo and 17 species from abroad. They are scattered all over the region. Bamboo has been used by Thai people since prehistoric times, not less than 3,000 years. In this day and age, bamboo is still related and connected to the way of living for Thai people in terms of culture, traditions, food, medicines, tools, and earning money (Jerasilp et al., 2019). Bamboo has been dubbed "the poor man's timber" by using it to build houses, furniture, food, musical instruments (Pratya Youngpattana & Rawee Thaworn, 2014). In addition, bamboo is considered an essential economic crop (Siri et al., 2014).

The bamboo handicrafts are cultural and traditional with a long history, playing an essential role as cultural heritage (Jerasilp et al., 2019). They are said to be the key to sustainable development in the twentieth-first century (Chudasri, Walker & Evans, 2011). Bamboo wicker handicrafts are products that reflect the famous wisdom and generate income for the community cause. Initiating job opportunities, creating sustainable income in the family, and building a solid community (Sarasook, 2014) reflect the culture and creativity. Thai ancestors used bamboo to create patterns by raising the hammers across the hammers (Sangsod et al., 2020). However, the Western came to replace traditional Thai culture,

changing the way of life in the community, the wicker or basketry is declining. To inherit wisdom, enhancing knowledge in the community is a must focus. Therefore, this research has promoted knowledge for youth in the Ban Na Kor community to know about bamboo basketry production, including the necessary occupational knowledge, to continue the wisdom and improve the quality of life.

The Quality of Life

The youth can be defined as the person's ages between 18-25 years old, a valuable resource and essential empowerment of country in the future. In Thailand, the National Child and Youth Development Plan No. 2 2017-2021 has been developed, a framework for improving the quality of life suitable for all ages in terms of physical, mental, emotional, social, and intellectual health by adhering to the main principle is "Children and youth are centers of development," promote and provide opportunities for self-discovery, know their needs, and be able to truly develop their potential, including awareness of rights, duties, and responsibilities in order to be creative participate in solving social problems. Therefore, the process is to raise the quality of the human by developing people to grow with quality and having values consistent with an excellent social norm, being a good person, having good health ethical discipline, and have a good conscience towards society, including skill development as well as raising the level of participation of children and youth to create power in community and social development processes (National Child & Youth Development Promotion Board, 2018).

Quality of life means living at an appropriate level according to the basic needs of human society, which adequately satisfies the physical, mental, emotional, social, and thought needs and able to live in harmony with society appropriately without being a burden. Be able to live by the environment, social values, righteousness, and can fix problems. They should be taught to pursue what they desire to obtain properly under the available resources for their happiness and mental health (Kunto, 2013). However, according to the 12th National Economic and Social Development Plan, the national development strategy has a fundamental goal of solving poverty and improving the quality of life of people in the country. Their purpose is to provide stability in the community economy by integrating production processes on the potential and strength of the community, creating new entrepreneurs through knowledge development (Bodeerat, 2018). This research has developed knowledge in 1) The production and the development of bamboo products, 2) marketing management, 3) financial management, and 4) accounting, cost and benefits analysis. This is to provide a quality of life to the youth, responding to their needs both physically and mentally to satisfy their life and be beneficial for society.

RESEARCH METHODOLOGY

Data Collection and Analysis

This qualitative research collected data at Ban Na Kor community, Ayer Weng Sub-district, Betong District, Yala Province. The key informants are two government agencies, a caretaker of youth, and the group youth member of Ban Na Kor, 30 people, a total of 33 people. The research was collected by the purposive sampling method. The research instruments were interview observation, focus group discussion, and snowball sampling. The researcher collected data by studying the need for bamboo handicraft occupation, the transferring production knowledge of bamboo products, the development process of handicraft prototypes, and the cost and benefits analysis. The data was collected, and consistency was analyzed. However, the data was analyzed along with ongoing interviews to gather new insights. The data were continuously compared, and as the study progressed, new

questions about emerging issues were considered. Therefore, the interview will be adjusted to match the information provided by the informant. There are steps as follow;

The first stage: study the general condition of youth groups in the three southern border provinces. The key informants are representatives from government agencies by focus group discussion. The group size consisted of four members, and the interview was semi-structured. The interview took place in 70 minutes. If the participants could not answer some questions, but other people could provide information, the researcher then used snowball sampling to interview a caretaker of a youth group recommended by a government agency. A semi-structured interview was used to gain insights information about youth groups. The interview took time for 45 minutes; the data were analyzed by interpretation.

Second stage: study the need for bamboo handicrafts occupation of the youth groups. The main informant was Ban Na Kor Youth Group, Ayer Weng Subdistrict, Betong District, Yala Province, using group discussions by dividing into five groups of six people each, spending 50 minutes to collect data of the need of bamboo handicrafts occupation, the needs knowledge development in handicrafts products, and the development of products by using semi-structured interview, the observation and interpretation analysis.

Third stage: transferring body knowledge of enhancing the potential of bamboo handicraft by passing down body knowledge to the youth group of Ban Na Kr, Ayer Weng Sub-district, Betong District, Yala province with 30 participants, 40 hrs. The body knowledge consists of 1) Production and development of bamboo products, 2) Marketing management, 3) Financial management, and 4) Accounting, cost and benefits analysis. However, the transferee is a professor who has qualifications appropriate with the body knowledge.

Fourth stage: the development and creating the prototype of bamboo products. The critical informant is the youth group of Ban Na Kor by using focus group discussion. The group separated into five groups with six members per group, took time 40 minutes to gathered information of development framework and prototype creation of bamboo product by using semi-structured interview and observation, analyzed data by interpretation to utilize the framework for development, and create a prototype of bamboo products consistent with the need of youth group.

Fifth stage: Accounting, cost, and benefits analysis of bamboo products using production record to create cost and benefits analysis account.

The proper protection of informants, information from interviews requires the consent of the informant. The researcher provided the right to the informant by statement and rights reservation. The research objectives were described, the different stages of the research, the use of the data. The informants feel free to participate in research or draw from research that does not affect the informant. For the informants' information, the researcher clarified to the informant that the real name was not disclosed but will use a pseudonym instead to protect the privacy of the contributors. The researcher requested the informants' permission before recording audio or taking notes and the use of information for discussion or publication will be done in the general overview only in academic presentations. The interviews were recorded and verbatim script by the researcher. All transcripts are read and written separately. After the first reading, codes were assigned to categorize them.

RESULTS

The results of the studying in the needs of bamboo handicraft occupation of the youth, the transmission of knowledge development in potential enhancing of bamboo handicraft, Product development of bamboo handicraft prototypes for youth groups, and the cost analysis and benefits of bamboo handicraft can be shown as followed;

The Needs of Bamboo Handicraft Occupation of the Youth Group

The data was collected from the youth group of Ban Na Kor, Ayer Weng Subdistrict, Betong District, Yala Province because the location is in the insurgency area, causing the unstable quality of life. The research was conducted by focusing on group discussion to interview representatives of government agencies, the youth group caretaker, and the youth groups to examine their background and answer the need for bamboo handicraft occupation. It can be found that the representatives of government agencies and the caregivers of the youth groups provided information consistent with the youth groups. This is because the youth groups want to pursue a career in bamboo handicrafts.

The need for bamboo handicraft occupation of the youth in Ban Na Kor came from the idea of stay close to the home. The youth do not want to go to the city and want to take care of their community. They have the idea of developing a community, earn money for the family's revenue, taking care of the family to meet the best quality of life. This is the beginning of the youth in the Ban Na Kor area to form a youth group. Firstly, a group of youths took care of a tourist attraction called "Ban Na Kor Hot Spring," free open for tourists, and the facilities have been provided by the youth group. However, the occupation and income generated from the tourism service have not yet arisen. Youth groups, therefore, try to create jobs for more income. There are many natural bamboos in the community area, but they were toppled and burned by people. Surprisingly, the bamboo in that area could not be eliminated. Therefore, bamboo is said to be an unwanted "weed" that cannot be destroyed. Therefore, youth groups must focus on bamboo because if used to produce handicrafts for sale, it was considered the raw materials to save production costs. The bamboo in the area is a species of "Kim Sung" that can produce handicrafts. The youth in Ban Na Kor are male with the age range of 18-28 years, making the large piece of bamboo product and takes a long time. The manufactured products such as beds, chairs, litter, porches, pavilions, or kiosks will be produced according to customer orders. The orders from customers are few because they accept large products that take a long time to produce long service life, and the only way to receive production orders is by phone. Consequently, compensation will take as long as the production time until the finish, including selling at a lower price than the market. For small items such as kitchen tools, souvenirs, and items that have never been produced by hand, the youth group's inspiration in creating bamboo handicrafts is to protect the environment. The youth group will select the only bamboo with suitable characteristics to produce products and is currently being replanted. In addition, the use of bamboo to produce workpieces can be naturally biodegradable, which agrees to be friendly with nature.

The reason of the need bamboo handicraft occupation of the youth in Ban Na Kor came from the idea of creating community secure, community's revenue and quality of life, to be a better community "A sense of patriotism " cultivate the youth of loving family, do not leave the community to work in the cities. However, in various occupations, the entrepreneurs must have knowledge in business operations such as group management knowledge, production knowledge marketing knowledge, financial management knowledge, accounting knowledge, and cost and benefits analysis which youth groups need knowledge in production, online marketing, financial management, accounting, cost, and benefits analysis especially the production knowledge because the youth groups want a short time of production in bamboo handicrafts with a modern look and can generate continuous income.

The Transmission of Knowledge Development in Potential Enhancing of Bamboo Handicraft for the Youth Group

The transfer of body knowledge can be classified into five aspects as follow; 1) production knowledge, 2) marketing online knowledge, 3) financial management knowledge, 4) accounting knowledge, and 5) cost and benefits analysis knowledge. The transmission

process is focused on a workshop by describing together with role-playing and practice. It is determined as course namely "The workshop of principles business management for handicraft in the community" which has been shown as (Figure 1).



FIGURE 1
THE PICTURES OF TRANSFERRING BODY KNOWLEDGE OF PRODUCTION, MARKETING, FINANCIAL MANAGEMENT, AND ACCOUNTING

Product Development of Bamboo Handicraft Prototypes for Youth Groups

A prototype product of bamboo handicrafts from the Ban Na Kor youth group came from the group's creativity after receiving the body of knowledge. The product design is functional and valuable, which can indicate the purpose of use. The group member can be divided into eight groups for brainstorm and create prototype products as eight pieces, namely 1) Yeti glass sleeve, 2) Curved dessert container, 3) Long-shaped dessert container, 4) Square dessert container, 5) Round dessert container, 6) portable bottle warmer, 7) Lamp, and 8) Bag as shown in Figure 2.

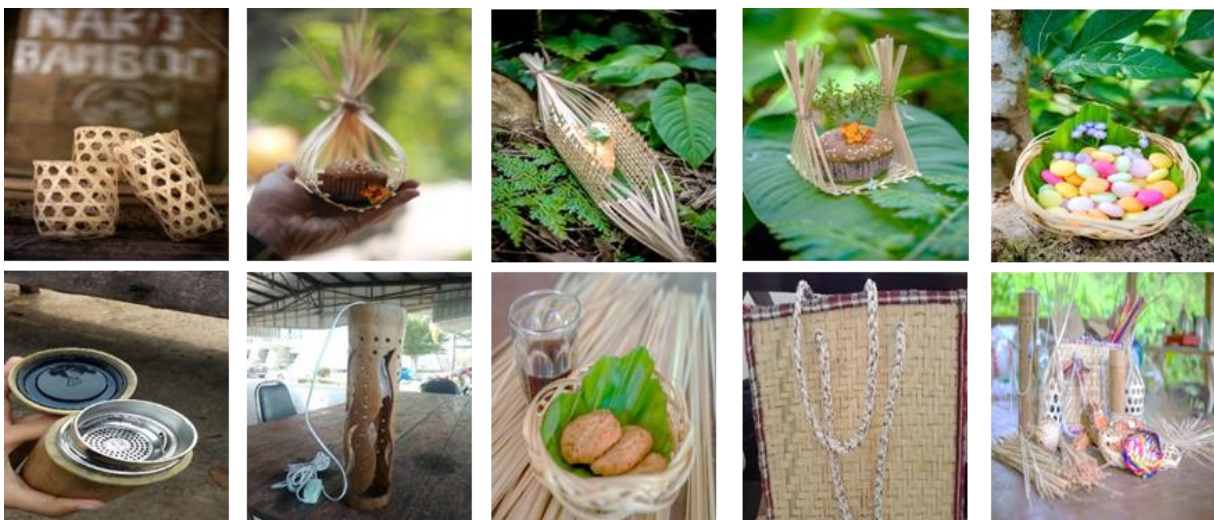


FIGURE 2
THE PICTURES OF BAMBOO HANDICRAFT

The pattern of bamboo products development, as can be shown in Figure 3

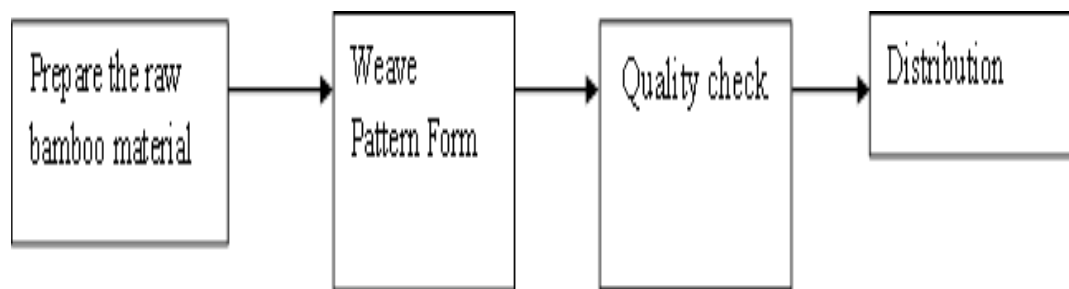


FIGURE 3
THE SUMMARY PRODUCTION PROCESS OF BAMBOO WICKER

There is a pattern and production process for each product. The research recorded the production process only around the dessert container because it is the most exciting product that the youth group focuses on. It is consistent with the need for development because it takes a short time, modern design, continuous earning income. The details of each process can be described as following;

1) Prepare the raw bamboo material by cutting each long 100 cm diameter 3-4 inches and 1 cm thickness. The bamboo was cleaved in half; the fiber inside the node was eliminated until the bamboo was smooth altogether. The next stage brought cleave machine, the critical equipment to pull bamboo stripes because it can help bamboo stripes have all the same size. The bamboo stripes should have 0.5 cm wide, 0.1 cm thick. After finish, the mentioned process washed all bamboo stripes and sunny dry for three days, and then the readiness of bamboo stripes was prepared for production.

2) Weave the product by bringing 18 bamboo stripes and weave them into a hexagon pattern; it is the same pattern as old round bamboo baskets. The hexagon patterns are weaved at 19 blocks then switched bamboo stripes which weave from upper to lower than from lower to upper. Continue by holding the rest, bending it up to a curve or perpendicular around it to see the line of woven bamboo stripes for crossing other bamboo stripes line. Consequently, bring the curved part to cross alternately by placing the hand below the three bamboo stripes and allowing grabbing the following three bamboo stripes and pulling the hand towards the body, and swirl the end of bamboo stripes to insert it in the hexagonal block, do this until it has completed. After the woven stripes are completed, the remaining part that has not been pulled is the stripes at the bottom of the hand. Next, grab the remaining bamboo stripes in every three stripes, and insert them in the hexagonal block, having to bend in the opposite direction to the first round. Do it until it is completed on all sides. Then use the hands to keep the shape firmly and beautifully rounded gently. Next, bring the remaining strands to insert alternately to keep the strands from appearing, and use the hands to shape them firmly again. The tip of the inner bamboo stripes that pops out, it can be cut off or eliminated. After the product is completed, it can be rechecked by observing the bamboo stripes have come off or loose.

3) The quality inspection, refinement, strength, and beauty can be done together with the procedure. Some pieces are small, not considered a lack of quality but can sort the sizes to sell at different prices. However, if the products have different sizes, for example, some workpieces are large.

4) Distribution, this product is for food containers; it may or may not touch with food. The bamboo stripe must not contain antifungals or varnish to enhance its beauty. This is for the consumer's health. In cleaning and drying, the bamboo stripes, which have sunny dry for about three days, will cause the bamboo stripes to dry slowly without causing mold.

Therefore, the finished product must be sent to the customer for use immediately, which the youth group produces according to the production order.



FIGURE 4

THE PROCESS OF PRODUCT PROTOTYPE OF BAMBOO HANDICRAFT

The Cost and Benefits Analysis of Bamboo Handicrafts for the Youth Group

Information on costs and expenses of bamboo handicraft products that result from this presented as round dessert containers is divided into three parts: 1) initial investment costs, 2) production costs, and 3) selling and administrative expenses.

Initial Investment Cost

The initial investment cost is used as an investment for the purchasing tools and equipment with an amount of 3,275 baht and depreciation at 1,675 baht per year and depreciation per month at 139.58 baht per month. The depreciation expense is calculated by the straight-line method.

| Item | Quantity | Price/Baht | Total cost | Expectation of using (year) | Depreciation Price/Year | Depreciation / Month |
|----------------|-----------------|-------------------|-------------------|------------------------------------|--------------------------------|-----------------------------|
| Saw | 3 | 250 | 750 | 2 | 375 | 31.25 |
| Machete knife | 5 | 160 | 800 | 2 | 400 | 33.33 |
| Basin | 2 | 50 | 100 | 1 | 100 | 8.33 |
| Cleave machine | 5 | 320 | 1,600 | 2 | 800 | 66.67 |
| Total | | | 3,275 | | 1,675 | 139.58 |

Production Cost

The cost of bamboo handicraft production consisting of direct raw materials, direct labor cost, and production costs which are shown as a round dessert container with an estimation as follows:

Raw Material

The total of direct raw materials is 30 stakes per month (80 cm per stick, 4 inches diameter, and 1 cm thickness, making bamboo stripes 80 cm length, 0.5 cm width total 255 stripes). The cost of raw materials is 3,000 baht. Therefore, one bamboo stick can be

produced in 14 round food containers (1 piece uses 18 stripes), producing 420 pieces per month.

Quantity of bamboo per piece = (total raw materials per month / product quantity per month) x 14 pieces

$$= (30/420) \times 14$$

$$= 1 \text{ bamboo stick per 14 pieces}$$

The average cost of direct raw material per piece = total raw material cost/number of pieces per month

$$= 3,000/420$$

$$= 7.14 \text{ baht/piece}$$

| Raw material | Quantity (Stick/Month) | Price (Baht) | Investment cost | First Month | Second Month | Third Month |
|-----------------------------|------------------------|--------------|-----------------|--------------|--------------|--------------|
| Cost of raw material | | | | | | |
| Bamboo | 30 | 100 | 3,000 | 3,000 | 3,000 | 3,000 |
| Total | 30 | 100 | 3,000 | 3,000 | 3,000 | 3,000 |

Labor Cost

Direct labor cost consists of production labor cost; using one person to produce around a food container takes 15 days. Therefore, one month can produce one round with a direct labor cost of 1,467 Baht/round.

| Raw material | Quantity | Price per item | Investment cost | First Month | Second Month | Third Month |
|--------------|------------|----------------|-----------------|--------------|--------------|--------------|
| Labor cost | 420 | 3.49 | 1,467 | 1,467 | 1,467 | 1,467 |
| Total | 420 | 3.49 | 1,467 | 1,467 | 1,467 | 1,467 |

The minimum wage of Yala Province in 2021 is at 313 Baht

Total labor cost = minimum labor cost per day × number of hours produced per day

$$\text{Minimum number of labor hours per day} = \frac{313 \text{ baht} \times 2.50 \text{ hours}}{8 \text{ hours}}$$

$$= 97.81 \text{ baht/day}$$

$$= 97.81 \times 15 \text{ days}$$

$$= 1,467 \text{ baht/month}$$

$$\text{Average labor cost per piece} = \frac{\text{total labor cost}}{\text{number of pieces}}$$

$$= \frac{1,467}{420}$$

$$= 3.49 \text{ baht/piece}$$

The Production Cost

The production cost consists of water expense, electricity expense, depreciation equipment; the total production cost is 199.58 Baht per month.

| Table 4 THE PRODUCTION COST | | | | | | |
|--|-----------------|-----------------------|------------------------|--------------------|---------------------|--------------------|
| Raw material | Quantity | Price per item | Investment cost | First Month | Second Month | Third Month |
| Water | 20 | 3 | 60 | 60 | 60 | 60 |
| Equipment depreciation | - | - | 139.58 | 139.58 | 139.58 | 139.58 |
| Total | | | 199.58 | 199.58 | 199.58 | 199.58 |

The Cost of Distribution and Management

The cost of distribution and management is the cost of packing materials (plastic bags) and shipping costs. The distribution and management expenses of the product are 240 baht per month.

| Table 5 THE COST OF DISTRIBUTION AND MANAGEMENT | | | |
|--|-------------------------------|--------------------------|---------------------------------|
| The cost of distribution and operation | Quantity / unit (Baht) | Price/Unit (Baht) | Total price/Month (Baht) |
| The consumable cost (plastic bag) | 30 | 18 | 540 |
| Total | | 18 | 540 |

Total Investment Product

The total cost of bamboo handicraft products consists of raw materials, direct labor costs, production cost, and distribution and management expenses as 5,206.58 baht per month.

| Table 6 THE TOTAL COST INVESTMENT PRODUCT | | | |
|--|----------------------------------|-------------------------------------|-------------------|
| No. | Detail | Investment cost/Month (Baht) | Percentage |
| 1 | Raw Material in production | 3,000 | 57.62 |
| 2 | Direct labor cost | 1,467 | 28.18 |
| 3 | Production cost | 199.58 | 3.83 |
| 4 | Distribution and management cost | 540 | 10.37 |
| | Total | 5,206.58 | 100.00 |

The Benefit

From the interviews with the youth group, the selling price of the product is set at 25 baht per piece. The total sales volume of the product is approximately 420 pieces per month, and the sales revenue is 10,500 baht per month. Therefore, from the previous data can be analyzed revenue from selling product of production cost, distribution cost, administrative expenses including net profit and loss, which can be shown in the table as follows;

| Table 7 | | |
|---|--------------------------|---------------------|
| THE RESULT ANALYSIS OF PRODUCTION BENEFITS | | |
| No | Detail | Price (Baht) |
| 1 | First investment | 3,275 |
| 2 | Net cash flow (12 Month) | 126,000 |
| 3 | Payback period | 1 month |
| <p style="text-align: center;">Note: *Net cash inflow = monthly income x 12 = 10,500 x 12 = 126,000 baht</p> <p style="text-align: center;">Payback period = (initial investment/expected cash inflow within 1 year)</p> <p style="text-align: center;">Payback period for investment = 3,275/ 126,000 = 0.02 = 1 month</p> | | |

From the table, it can be shown that the product has a payback period of 1 month.

After creating a bamboo handicraft prototype, the researcher had the youth group work for three months, and the investigator monitored the group's progress. We found that the group was assigned members to take care of financial issues. Furthermore, it provides information to the group about the financial situation, Accounting, and costing. The group has designated its members as household accountants following the Sufficiency Economy Philosophy of King Bhumibol Adulyadej of Thailand. Costing and selling prices are more accurate. Online Marketing Issues because the youths are in rural areas Found a problem with the internet signal. Furthermore, equipment is used to go online. As a result, and the current distribution channel remains the same, customers have to use the phone to order products and use the word-of-mouth model for creativity to upgrade the transition from bamboo to renewable energy. The researchers used to provide additional knowledge and advice during the knowledge transfer. We found that youth groups were able to develop and upgrade their knowledge. The ability beyond the researcher's goal is that the group can successfully convert bamboo to a renewable energy gasifier, which Thailand and the world support in creating renewable energy to save the world, as shown in Figure 4.



FIGURE 4
CONVERTING BAMBOO TO RENEWABLE ENERGY GASIFIER

DISCUSSION AND CONCLUSION

Handicrafts are recognized as a solution to sustainable economic development because they create employment opportunities, especially in rural areas. Therefore, the production of traditional handicrafts benefits the country's economy, society, culture, and environment in the context of sustainable development (Oluwayemisi & Mziwoxolo, 2018) to lift life quality. This research was studied with the youth group of Ban Na Kor, Ayer Weng sub-district, Betong district, Yala province. The research findings on the need for a career in bamboo handicraft revealed that youth groups desire a career in bamboo handicraft. This is because young people want to have a better quality of life. After all, the particular areas of the three southern border provinces, namely Pattani, Yala, and Narathiwat, have insurgency for ten years in a row. It affected Ban Na Kor, Ayer Weng sub-district, Betong district, including the communities located on the hill far from urban communities. Most of the youth groups are under-educated and are in the age range of 18-28 years. However, joining youth groups to take care of and develop their home communities is the main objective of creating a group; it creates jobs and careers and generates sustainable income for themselves and the community. In the past, youth groups have worked together to take care of tourist attractions that have an essential identity, a hot spring. Nearby, natural mountain water is flowing through, but the attractions are still not unknown and open free of charge. This is another important reason because youth groups and people in the community are still unable to generate income. Youth groups must look for new approaches for creating a better quality of life. They saw bamboo as useless material which people in the community did not want. Then they brought bamboo to produce the furniture. However, it takes a long time to be successfully produced, and a lack of the knowledge to make a cost-benefit analysis leads to unable to determine the correct price. The selling price is, therefore, lower than the general market. Therefore, the youth group needs a career in bamboo handicraft and the knowledge that can help a successful career.

The study of transferring potential development of bamboo handicrafts found that in need of bamboo crafts occupation, the youth group still lacks knowledge in various fields. This may be because the youth group has young age. Most of them are between 18-22 years, causing a lack of knowledge and lack of experience and worry occupational insecurity for financial management. The youth group is unaware that there is funding from various sources. To support money for a business. However, they have to know how to manage money for its best worth. For the accounting, the youth group assigns one member to be the accountant, while the rest cannot understand how important it is and do not know how the process is set up. In the cost analysis, the youth lack understanding of which costs that has been calculated. At present, the group has paid the shipping cost by themselves but not calculated in the production cost, leading to the incorrect price, which is cheaper than the market. The youth group would know about online marketing; however, the spatial restrictions on the accessibility of internet signals and equipment to support marketing online are not ready. However, knowledge transfer is still happening because it is crucial and can support when the future is more ready. In terms of production and design, the youth group wants to produce and design bamboo handicrafts with a small size that takes less time and can be sold continuously, becoming a revolving income. From all previously mentioned, there is the knowledge transfer project for developing the potential of bamboo handicraft training activity in a workshop under the topic business management for community handicrafts. The duration of the training is 40 hours, emphasizing the process of producing bamboo sticks, bamboo weaving, and design of bamboo handicraft products to meet the demands of developing knowledge of the development of knowledge and ability to create stability in the community economy (Bodeerat, 2018) and create a good quality of life in the future.

The development of product prototype for bamboo crafts of the youth groups, it was found that the member of the youth groups can be divided into eight subgroups developed eight prototype products, namely 1) Yeti glass sleeve, 2) Curved dessert container, 3) long-shaped dessert container, 4) square dessert container, 5) round dessert container, 6) portable bottle warmer, 7) lamp, and 8) bags. The youth group has set guidelines for selling the products at the tourist attraction area Ban Na Kor, Hot Spring. The distributors for the prototype product development process will receive production orders to send to customers and distribute to people in the community to help produce and youth groups. They started by preparing bamboo raw materials, weaving, quality inspection, and distribution. The products designed will be responsible for the environment and the ecosystem, which is based on research from the Oluwayemisi & Mziwoxolo (2018).

The cost and benefits analysis of bamboo handicraft products found that the cost analysis production is divided into direct raw material, direct labor cost, and production costs which took the example of a prototype product developed as around dessert container to analyze in order to assess the cost and benefits that will occur by estimation for the month. The estimated number of products produced per month is 420 pieces, resulting in a cost of raw materials of 3,000 Baht, direct labor of 1,467 Baht, and production costs of 199.58 Baht. In addition, selling and administrative expenses are 540 baht, resulting in a total product cost of 5,206.58 Baht, cost per product of 12.39 baht for the resulting return. If there is an initial investment of 3,275 baht, it can be sold for the whole year as a net cash inflow of 126,000 baht. The payback period will take only about one month. For the time to pay back, it can be seen that it takes a short time to pay back the investment. However, the production uses only 15 days of production per month. If it is produced throughout the month, it will create revenue, and the payback period is faster, and if there is a large amount of production, the production cost will be reduced.

New knowledge from research

1. The process of producing bamboo handicrafts, as shown in Figure 3, begins with the preparation of raw materials, which is to prepare the bamboo to make bamboo sticks, by cutting the bamboo into small pieces and eliminate the splinter at the bamboo node, after that use cleave machine to cleave the bamboo as stripes, then strands and clean them with plain water and sunny, dry them and readiness to use. Subsequently, the strands that have been thoroughly dried in the sun are then weaved. Formed into various types of products and monitor the quality, strength, refinement, and distribution markets.

2. The training workshop on business principles for crafting community, 40 hours, has content about the history and unique handicrafts of Thailand, the management principles for the operator community, materials and equipment for the production of bamboo handicrafts, the process of producing strips of bamboo, the woven bamboo product, the design of the bamboo craft, principles and methods of financial management, marketing and distribution channels, accounting income – expenses, production cost and benefits analysis on investment. However, the hours of theory and training arising from the practice in the area.

| Contents | Hrs. | |
|---|--------|----------|
| | Theory | Practice |
| 1. Theory and identity if Thai handicraft | 1 | - |
| 2. The principles of community administrative | 2 | - |
| 3. Raw Material, Equipment to product bamboo handicraft | 1 | - |

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| 4. The process of bamboo stripes | 2 | 6 |
| 5. Woven bamboo stripes | 1 | 6 |
| 6. Designing bamboo handicraft product | 1 | 6 |
| 7. Principles of money management | 1 | - |
| 8. Marketing and distribution Channel | 1 | 2 |
| 9. Revenue account | 1 | 2 |
| 10. Investment cost analysis | 1 | 3 |
| 11. Total benefits analysis | 1 | 3 |
| | 12 | 26 |
| Total | 40 | |

Suggestion

1) The local authorities should raise more promotion in bamboo handicraft product both tools, equipment, and funding, including modern knowledge in order to apply in operations

2) Agencies responsible for short-term courses in the three southern border provinces have to add the curriculum of bamboo handicrafts that can meet the needs of people in the study area. It can be a way to increase potential and a way improve quality of life.

3) Study the patterns of weaving bamboo handicrafts in each style for three southern border provinces to gather knowledge and find the similarities or differences in another area because there are unique cultures with unique characteristics in the three southern border provinces.

4) Should study more about the supply chain for bamboo handicraft to the upstream, midstream, and downstream process to be a framework and apply in operations.

REFERENCES

- Bodeerat, C. (2018). The development guidelines for small and micro community enterprises of Ban Tao Hai Pottery handicraft group at Muang District, Phitsanulok Province. *Humanities and Social Sciences Journal of Graduate School, Pibulsongkram Rajabhat University*, 12(2), 388-408.
- Chudasri, D., Walker, S., & Evans, M. (2011). *An Overview of the Issues facing The Craft Industry and the Potential for Design, with a Case Study in Upper Northern Thailand*. Chulalongkorn University.
- Jerasilp, S., Boonpracha, J., Wongtanaporn, P., Ratanavadi, S., & Duangin, J. (2009). A Study of Thai Handicraft Souvenirs that Meet the Western European Tourists ' Satisfaction in Rattanakosin Area and Inner Bangkok Zone. *The 2019 International Academic Research Conference in Vienna*, 138-143.
- Kattiyawara, K., Sombhoon, A., & Samerjai, W. (2012). The Study of Local Wisdom in Making Traditional Vegetable-Oil-Lantern, Case Study: Pongyangkhok Sub-District, Hang Chat District, Lampang. *Lampang Rajabhat University Journal*, 1(1), 67-76.
- Kittipattanawat, J. (2014). The development prototype of products and packaging of community enterprise in Sankampaeng District, Chiang Mak. *Rajabhat Chiangmai Research Journal*, 15(2), 102-114.
- Kulmala, A. (2009). A study of guidelines for developing local handicraft products of Bamboo Basketry for commercial value-added purpose in the lower area of the northern region. Maha Sarakham: *Maha Sarakham University*.
- Kunto, N. (2013). *Quality of Life of People in Community Health Care Area of Medical Development Clinic*. Burapha University.
- Leesuwan, V. (1996). *Basketwork in Thailand*. Bangkok. O.S. PRINTING HOUSE CO., LTD.
- Manee-oud, P. (2018). A Creation of Bamboo Products to Add Values for Namsong Community in Payuhakiri District, Nakhon Sawan Province. *Journal of Community Development Research (Humanities and Social Sciences)*, 11(3), 51-62.
- National Child & Youth Development Promotion Board. (2018). *National Child and Youth Development Plan No. 2 B.E. 2017 – 2021*. JS Printing House.
- Nonthapayap, P., & Kosiyawat, P. (2020). Knowledge of bamboo handicrafts and local knowledge for product development and creative value creation in the economy. *Journal of Rajanagarindra*, 1-9.

- Oyekunle, O., A., & Sirayi, M. (2018). The role of design in sustainable development of handicraft industries. *African Journal of Science, Technology, Innovation and Development*, 10(4), 381–388.
- Pruek-Udom, T., & Boonyananta, S. (2020). Development of art activities to promote appreciation values of southern handicraft identity for youth. *Journal of Education Studies*, 48(1), 103-121.
- Pumpamon., S. (2014). Bamboo and the way of life in Thailand. *Meeting Documents, Knowledge and Knowledge Management of Community*, 19-27.
- Rodchuen, N. (2017). Designing the basketry bamboo products from local wisdom. Community Enterprise basketry local handicrafts of Baan Dongchaplu, Bangmafor subdistrict, Krok Phra District, Nakhon Sawan Province. *Art and Architecture Journal Naresuan University*, 8(1), 12-23.
- Sangsod, C., Chulacupt, S., & Boonyopas. S. (2020). The development of bamboo stripes with natural dye color from coffee grounds for wicker work products. *Global Goals, Local Actions: Looking Back and Moving Forward 2020*. 1200-1208.
- Sarasook, M. (2014). The development of appropriate production technology in the community bamboo wickerwork handicrafts. *Koch Cha Sarn Journal of Science*, 36(1), 22-34.
- Siri. P., Tavon, R., Malithong., P & Siri. N. (2014). Bamboo management leads to improvement of quality of life and forest care funds: A case study of Ban Hay Hiin Lad Nai, Banpong Sub-District, Wiangpapao District, Chiang Rai Province. *Meeting Documents, Knowledge and Knowledge Management of Community*, 42-62
- Smattha, N., Inthawong, P., & Wong Khamchan, S. (2009). Guidelines, development of potential of children and youths, Wangsaipoon Subdistrict. *The Golden Teak: Humanity and Social Science Journal*, 15(1), 181-199.
- Yotatip, S., Udomlamun, S., Maso, S., Raning, M., Chuyok, D., & Dahami. R. (2012). Pattern and Method of Youth Development for the Stability of Three Southern Border Provinces. *Yala Rajabhat University*.
- Youngpattana, P., & Thaworn, R. (2014). Diversity and use of Bamboo in Thailand. *Meeting Documents, Knowledge and Knowledge Management of Community*, 10-18.