$\ ^{\odot}$  2022 The authors and IOS Press.

This article is published online with Open Access by IOS Press and distributed under the terms of the Creative Commons Attribution Non-Commercial License 4.0 (CC BY-NC 4.0).

doi:10.3233/FAIA220035

# Brand Construction of Rural Handicraft Based on Green Design Concept

Huafeng Sun, Siqi Wang, Yunfei Fan, Chenwen Wo, Linxin Zheng School of Design and Fashion, Zhejiang University of Science and Technology

Abstract. This paper aims at exploring the feasible path of building rural handicraft brand under the concept of green design. Taking the intangible cultural heritage handicrafts in Sansui County, Qiandongnan, Guizhou Province as the core, the demand factors among craftsmen, left-behind laborers, designers, market and government were analyzed. Based on the green design concept, the brand of "Zhi Bu Zhi Zhu" was created in a green way. In the design practice, the pictures of cultural images with brand characteristics are collected as samples, and the symbols with the highest recognition of images are obtained through cultural image cognition experiments, which are applied to the brand design together with the symbols of brand personality elements. In today's competitive market, the concept of green design is combined with brand building. Through brand green co-creation design, more social responsibilities and obligations are borne, and material reduction design and material substitution design are integrated into the whole brand process so as to create a green, natural and healthy rural handicraft brand, expand brand connotation and value and enhance brand market competitiveness.

**Keywords.** Green brand, co-creation design, material reduction, material replacement

#### 1. Introduction

In today's increasingly serious brand homogeneity, brand building should pay more attention to the shaping of enterprise connotation and social responsibility. In "Designing for the Real World", Victor Papanek proposed that design should seriously consider the use of the limited resources of the earth and serve to protect the limited resources of the earth where we live. This has a direct impact on the green design trend of thought. Green design means that in the whole life cycle of products, ecological and environmental protection attributes are taken into consideration, resource consumption is reduced to the greatest extent, toxic and harmful raw materials are reduced to use as much as possible, and environmental pollution is reduced to achieve the goal of green environmental protection. Reduce, replace, recycle and reuse are classic 4R principles in green design theory. The concept of green design should not be limited to product design itself, but should be integrated into the concept of green brand from the source of brand building, which will bring green experience premium and increase green experience value to the brand. Brand positioning plays an important role in shaping consumers' attitudes, and green brand positioning plays a positive role in consumers' willingness to buy-back<sup>[1]</sup>.

#### 2. Green brand co-creation design

#### 2.1. Design object

Brand is audiences' evaluation and cognition of an enterprise and its products, services and culture, and it is also a kind of trust. In today's commodity economy, brand is the embodiment and cognition of the comprehensive quality of commodities and an intangible asset with economic value. Green brand means brand that is not limited to the category of ecological environment protection, it is the general name of a brand established by faithfully practicing, advocating and popularizing the green concept of "health and peace", and it is a green and sustainable brand. The green concept is deeply integrated in the process of brand management and promotion, and the marketing concept is changed<sup>[2]</sup> from "selling things" to "lifestyle proposal". Green brand is associated with business practices of environmental protection and sustainable development. Green brand is an important method to enhance corporate image, increase business profits, establish relationship with consumers and establish differences with competitors. Green brand is playing an important role in the market.

Brand orientation is the core of brand image<sup>[3]</sup>. Under the trend of "greening" of brand, the public tends to green consumption and ecological consumption. By taking green design as the concept, combining three local intangible cultural heritage handicrafts, namely "Sansui Bamboo Weaving", "Miao Embroidery" and "Dong Woven Fabric" and cooperating with Yang Dujuan, a model of poverty alleviation in Guizhou Province and a member of the Political Consultative Conference in Southeastern Guizhou, we create a green brand of "Zhi Bu Zhi Zhu", aiming at promoting the aesthetics of green life, promoting the development of rural handicrafts in live transmission and alleviating the local employment problem of left-behind laborers. " Zhi Bu Zhi Zhu " was established in Sansui County, Guizhou Province. Guizhou is a major province in China. Southeastern Guizhou is famous for humanities and crafts. Sansui County was named as the hometown of Chinese bamboo weaving culture by the Ministry of Culture in 2008. However, the rich cultural resources correspond to the backward economy. Sansui County got rid of poverty in 2019, but the local economy is weak, and most laborers chose to go out to work. As a result, more left-behind women took care of the elderly and children at home.

#### 2.2. Design object

Logo is widely used in modern society and is an indispensable visual symbol in brand image. A single conceptual element and symbol cannot convey a complete brand message. The signage presents its meaning through the communication mode of vision-psychology-meaning, including the meaning of its external shape and internal image language<sup>[4]</sup>. Logo is composed of various symbols that can reflect the cultural image of the design object<sup>[5]</sup>.

The design practice collected pictures which have brand cultural image as the object from regional culture and handicraft, and through cultural image cognitive experiment, the strongest ten cognitive cultural imagery graphics were selected from two dimensions to sum up the symbols that matched the brand image. The results of the analysis are applied to the design practice, and the cultural element symbols are selected, combined, transformed, reconstructed and metaphorized to express the key characteristic information of the symbols and meet the individual needs of the brand image<sup>[6]</sup>.

Image cognition is the subjective feeling of the subject to objective things, and the cultural image in this paper refers to the audience's psychological feeling and association of "cultural image of Southeast Guizhou" and "handicraft". In this experiment, Likert scale was used to invite 100 subjects to score the collected images. Five response levels were used: 5 means strongly agree, 4 means agree, 3 means uncertain, 2 means disagree, and 1 means strongly disagree. The higher the final score was, the stronger the cultural image cognition generated by the image was. The valid data of the collected questionnaire were analyzed and counted, and the final score was the average value of recognition. After analyzing and sorting the data, the cultural image cognition scale was made for ranking statistics, as shown in Table 1 and Table 2.

Table 1. Southeast Guizhou cultural image recognition ranking statistics

| Ranking | Picture         | Recognition | Ranking | Picture          | Recognition |
|---------|-----------------|-------------|---------|------------------|-------------|
|         |                 | degree      |         |                  | degree      |
| 1       | Minority        | 4.85        | 6       | Diaojiao houses  | 3.98        |
| 2       | Drum tower      | 4.68        | 7       | Qinglong cave    | 3.75        |
| 3       | Qianhumiaozhai  | 4.52        | 8       | Zhenyuan village | 3.13        |
| 4       | Zhusheng bridge | 4.33        | 9       | Jiapang terrace  | 2.98        |
| 5       | Fengyu bridge   | 4.19        | 10      | Sansui duck      | 2.75        |

Table 2. Handicraft culture image recognition ranking statistics

| Ranking | Picture         | Recognition | Ranking | Picture        | Recognition |
|---------|-----------------|-------------|---------|----------------|-------------|
|         |                 | degree      |         |                | degree      |
| 1       | Miao embroidery | 4.67        | 4       | Weaving cotton | 3.98        |
| 2       | Batik           | 4.55        | 5       | Indigo         | 3.75        |
| 3       | Bamboo hat      | 4.52        | 6       | Spinner        | 3.02        |

According to the results of the cognitive experiment of cultural image, six symbols that are most consistent with the brand image and easy to design are finally extracted after focus group, and then analyzed and summarized to extract the cultural symbols, as shown in Table 3.

Table 3. Extraction of cultural symbols

| Picture | Minority | Drum tower   | Silver  | Bamboo<br>weaving | Miao<br>embroidery | Weaving cotton |
|---------|----------|--------------|---------|-------------------|--------------------|----------------|
| Symbol  | Portrait | Architecture | Ox horn | Bamboo<br>strip   | Floss              | Line           |

The analysis of personality elements of brand image is shown in Table 4. The cultural symbols extracted from Table 3 are deduced, combined and arranged to make it into a visual image consistent with the brand characteristics of "Zhi Bu Zhi Zhu ", as shown in Figure 1.

Table 4. Personality elements of " Zhi Bu Zhi Zhu " brand image

| Brand name     | Brand type                   | Brand culture  |
|----------------|------------------------------|--|
| 知布知竹           | Intangible cultural heritage | Life aesthetics  |
| Zhi Bu Zhi Zhu | Handicraft<br>Household      | The beauty of the Orient Rural revitalization through design |
|                |                              | Left-behind women employed in local areas                    |
|                |                              | Cultural confidence improvement                              |



Figure 1. " Zhi Bu Zhi Zhu "green intangible cultural heritage household brand image.

#### 2.3. Analysis of green brand relationship elements

The "green brand" should not be limited to the ecological environment protection in the traditional sense, but should undertake more social responsibilities and obligations, and promote the rural culture revitalization, increase the local employment rate and promote the development of traditional handicraft live transmission through the brand's own source power. With the mode of connecting designer with craftsman, we co-create the brand of " Zhi Bu Zhi Zhu ". The brand focuses on traditional handicrafts, aiming at spreading local traditional intangible skills, transforming rich intangible cultural heritage into resource advantages, helping rural revitalization by co-creating brand, enhancing cultural self-confidence, and creating more local employment opportunities for local leftbehind laborers.

"Zhi Bu Zhi Zhu" is a green co-creation brand. The brand building needs to fully analyze the demands among craftsmen, left-behind laborers, designers, market and government. See Figure 2 for its interest connection system. Handicraftsmen empowered by designers research and develop three kinds of handicrafts, namely, "Sansui Bamboo Weaving", "Dong Woven Fabric" and "Miao Embroidery". "Zhi Bu Zhi Zhu" was co-created by handicraftsmen and designers. As the medium between craftsmen and left-behind laborers, the local government offers free courses for left-behind laborers and invites craftsmen to teach skills. After training, left-behind laborers can process products for brands, thus alleviating the employment problem in rural areas. By paying taxes and promoting local culture, brands can become samples of local entrepreneurial brands for model promotion. The brand of "Zhi Bu Zhi Zhu" is based on the concept of green design, aiming at accurate market positioning, establishing the brand green image and improving the brand market acceptance. While selling products and services to the market, the brand

not only promotes rural handicrafts and local culture but also builds a green brand through multiple dimensions.

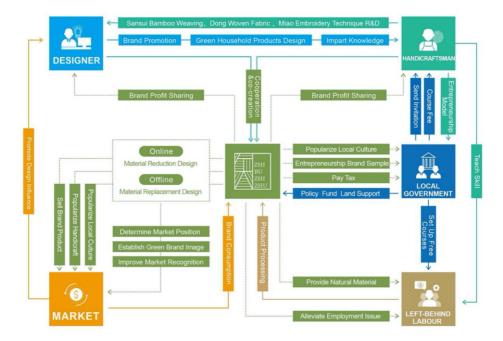


Figure 2. Benefit connection system of "Zhi Bu Zhi Zhu".

# 3. Brand material reduction design

### 3.1. Increase the promotion of online digital media

With the development of science and technology and the popularization of green design, modern digital media gradually replaced paper media, and product promotion changed from material to non-material. Traditional brand promotion often uses the way of pushing down the line, and the promotion of brand advertisement needs to be updated frequently due to the timeliness problem, which will produce a lot of material waste. The digital era provides favorable conditions for the construction of green brand, which gradually develops into electronic, information-based, diversified and personalized forms. Compared with the physical promotion of traditional brands, digital media can save more materials needed for promotion, and at the same time improve the effectiveness of promotion and the accuracy of delivery. It also greatly reduces the use and waste of material resources, and is an indispensable method for thinking about green design in the digital age.

Adhering to the concept of environmental protection and material reduction, "Zhi Bu Zhi Zhu" brand has set to increase online promotion and application of the brand when building the brand, and set up e-business platforms such as WeChat official account, Taobao shop and APP client. Spread brand value and market brand products and services through electronic platform. "Zhi Bu Zhi Zhu" brand popularize and

promote craftsmanship through social media accounts. See fig. 3 for the promotion of digital media of "Zhi Bu Zhi Zhu".



Figure 3. Digital media promotion of "Zhi Bu Zhi Zhu".

### 3.2. Green design of offline products

With the rapid development of society, the problem of environmental pollution is becoming more and more serious, which requires brands to assume more social responsibilities, attach importance to the concept of green design, and run through the green idea in the whole process of products and services. The brand "Zhi Bu Zhi Zhu" follows the green design concept. Material selection is for the purpose of environmental protection, safety and recycling. The use of paper is inevitable in the sales stage of products, but "Zhi Bu Zhi Zhu" has chosen safe, environmentally friendly and degradable recycled paper as raw material, which is a kind of recycled paper. After sorting, purification ,beating, copying and other processes, the paper is in line with the natural style of brand because it has no coating, no floating color and is a little bit yellowed. The common printing of paper products in the market is generally four-color printing. Although most of the printing inks are environment-friendly inks now, the paper printing of "Zhi Bu Zhi Zhu" brand only uses monochrome inks, which is considered for ecological and environmental protection to the greatest extent. In order to avoid the monotony and no layering of the picture caused by monochrome ink printing, a bronzing process is added to monochrome ink printing to increase the color richness of the picture. At the same time, concave-convex process and glossy UV process are selected, which can increase the three-dimensional effect of flat paper, and the glossy UV effect is in hierarchical contrast with the matte cotton recycled paper. Through the combination of materials and techniques, details and texture are added to the production of brand paper materials, as shown in Figure 4.



Figure 4. Ink-reducing materials of "Zhi Bu Zhi Zhu".

Green packaging has always been the eternal goal pursued by the packaging industry, but we should not only consider the green issue of packaging even neglect people's emotional needs for packaging. Good design is to skillfully use the wisdom of design, and to link the concept of repeated use with people's innovation and interest in life, which is also an important part of brand implementation<sup>[7]</sup>. Reuse is an important principle in the concept of green design. The brand "Zhi Bu Zhi Zhu" abandons the disposable paper and plastic handbag, and chooses the recyclable "Dong Woven Fabric" hand as the handbag material. The bag has good air permeability, softness and toughness, especially the material is easy to decompose, unlike plastic bags, which are extremely difficult to decompose. Canvas bags are environmentally friendly products. Canvas bags are made of environmentally friendly materials in strict compliance with relevant environmental protection standards and have good degradability. Canvas bags are soft and wear-resistant, which can be folded into various forms and recycled, as shown in Figure 5.



Figure 5. "Zhi Bu Zhi Zhu" environmental protection bag.

The brand takes tea set as an example, which maintains the green design concept of material reduction. The common porcelain in the market will color the porcelain tire as decoration. The brand "Zhi Bu Zhi Zhu" gives up the ink coloring decoration, and adopts Sansui Bamboo Weaving technique to combine with porcelain, and carries out bamboo weaving decorative surface decoration on the periphery of the white porcelain tire. The tea set has good thermal insulation function because the bamboo weaving is thick enough. The matching of raw bamboo and white porcelain reflects the natural and healthy design concept of brand.



Figure 6. "Zhi Bu Zhi Zhu" tea set products.

### 4. Brand material replacement design

# 4.1. Application of natural materials

The modernization has brought serious ecological pollution and homogeneous architectural forms. The wooden architecture incorporating the green design concept has shown strong development potential, showing a natural ecological and elegant spatial environment. The innovative architectural design language contains rich artistic aesthetic value<sup>[8]</sup>. In order to conform to the brand's green, healthy and natural positioning, the offline image store of "Zhi Bu Zhi Zhu" has simplified the decoration of its facade, designed a wooden veneer, and selected a horn-shaped eaves with the literary intention of Southeastern Guizhou at the door. The offline image store of "Zhi Bu Zhi Zhu" brand uses native bamboo and wood as decorative surfaces in large areas, which minimizes the application of artificial materials and minimizes the harm to the environment. At the same time, the storefronts use large areas of transparent glass to increase indoor lighting and reduce the use of indoor lighting.



Figure 7. "Zhi Bu Zhi Zhu" offline store.

## 4.2. Application of Plant Dyeing

Most dyes used in the market now are chemical dyes, but some of them pose a threat to human health. Some azo dyes can be decomposed into toxic aromatic amines, pentachloride and chlorophenol, and some dyes are easy to cause skin allergy. European Union countries began legislation on banning azo dyes. Export textiles are subject to strict environmental certification inspection. "Zhi Bu Zhi Zhu" brand pursues household products grown from the land, emphasizing nature and health, and all its textiles are dyed with plants. Plant dyeing refers to the use of various pigments naturally grown in nature which is also called "plant dyeing". It contains vegetable dyes (e.g., Indigo), animal dyes (e.g., lac) and mineral dyes (e.g., cinnabar), among which plant dyes are the most widely used and the available materials are the most abundant. Natural dyeing accumulated many predecessors' experience and wisdom. These excellent color cultures should be reendowed with meaning, so as not to make the culture form a fault phenomenon. Natural dyeing is characterized by the sustainable utilization of natural resources, while avoiding the serious pollution of chemical dyes. Natural dyeing can not only get a variety of bright high color, but also many delicate intermediate colors. Elegant color is the most generous gift from nature, it is worth our careful taste. Through different times and hues of redyeing, richer and more meaningful color levels are revealed.

#### 5. Green brand co-creation design

Rural handicraft itself has the green characteristics of health, environmental protection and handmade property. Branding it based on green design theory can accurately locate the brand goal, create a good sense of social responsibility and popularity of the brand, and thus gain market recognition. Finally, good brand image was established and consumers' purchasing decisions was influenced. In brand strategy, "experience and feeling" is the core, and in product positioning, more attention is paid to bringing

customers value and experience beyond product functions. This brand premium can enable enterprises to achieve healthy and sustainable growth<sup>[9]</sup>. Art is a form of description. Logo design uses symbol language to describe. We should not only release the romance and perfection of art but also have rigorous and scientific logical thinking<sup>[10]</sup>. Under the concept of green design, the rural handicraft brand "Zhi Bu Zhi Zhu" takes green as its brand core, ensures market positioning, excavates the cultural genes of rural handicrafts and creates competitive and influential rural green brands by means of green co-creation design, material reduction design and material replacement design.

#### References

- [1] T.P.Situmorang, Brand Positioning and Repurchase Intention: The Effect of Attitude Toward Green Brand, The Journal of Asian Finance, Economics and Business 08 (2021), 4.
- [2] T.Sadao, J.J.Liu, Communication Marketing: The approach on Marketing and Branding into a Mature Era, *Zhuangshi* **09** (2017), 39-45.
- [3] Y.F.Liu, Research on Brand Image of Rural Tourism Development: Taking Zhuze Town as an Example, *Zhuangshi* **05** (2018), 134-135.
- [4] C.M.Yang, Discussion on the application of Saussure linguistic sign theory to logo design, *Industrial Design* **32** (2004), 26-32.
- [5] Y.H.Zhao, Semiotics Principle and Deduction, Nanjing University Press, 2017.
- [6] L.X.Zheng, J.Y.Du. Design of Olympic Medals Based on Cultural Image Cognition, *Packaging Engineering* 39 (2018), 204-208.
- [7] L.Xu, From Packaging Design to Branding Design: The Strategies for Chinese Tea During the Period of Consumption Upgrading, *Zhuangshi* **02** (2018), 30-36.
- [8] P.Shang, Y.F.Sun, Art Construction-Research on Modern Wood Structure Green Building Design, *Journal of Nanjing Arts Institute (Fine Arts & Design)* **04** (2015), 148-153.
- [9] J.C.Chien, M.M.Zhang, Research on Emotion-driven Design Rebranding and Product Innovation: A Case Study of JMGO Branding Design Strategy, *Zhuangshi* 12 (2018), 25-31.
- [10] H.F.Sun, L.X.Zheng, Construction and Research of Cultural Symbol in Logo Design Based on Two-axis Analysis Method, *Packaging Engineering* **41** (2020), 258-263+277.