

# Tourism-Oriented Cultural Product Design: A Case Study of Yami Culture in Lanyu

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## Abstract

Due to the prevalence of modern commerce and mainstream culture, many indigenous cultures around the world are rapidly diminishing. These cultures, with their unique primitiveness distinct from modern culture, often attract tourists. This study integrates the indigenous Yami culture of Lanyu Island, Taiwan Region, into innovative designs from the perspective of tourists' understanding of the local culture. In this way, tourists can experience the harmonious coexistence of the Yami tribe and nature, while these culturally rich products foster deeper experiential and emotional resonance. This study employs the Mandala thinking method for concept expansion and the Osborn checklist method for the analysis and transformation of design elements. Subsequently, designers were invited to conduct on-site travel experiences, leading to the creation of a series of Yami cultural products. Through the evaluation and validation of cultural product assessment indicators, functional commercialized products were ultimately produced. This study aims to establish a design process for cultural products through this design case. It seeks to help users recall their Lanyu Island travel experiences and appreciate the often-overlooked cultural beauty, thereby raising awareness of cultural preservation.

## Keywords

Cultural Innovation, Cultural Product, Yami Culture, Tourism, Lanyu

## 1. Introduction

Culture is the way of life of a group of people [1]. The concept of cultural commodities stems from cultural industries [2], which argue that once culture undergoes mass reproduction through industrial production, it becomes commodified and homogenized, losing its inherent uniqueness. Currently, most cultural products are characterized by imitation of common forms or application of patterns,

often neglecting the expression of cultural significance, and thus failing to enhance living culture through design. Daily life products interact closely with people, and aside from solving problems, whether these products can provide users with feedback and reflection beyond functionality challenges designers to touch the inner feelings of users and evoke emotional resonance [3]. As global consumer market products gradually lose their unique identity due to similar functions and forms, products showcasing local characteristics become increasingly important.

Lin [4] explored scenario-based storytelling and product semantics to develop methods for understanding and systematically analyzing cultural features applicable to cultural product design. This study aims to explore the feasibility of integrating tourism emotional experiences with cultural product design. Through clear and logical procedures, the Mandala thinking method [5] was employed to derive appropriate design elements. Additionally, the Osborn checklist method [6] was used to assist designers in developing cultural themes and concepts. By conducting comprehensive reviews and brainstorming, a list of problems and potential directions for improvement was established, stimulating opportunities for multifaceted problem-solving.

Taiwan Region's indigenous culture has distinct ethnic characteristics. Unlike the mountainous cultural characteristics of most Taiwan Region's indigenous groups, the Yami culture on Lanyu Island possesses rich and unique humanistic qualities. Their clothing, crafts, architecture, cuisine, festivals, and economic production methods are all centered around maritime characteristics. Due to the island's geographic isolation and being surrounded by the ocean, the culture has experienced minimal external influence, making it highly suitable for cultural design development. The purpose of this study is to establish a feasible cultural product design process that allows users to associate the product with the beauty of the connected culture and to raise awareness of cultural preservation. Consequently, this study focuses on designing cultural products based on the Yami culture of Lanyu, Taiwan Region. Upon completing the design, functional prototypes were produced to demonstrate and evaluate the effectiveness of this cultural design method.

## **2. Cultural Association and Design Ideation**

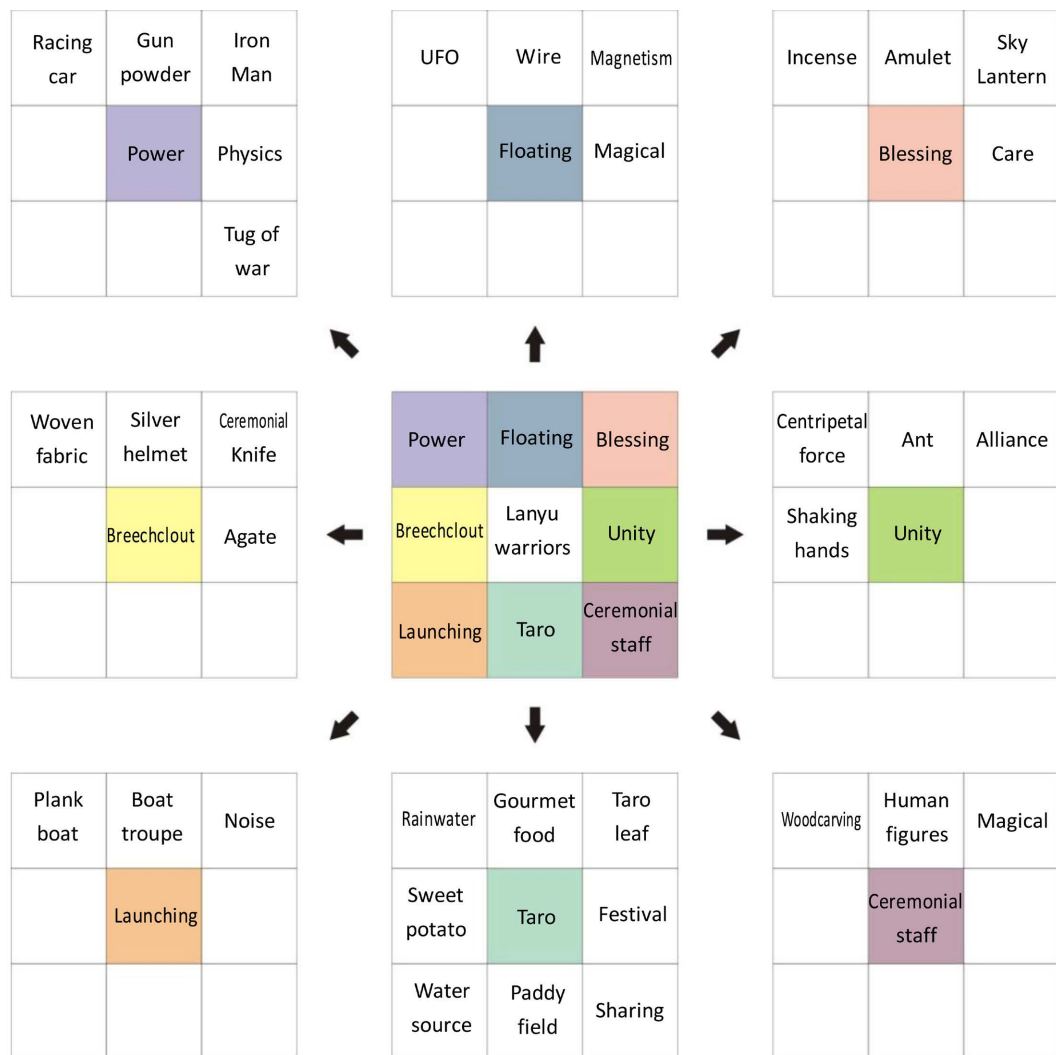
The traditional warriors of Lanyu are masters of fishing and boat-building, which are symbols of the maritime cultural heritage of the Yami people. In the year-round heat, they wear silver helmets, sleeveless tops, and breechclouts as formal attire. Lanyu is also known as the "Island of People". This study takes "Lanyu Warriors" as its cultural theme and implements the following design steps.

### **2.1. Divergent Thinking on Cultural Identity**

Using the Mandala thinking method, we conducted concept expansion and development focusing on "Lanyu Warriors". The principles for the Mandala thinking technique include: generating as many associations as possible, stimulating numerous ideas, not rushing to fill in the blanks, using concise language, selecting

the best or most representative ideas, continually reviewing and integrating, organizing afterwards, and combining with other thinking techniques. Additionally, the method allows for infinite expansion; any association in the first layer can be used as a central theme for another layer and then developed further.

In the first layer of the 3 × 3 grid of Mandala, “Lanyu warriors” is the central theme, leading to associations such as traditional dress (brechclout), the boat launching ceremony (launching and blessing), team strength (unity and power), the power and beauty of the boat launch (strength), sacrificial items (taro), maritime culture (floating), and the ritual tool used to move the plank boat at the beginning of the ceremony (ceremonial staff). These associations from the first layer then serve as themes for the development the second layer, as shown in **Figure 1**.



**Figure 1.** Associative terms in Mandala thinking.

The 54 associative terms from **Figure 1** were made into options for selection. Subsequently, 35 visitors to Lanyu, aged 18 - 50, were invited to vote on these 54 terms representing Lanyu’s cultural characteristics in a cultural impression

survey. The results indicated that the “plank boat” was the most representative of Lanyu culture, and further design development will continue based on this theme.

## 2.2. Element Analysis and Design Ideation

Based on the cultural product design process [4], a consumer-oriented approach was adopted to analyze the cultural features of the plank boat. Subsequently, Osborn’s checklist method was used to explore the less common or overlooked characteristics, leading to more diverse and innovative ideas. The implementation steps are as follows.

### 1) Analysis of theme elements in five dimensions

- **Color:** The interior and exterior of the plank boat are often painted in three colors: white, black, and red.
- **Shape Characteristics:** The boat’s body is intricately and uniquely carved with symbols of auspiciousness, including human figures, spirals, wave patterns, and circular eye motifs, which are characteristic of the Yami tribe.
- **Usage Habits:** The plank boat is used by the Yami tribe for fishing, transportation, and transit. During the flying fish season, torches are lit at night to attract flying fish to the large boat, where nets are cast to catch them, and the flying fish are then used as bait to catch larger fish.
- **Intrinsic Meaning:** The decorations on the plank boat are all related to the beliefs of the Yami tribe. Each traditional totem has its own significance, such as prayers, warding off evil, and identifying family lineage.
- **Cultural Significance:** From material selection, construction, to the boat’s completion and launch, there are specific taboos and rituals, especially after the completion of a large boat. A grand launching ceremony must be held, inviting friends and family from the entire village. This ceremony celebrates the crew’s achievements and hard work and prays for a bountiful harvest and the crew’s safety.

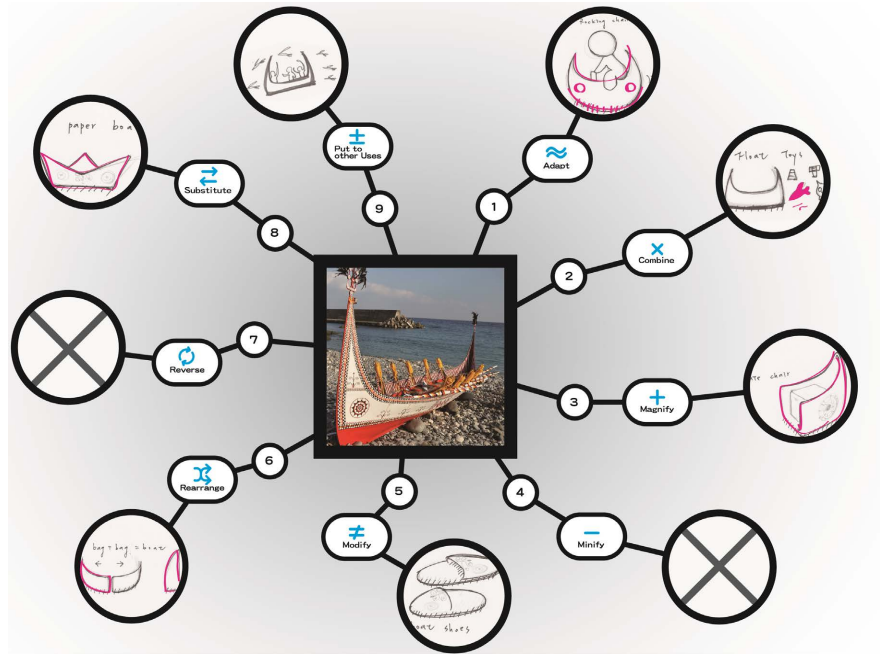
### 2) Cultural checklist questions and ideation

We invited one designer with two years of experience in cultural product design to explore possible cultural reinterpretations of the plank boat. Utilizing nine specific checklist questions (adapt, minify, reverse, combine, modify, put to other use, magnify, rearrange, substitute), the designer was asked to express the transformed concepts through symbols or simple conceptual diagrams, as illustrated in **Figure 2**.

## 3. Concept Sketches

In this phase, we invited two designers with three years of experience in cultural product design to create concept designs for plank boat cultural products. Before the design activities, a five-day trip to Lanyu Island was arranged to allow the designers to experience the local cultural environment, the daily life of the Yami people, and the actual plank boat. After the trip, the designers were introduced to the previous analysis of cultural elements and the simplified diagrams obtained

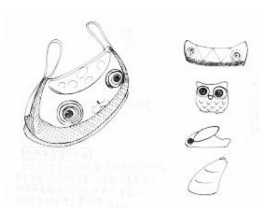
from the checklist method. They were then invited to express their impressions of the Yami people and the plank boat culture in their designs. A total of four concept designs were completed, and the related concept sketches and design ideas are shown in **Figure 3**.



**Figure 2.** Nine checklist questions and simple concept idea diagrams.

**Floating water toy:**

Transforming the features of Yami culture into floating toys, the plank boat embodies the meaning of “Inheritance - Vessel of Tradition.”



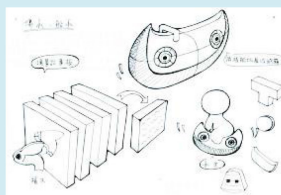
**Flying fish paperclip set:**

Transforming the Yami people’s activity of catching flying fish during the Flying Fish Festival into the design of a paperclip holder set.



**Children’s rocking chair and storage box:**

Transforming the features of the Yami people into a scene storyboard, the plank boat-shaped toy storage box can also be used as a rocking chair.



**Face-changing makeup bag:**

The transformable design combines two distinct features of the plank boat and the Lanyu scops owl, offering playful versatility in its use.



**Figure 3.** Plank boat concept sketches and design introduction.

**4. Concept Evaluation**

In this phase, three experts from the fields of design education, design marketing, and practical design were invited to discuss the evaluation criteria. The criteria

were categorized into four dimensions: “cultural product attributes”, “product identity”, “conveyance of cultural message”, and “manufacturing”. Ten evaluation criteria and their inherent meanings were derived, as shown in **Table 1**. The experts used these ten evaluation criteria as a basis to conduct compliance assessments of the four concept design proposals. The evaluation results are presented in **Table 2**.

**Table 1.** Evaluation criteria for cultural product design concepts.

Dimension	Evaluation criteria	Definition of criteria
Cultural product attributes	Local Flavor	This product has local characteristics.
	Originality	This product has unique features compared to other similar products.
	Functionality	This product has practical and useful functions.
	Storytelling	This product conveys a story or significant cultural meaning.
	Cultural Diversity	This product embodies the main characteristics of cultural diversity.
Product identity	Differentiation from other products	The image used in this product enhances its unique features.
	Appeal for exploration	This product attracts consumers to actively explore its design and meaning.
Conveyance of cultural messages	Capability of transmitting cultural messages	This product effectively conveys cultural messages to different countries and ethnic groups.
	Ease of acceptance and use by different cultures	This product has a cultural code that is easily understood and accepted by consumers from different cultures.
Manufacturing	Mass productivity	This product can be mass-produced.

**Table 2.** Evaluation of design concepts for plank boat cultural products.

Evaluation criteria	Floating water toy	Flying fish paperclip set	Children’s rocking chair and storage box	Face-changing makeup bag
Local Flavor		•		•
Originality		•	•	•
Functionality	•	•	•	•
Storytelling	•	•	•	•
Cultural Diversity	•	•		•
Differentiation from other products		•		•
Appeal for exploration		•		•
Capability of transmitting cultural messages	•	•	•	•
Ease of acceptance and use by different cultures	•	•	•	•
Mass productivity		•		•

From the evaluation results shown in **Table 2**, it is evident that among the four design concepts, two (the flying fish paperclip set and the face-changing makeup bag) fully meet the established evaluation criteria for cultural products. This indicates that they possess market competitiveness and development potential. Experts also provided recommendations on mass production and cultural conveyance for these two design concepts. Considering the applicability to the mass market, the functionality of the face-changing makeup bag was changed to a stationery pencil case, and the name was revised to face-changing pencil case. Further details are provided in **Table 3**.

**Table 3.** Expert recommendations on two selected design concepts.

Name	Recommendations
Flying fish paperclip set	<ul style="list-style-type: none"> <li>• Pay attention to whether the thickness of the boat material affects the magnetic force.</li> <li>• Make the boat colors and shape more closely resemble the image of the plank boat.</li> <li>• Consider different colors, shapes, and sizes for the flying fish pattern.</li> </ul>
Face-changing pencil case	<ul style="list-style-type: none"> <li>• Consider both flat and three-dimensional presentations for the texture of the fabric surface.</li> <li>• Use smooth fabrics in the red, black, and white colors of the plank boat to enhance the texture.</li> <li>• Use thicker and more rigid neoprene fabric for the exterior, allowing the material itself to provide structural support without the need for additional internal stiffening materials.</li> </ul>

## 5. Functional Product Implementation

Based on the expert design recommendations, computer design drawings were created, and 1:1 scale functional prototypes were produced for user inspection. The final results of the two designs are described as follows.

### 5.1. Flying Fish Paperclip Set

This design transforms the activity of the Yami people catching flying fish during the Flying Fish Festival into a paperclip holder set. The base of the paperclip holder, shaped like a plank boat, contains a magnet. The flying fish paperclips are attracted to the magnet in the base, gathering on and around the boat, creating a dynamic scene that mimics flying fish chasing the plank boat. This represents the joy of harvest during the festival. The appearance features three traditional Yami totems, conveying their cultural spirit and adding cultural vitality to the office desk. The functional prototype is shown in **Figure 4**.

### 5.2. Face-Changing Pencil Case

The design of the pencil case combines two distinct features of Lanyu Island: the plank boat and the Lanyu scops owl. When the pencil case is upright and closed, it resembles a simplified half-plank boat. When the top is opened and the thickened base allows it to stand, it transforms into an adorable Lanyu scops owl-

shaped pen holder. The two different forms represent two characteristic faces of Lanyu Island. The functional prototype is shown in **Figure 5**.



**Figure 4.** Functional model of the flying fish paperclip set.



**Figure 5.** Functional model of the face-changing pencil case.

## 6. Conclusions

Unlike typical recreational tourism, this approach respects local culture and encourages deeper experiential engagement, promoting the sustainable preservation of the culture. This aligns with the concepts of “design for feeling” and “form follows emotion”, both of which aim to satisfy inner emotional needs. Culture develops in conjunction with the environment and can be preserved and passed down through products and their contexts in various forms. Products can evoke memories and inspiration in users, spreading the product’s ethos to a wider audience.

The Yami culture of Lanyu Island, located on an outlying island of Taiwan Region, is one of the most well-preserved indigenous cultures in Taiwan Region today. However, the tide of the capitalist market is encroaching upon this cultural land. “Seeing the product” marks the beginning of a conversation between the

designer and the user, as well as the user's awareness and concern for this land. The cultural products of Lanyu Island designed in this study aim not only to satisfy users in terms of functionality and consumerism but also to serve as a medium for promoting cultural tourism [7]. Through these products, we hope to showcase the essence of Yami culture and contribute to the sustainable preservation of this vulnerable culture.

## Fund

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## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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