



Innovative packaging design to add value to the tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province

Piyada Maneenin

Faculty of Management Sciences, Yala Rajabhat University

Email: piyada.m@yru.ac.th

Sasadee Kamphaengdee

Faculty of Management Sciences, Yala Rajabhat University

Email: Satsadl.K@yru.ac.th

Chompunuch Sriphong

Faculty of Management Sciences, Yala Rajabhat University

Email: Chompunuch.s@yru.ac.th

Abstract

This research aims 1) to study basic information, problems, and the need for packaging development to add value to tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province; 2) to develop a packaging design to increase the value of tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province; 3) to assess and improve the packaging design to increase the value-added of the tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province. It is a research and development study. It revealed that the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province, had a need to develop new packaging to increase the value-added of tie-dye fabric products and had a symbol that reflects the Ban Tha Sap community. The researcher designed a prototype of the packaging and assessed the suitability in designs from three experts and prototypes of tie-dyed fabric products. The evaluation results of the third type showed the appropriate level of packaging design development was ranked No. 1 ($\bar{x}=4.22$) and the overall consumer satisfaction result of Ban Tha Sap to tie-dye fabric product packaging design was at a high level ($\bar{x}=4.19$). Customers were satisfied with the structure of the packaging that was convenient to pick up or carry. In terms of design, graphics, and packaging, consumers were satisfied with providing complete details of product information and packaging can reflect the identity of the group/community was at the highest level ($\bar{x}=4.26$).

Keywords: packaging innovation, add the value of tie-dye fabric products, the elderly

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Introduction

The country's economic development policy as shown in the twenty-year National Strategy (2018-2037) and the Twelfth National Development Plan (2017-2021) strategy, numbering ten strategies, strategies

related to one project district one product is the second strategy to create fairness and inequality in society, encouraging the elderly to have a career and income from supporting small, medium and small community enterprises and social enterprises (Office of



the National Economic and Social Development Council, 2020). Developing the elderly to have economic and social stability with quality, value, and ability to adapt to keep up with changes is a force for the development of society by promoting income generation and employment among the elderly along with increasing knowledge for the elderly for career and development themselves continuously. It also promotes and encourages the use of knowledge and experiences of the elderly who are the knowledge source people, local wisdom experts to use local development benefits as well as encouraging the elderly to be able to rely on themselves sustainably (Kitjathananant, 2019).

Ban Tha Sap Elderly Group, Tha Sap Sub-district, Muang District, Yala Province, has established a group to produce tie-dyed fabric products to generate income that is supported by local agencies, research teams, faculty of management sciences, Yala Rajabhat University to provide knowledge as a consultant in promoting groups that still have problems in business operations of the elderly. In the current era of online trading, packaging plays an important role in more people of all ages. It can be seen from the things that surround us, whether it is food, beverage, or various appliances. The packaging can be considered a representative of the marketing promotion process. The image of the product and the taste of the consumers affect the market competition, the entrepreneurs like to produce similar products. Therefore, entrepreneurs need to create a unique identity for their products for consumer recognition and create most interest in purchasing the product until developed into brand loyalty, the packaging is outstanding and has quality and beauty, so it can be used for further use. Therefore, it has the advantage of being able to attract the attention of producers and consumers. It affects the consumers' purchase decisions as well as impresses the recipients, creating a selling point for the product.

Therefore, the researcher is interested in studying the development of a packaging design to increase the value of tie-

dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province, so that the elderly group can compete in business to generate additional income and reduce inequality in society.

Research Objectives

The objectives of this research are as follows:

1) to study basic information, problems, and the need for packaging development to add value to tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province.

2) to develop a packaging design to increase the value of tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province.

3) to assess and improve the packaging design to increase the value-added of the tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province.

Literature Review

The researcher has studied the concepts and theories related to the research operation as follows.

1. Theoretical concepts of innovation

National Innovation Agency (2009) has defined innovation as something that arises from the ability to use knowledge, creativity, skills, and experience with technology or management to develop products, new production processes, or services to meet market demands as well as improve technology. It diffuses technology, product design, and training applied to increase economic value and cause public benefits in the form of business formation, investment, entrepreneurship, new markets, or new sources of income including new hires.

Type of innovation

Department of Industrial Promotion (2016) has divided innovations into three major categories:

1. Product innovation is a commercially manufactured product that is improved or new in the market. This



innovation may be new to the world, to a country, an organization, or even to ourselves. National Innovation Agency (2010) has explained that product innovation is innovation in the form of goods or products, especially consumer products. Product innovation is the use of innovations that can be seen, such as new products or products that have never been on the market before, including original products that were developed to have the distinctiveness and difference from the available original products in the market.

2. Process Innovation

It is a change in the way or method of producing goods or providing services in a different form than before.

3. Business Innovation

Business Innovation for Sustainability: for a business to be successful and sustainable, a business must find "business innovation" that is not only creative ideas and new ideas but also new ideas that can be sold or made new ideas commercially valuable. The most important source of innovation is the "customer or competitive market" because it represents consumer demand. The availability of new products that competitors bring to the market continuously can create an acceleration of business innovation.

2 Concepts and theories related to packaging development and design

Packaging refers to the packaging that protects the product so that the delivery of the product to the consumer is in perfect condition and has no damage.

Function of packaging

Weera Chotithamaporn (2017) said that packaging plays a primary role in helping the products that are contained in the package to have perfect condition. At present, the role of packaging is not only to protect the product or the goods inside, but it also plays

other additional roles which can be classified into two areas: technical and marketing functions.

1. Technical functions: the role of technical packaging consists of

1.1. Containment

1.2 Protection

1.3 Preserve quality

1.4 Ease of Transport

1.5 Enhancing Convenience

1.6 Identification

1.7 Environmentally friendly

2. Marketing functions: the role of the marketing packaging consists of

2.1 Promotion

2.2 Print Information

2.3 Value added

2.4 Increase sales volume

Packaging Design

Pattamaporn Thochoo (2016) has summarized the meaning of packaging design which means determining the form and structure of the packaging about the function of the products to protect the products from damage and add psychological value to consumers by relying on both science and art to create the packaging.

Summary of the literature review to show that the researcher took the reviewed theory and the concepts used in the research and in what areas. Therefore, the researcher has studied the above concepts and theories and applied them in the packaging design process and creating questionnaires to cover research objectives.

Research Conceptual Framework

This is a Research & Development study, so the researcher has the research conceptual framework under the theory and the concepts studied. The details are as follows.

Basic information, problems, and needs for packaging development to add value to tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Seap Sub-district, Muang District, Yala Province

Development of packaging design to add value to tie-dye fabric products of the ly group of Ban Tha Sap, Tha Seap Sub-district, Muang Distr

To assess and improve packaging designs to add value to tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Seap Sub-district,

Muang District, Yala Province
Figure 1 Research Conceptual Framework

Research Methodology

Research on “Innovative packaging design to add value to the tie-dye fabric products of the elderly group of Ban Tha Sap” is a research and development study that uses mixed methods between qualitative research and quantitative research using qualitative research method as the main. The procedure for conducting research was divided into four steps:

Step 1: Study the basic information, problems, and needs for packaging development to add value to tie-dye fabric products of the elderly group. The tool for collecting data was divided into two parts, an interview form, and a questionnaire as follows:

Part 1 General information

Part 2 The need for packaging design development to increase product value-added of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province, to obtain basic information and needs for packaging development to add value to tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Seap Sub-district, Muang District, Yala Province, and using the information obtained to create a guideline for the development of tie-dye fabric packaging of the Ban Tha Sap elderly group.

Step 2: To create a guideline for the development of tie-dye fabric packaging designs for the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province by participating in group discussion activities and participation in creativity. The information obtained from interviews and practice will be used to improve and develop guidelines to meet the needs of the elderly.

Step 3: To develop a tie-dye fabric packaging design for the elders of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province by using the packaging model

prototype for evaluation and improvement by design experts, academics, and community developers. The tool used for data collection was a rating scale questionnaire with 5 Likert Scale criteria to assess the levels of opinion about the development of packaging designs to add value to tie-dye fabric products for the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province.

Step 4: The assessment and summary of the development of packaging design to add value to tie-dye fabric products for the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province was satisfied with the tie-dye fabric packaging design developed, problems and obstacles by using a questionnaire on satisfaction with innovative packaging designs to increase the value-added of tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province. The questionnaire consisted of two parts as follows.

Part 1 General information of the respondents

Part 2 Satisfaction in Packaging Innovation
 Variable Level Measurement Criteria

The tool used for data collection was a rating scale questionnaire with 5 Likert Scale criteria to assess the opinion levels of satisfaction with the tie-dye packaging design of Ban Tha Sap Elderly Group.

Research Results

1. To study the basic information, problems, and the need for packaging development to increase the value-added of tie-dyed fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province

Basic information, problems, and the need for packaging development to increase

the value-added of tie-dyed fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province.

The elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province, needs to develop new packaging to increase the value-added of tie-dye fabric products and have a symbol that reflects the

Ban Tha Sap community. From the analysis of data from the development needs questionnaire on innovative packaging styles to add value to tie-dye fabric products, the elderly group of Ban Tha Sap needs packaging that can help add value to tie-dye with eye-catching shapes or colors and should have a symbol reflecting the local community.



Figure 2: The original packaging design of the tie-dye fabric product of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province.

2. Development of innovative packaging designs to add value to tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province

In the packaging design, the researcher collected the needs data from the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province, along with the advice of design experts and study more information initially and came to a conclusion on the packaging format by the group has a boxed requirement. Therefore, they choose ready-made boxes that can be easily purchased in the available areas by choosing a box that has a compact shape with a gap in the middle to see the tie-dye fabric products. In the design of the label, there has been a study of the identity of the tie-dye fabric and the symbols that convey the area of

Ban Tha Sap by making it in the form of a box strap with graphics in geometric shapes, colorful, beautiful, and eye-catching, the researcher has designed three types of labels as follows:

Type 1 uses several small horizontal rectangles by overlapping layouts in some parts to overlap for that picture to be unity and a sense of stability and spaciousness.

Type 2 uses a single horizontal rectangle with the same length as the front of the package to give a feeling of spaciousness, calmness, smoothness, stillness, and relaxation.

Type 3 uses multiple small hexagon shapes by arranging corners and corners to overlap to create a harmonious image that gives a feeling of infinite interconnection.

All three types are placed under the symbol of a junk boat to represent the water.

When combined, it reflects the geography of the location of Ban Tha Sap which is located on the Pattani River in the past, it was also a small port of the Pattani River Basin and used to be the forest trade route of the Langkasuka Kingdom (Tha Sap Subdistrict Municipality).

The label design specifies the important information including group name, product name, manufacturer information, product origin, and reminder for product storage by the selected font emphasizes a simple feature on the eyes.

Figure 3:Packaging prototype tie-dye fabric products, Types 1,2 and 3

Table 1 The assessment results of the development of innovative packaging design to add value to the tie-dye fabric products of the elderly group of Ban Tha Sap

Overall packaging design development	\bar{x}	S.D	Interpretation
Packaging prototype type 1	4.11	0.431	High
Packaging prototype type 2	4.03	0.312	High
Packaging prototype type 3	4.22	0.367	Highest

From the results of the assessment of the development of the three types of packaging, it showed that academics and design experts gave the appropriate level of packaging design development No. 3 as the first order which is suitable for the development of packaging designs at the highest level ($\bar{x}=4.22$) followed by type 1, there was a level of suitability of the packaging design development at a high level ($\bar{x}=4.11$), and the type 2, the level of suitability of the packaging design development was at a high level ($\bar{x}=4.03$), respectively. Therefore, the prototype was selected for packing at Type 3.

3. Assessment and improvement of packaging designs to increase the value of tie-dye fabric products for the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province

Part 1 General information of the respondents

It was found that the target group was female, 77.7%, and male, 22.3%, in the age range of 20 - 29 years with the most of 49.33%, followed by 30 - 39 years at 37.67%, aged 40-49 years at 6%, aged 50. - 59 years old at 3.33%, under 20 years old at 2.67%, and over 60 years old at 1%, respectively. In terms of occupation, owned business ranked first at 34.33%, followed by pupils/students at 26.33%, employees, private employees at 14.33%, civil servants at 7.3%, butlers, housewives at 6%, university employees at 4.67%, state enterprise employees at 4%, government employees at 1.33%. Retired at 1% and government employees at 0.67%, respectively. Average monthly income 10,001 - 15,000 baht at 44.33%, followed by less than 5,000 baht at 21.33%, 5,001 -10,000 baht at

11.67%, 15,001 - 20,000 baht at 9.67%, more than 30,000 baht at 6%, 25,001 - 30,000 baht at 4.33%, and 20,001 - 25,000 baht at 2.67%, respectively.

packaging designs to increase the value of tie-dye fabric products for the elderly

Ban Tha Sap, Tha Sap Subdistrict, Mueang District, Yala Province

Part 2 The results of the satisfaction assessment of the development of innovative

Table 2 Satisfaction results of the development of innovative packaging designs to add value to tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Mueang District, Yala Province

Satisfaction with the innovative packaging designs of Ban Tha Sap tie-dye fabric product	\bar{x}	S.D	Interpretation
Structure			
1. The overall structure of the packaging is suitable for the product itself.	4.20	0.793	High
2. The material of the packaging structure is suitable.	4.21	0.788	Highest
3. The size of the package is appropriate.	4.24	0.806	Highest
4. Opening and closing the packaging is easy.	4.21	0.929	Highest
5. Handling or carrying was convenient and satisfactory.	4.33	0.830	Highest
Packaging graphic designs			
1. Colorful, cheerful, beautiful, eye-catching, and notable.	4.16	0.799	High
2. Pictures and decorative patterns are beautiful and suitable for the product.	4.09	0.824	High
3. The font style is consistent and appropriate.	4.14	0.826	High
4. Provide complete details of product information.	4.26	0.798	Highest
5. Packaging can reflect the identity of the group/community.	4.26	0.797	Highest
Price			
Appropriateness of price, original price 199baht, new price 250 baht.	3.97	0.819	High
Total	4.19	0.04	High

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Satisfaction with the innovative packaging designs of Ban Tha Sap tie-dye fabric product overall was at a high level ($\bar{x}=4.19$). When considering each item, it revealed that the handling or carrying was convenient and satisfactory that had the highest level of satisfaction ($\bar{x}=4.33$), followed by providing complete details of product information and the packaging can reflect the identity of the group/community with the highest level of satisfaction at the same mean ($\bar{x}=4.26$). The size of the package was appropriate, the satisfaction level was at the highest level

($\bar{x}=4.24$). The material of the packaging structure is suitable and opening-closing the packaging is easy, the satisfaction level was at the highest level, the same mean ($\bar{x}=4.21$). The overall structure of the packaging was suitable for the product, satisfaction was at a high level ($\bar{x}=4.20$). Pictures and decorative patterns are beautiful and suitable for the product, the satisfaction level was at a high level ($\bar{x}=4.09$), and the suitability of the price was the original price of 199 baht, the new price was 250 baht, the satisfaction level was at a high level ($\bar{x}=3.97$), respectively.



Discussions

This research found that the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province, needs to develop new packaging to add value to tie-dye fabric products and a symbol that reflects the Ban Tam Sap community. From the analysis of the data from the questionnaire on the development of innovative packaging design to add value to tie-dye fabric products. The elderly group of Ban Tha Sap needs a package that can add value to tie-dye fabric products with eye-catching shapes or colors and should have a symbol reflecting the local community.

In the packaging design, the researcher collected the needs data from the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province, along with the advice of design experts and study more information initially and came to a conclusion on the packaging format by the group has a boxed requirement. Therefore, they choose ready-made boxes that can be easily purchased in the available areas by choosing a box that has a compact shape with a gap in the middle to see the tie-dye fabric products. In the design of the label, there has been a study of the identity of the tie-dye fabric and the symbols that convey the area of Ban Tha Sap by making it in the form of a box strap with graphics in geometric shapes, colorful, beautiful, and eye-catching, the researcher has designed three types of labels which have different geometric graphics. All three types are placed under the symbol of a junk boat to represent the water. When combined, it reflects the geography of the location of Ban Tha Sap. The label design specifies the important information including group name, product name, manufacturer information, product origin, and reminder for product storage by the selected font emphasizes a simple feature on the eyes.

From checking three complete packaging prototypes, experts have analyzed the suitability of packaging design for tie-dye fabric products for the elderly at Ban Tha Sap. Design experts have suggested that it is possible to use packaging and labeling, which

can help add value to tie-dye products and the label represents the local identity of Ban Tha Sap. This can make the products valuable, attractive, and suitable for souvenirs. It is consistent with Sukanya Phayungsin (2019) who studied "Community participation in adding value to community products according to OTOP innovative tourism guidelines". It showed that the brand that has been developed to add value shows the identity of the Ban Wang Khon community. The product brand can also be applied to other products within the community and is also accepted by consumers who found that there was a high level of satisfaction. From the results of the assessment of the development of the three types of packaging, it showed that academics and design experts gave the appropriate level of packaging design development No. 3 as the first order which is suitable for the development of packaging designs at the highest level ($\bar{x}=4.22$). The packaging issue adds value to tie-dye fabric products, the packaging design has been developed at the most level which had the same mean ($\bar{x}=4.67$). The researcher, therefore, chose Model 3 to assess the satisfaction of the target group to find a conclusion.

Assessment and improvement of packaging designs to add value to tie-dye fabric products of the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province found that the majority of consumers were female at 77.7%, which is consistent with Metika Phuangsang and Ying Matnan, (2018), who studied "development and design of contemporary packaging to develop the image and add value products for the community: a case study of the catfish production group, Phatthalung Province". Most of the respondents were female, representing 92%, being in the age range of 20 - 29 years old, in terms of occupation, had self-employed, ranked the first number with an average monthly income of 10,001 - 15,000 baht.

The satisfaction assessment results for the development of innovative packaging to increase the value-added of tie-dye fabric products of the elderly group of Ban Tha Sap,

Tha Sap Sub-district, Muang District, Yala Province, found that the satisfaction of Ban Tha Sap tie-dye fabric innovative packaging overall picture was at a high level ($\bar{x}=4.19$) which consumers are satisfied with the structure of the packaging that is convenient to handle or carry. In terms of packaging graphic design, consumers are satisfied with providing complete details of product information and packaging can reflect the identity of the group/community, the satisfaction level was at the highest level ($\bar{x}=4.26$). It is consistent with Pattakorn Orkaew, (2020), who studied “bag packaging design from ostrich eggshell: Palita Kai Wichit Shop”. It found that overall satisfaction per bag packaging design from ostrich eggshell covered two objectives: 1. Packaging structure can protect products 2. Graphics can help promote sales and create a good attitude towards the product. The assessment results showed that overall have a high level of satisfaction.

Bringing innovation to develop a packaging design to increase the value-added of tie-dye fabric products of the elderly group of Ban Tam Sap, Tha Sap Sub-district, Muang District, Yala Province, this time is the development to extend the packaging to be able to increase the value-added of tie-dye fabric products. The packaging can be found easy to buy locally, can be purchased in retail, not need to cost a lot. The structure is suitable for the product. It has a more colorful graphic design and a unique identity that reflects the Ban Tha Sap community. Consumers' satisfaction with the prototype packaging overall was at a high level. The elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province were able to take the prototype packaging for tie-dye fabric products to value-added the elderly group's tie-dye fabric products. This will bring income and strength to the elderly group of Ban Tha Sap, Tha Sap Sub-district, Muang District, Yala Province.

Recommendations

1. The packaging design should study the basic information of the population for

the development of packaging that will meet the needs of customers.

2. Government agencies or private agencies should take part in the evaluation for publicity and extend the work to a great extent.

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