

The Study of Local Crafts Cultural Products on 3-level Emotional Design

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Abstract: Consumers' demands have shifted from satisfaction towards product functions to satisfaction towards emotional attachment and symbolic meaning sought from a product. We take as our starting point the distinction between three perspectives on crafts products: craftspeople, designer and user. There is often a mismatch between these three perspectives, but both matches and mismatches constitute a major source of the affective reactions that people have to products and their interactions with them. Consumer demand concerning crafts products has changed from seeking functional satisfaction to emotional and meaningful satisfaction. This change has prompted businesses to gradually shift their focus to aesthetics and emotional design when developing new products. Consequently, Taiwan's Ministry of Economic Affairs and small and medium enterprises (SMEs) share the objective of recreating local commercial opportunities to assist in local industry development and promote product innovation regarding Taiwan's local characteristic industries. In addition to its rich Chinese culture and traditions, Taiwan possesses excellent regional advantages and production through high-tech industries. The connotations of industry development that employs local characteristics are that historical and cultural attributes must be included and industry culturalization emphasized, that is, adopting cultural connotations to strengthen the impetus for creative design and to enhance the added value of products. Based on data analysis and a literature review, this study analyzed the development of an integrated relationship between Taiwan's local characteristics and crafts design industries. Data from relevant analyses indicated the following: (1) Localized life and cultural characteristics and local spirit can sufficiently influence the innovation of local characteristic products; (2) successful local characteristic products must satisfy three levels of emotional design, namely, the visceral, behavioral, and reflective levels; and (3) integration of local characteristic industries and the experience economy concept requires an interdisciplinary exchange platform to stimulate industry innovation and drive emerging industries.

Key words: *local crafts cultural products, emotional design, interdisciplinary*

1. Introduction

The Executive Yuan in Taiwan began promoting the Challenge 2008 - The New Six-Year National Development Plan of the Republic of China (Taiwan), the goals of which are to nurture creative skills and promote the combination of culture with entrepreneurship to develop cultural industries. Strategies: (1) Setting up an organization to promote culturally creative industries. (2) Cultivating creative manpower for art and design. (3) Molding an environment conducive to the development of

creative industries. (4) Developing creative design and culture-based industries [1]. This plan included the Cultural and Creative Industry Development Plan, which incorporates the One Town One Product (OTOP) policy and generated emerging industry concepts, such as tourism and creative living, to form a more substantial and sustainable economy [2]. Local characteristic industries warrant considerable attention because the majority of people employed in local traditional industries are residents of rural villages, particularly in the Asia-Pacific region. Therefore, enhancing the development of local cultural industries is extremely significant for maintaining economic stability and promoting sustainable development. Relevant knowledge and skills must be transferred to manufacturers, and the value and cultural significance of products must be conveyed to potential consumers [3]. The primary topics discussed were as follows: (1) the correlation between local characteristic industries and crafts cultural products; (2) the relevance of cultural products regarding the mode of emotional experience design; and (3) the correlation between local characteristic industries and design in interdisciplinary collaboration.

2. Literature Review

2.1 Emotional design of local crafts cultural products

Considering the development trends and effects of a globalized economy, designs have gradually exhibited a consistent and international style that corresponds to the increasing similarity of lifestyles despite environmental variations. However, without individual characteristics, these designs cannot reflect regional cultural characteristics [4]. Various countries throughout the world have begun developing design styles that accentuate their personal cultural characteristics; this has resulted in design variations that highlight the current globalized design trend of seeking differences within commonality. This trend entails enhanced shaping of characteristics through design localization to address the current challenges of market globalization. Furthermore, greater emphasis is placed on adding value to products through design to transfer key elements, such as brand culture and value [5]. Made by Process Creators through Structural design and materials are the Create of products designs in the crafts. Products are very Performance on a very traditional. How do designers reinterpret using crafts material. Many design considerations are considered by the designer. Here, we focus upon two: Appearance and Utility. In turn, the user has various reactions to the product. Here we focus on three fundamentally different kinds: Visceral (perceptually-induced), Behavioral (expectation-induced), and Reflective (intellectually induced). Norman identified another crucial factor for products besides function, that is, emotion. Emotional design comprises the following three levels: visceral (the external appearance and texture of products), behavioral (product function), and reflective (individual feelings and perceptions) levels. Thus, emotional design is crucial for future developments in the design and service industries, which increasingly emphasize customization and interactive design to accommodate the design principles of different levels [6]. According to the above discourse, which is summarized in Fig. 1, shows the relationship between the three views. The craftsmen passed through material and structure technical provide designer. The designer may intend to induce emotions through the design, but because emotions (which are a special, but particularly salient form of affective reaction) reside in the user of the product rather than in the product itself, the emotions the user experiences are not necessarily the same as those intended by the designer. Product-induced emotions are often quite idiosyncratic, depending, for example, on memories the product invokes or on the particular circumstances of use. Yet other emotions result from concerns outside the object, such as the status it might or might not bestow.

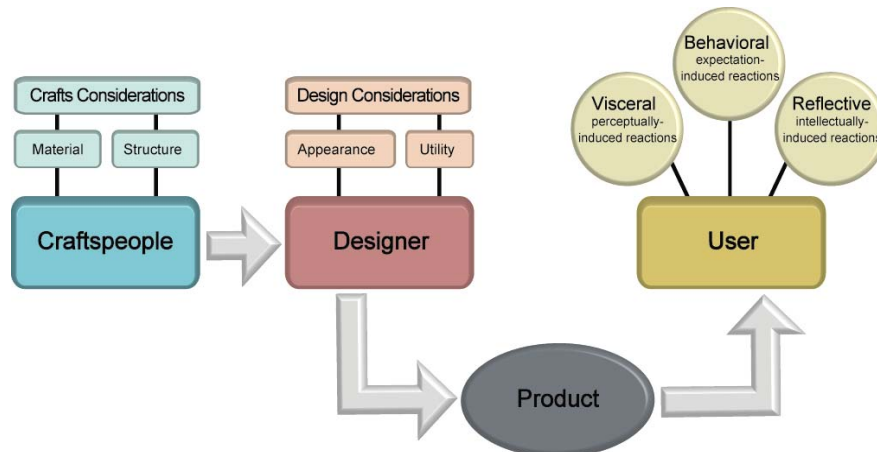
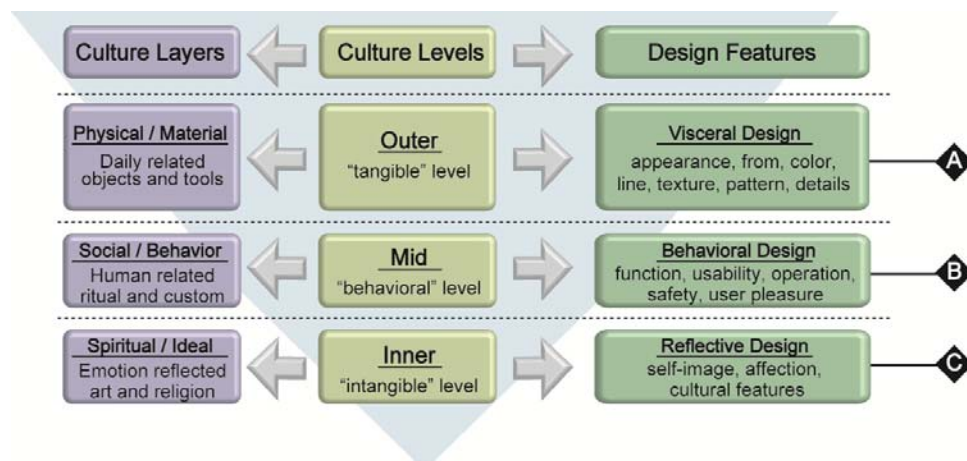


Figure.1 The Designer's View of the crafts product differs from the User's view
(Source: data compiled in this study, 2012)

2.2 Emotional design of cultural design features

As shown in Fig. 2, culture can be classified into three layers: (1) physical or material culture -- including food, garments, and transportation related objects, (2) social or behavioral culture- including human relationships and social organization, and (3) spiritual or ideal culture -- including art and religion. These three culture layers can be fitted into Leong's three culture levels given above. While cultural objects can be incorporated into cultural design, three design features are identified as follows: (1) the inner level containing special content such as stories, emotion, and cultural features, (2) the mid level containing function, operational concerns, usability, and safety, and (3) the outer level dealing with colors, texture, form, decoration, surface pattern, lines quality, and details [7]. Taking Taiwan traditional crafts culture as an example, Fig. 2 illustrates the application of the three levels of a "Rush" from Yuanli in Miaoli Country to design a cultural product [8]. The three levels of the cultural object can be mapped into three levels of design features. Visceral design concerns the appearance of a cultural object, and transforms its form, textures, and pattern into a new product. The visceral design feature is where appearance matters and first impressions are formed. The behavioral design level is about use, function, performance and usability of a cultural object. The behavioral design feature is the key to a product's usefulness. Reflective design concerns feeling, emotion, and cognition of a cultural object. The reflective design feature is the most vulnerable to variability through culture, experience, education, and individual difference.



Example:Rush



Figure.2 Three layers and levels of cultural objects and design features (Lin, 2005)

2.3 Local crafts industries and interdisciplinary design collaborative models

Globally, industry development has shifted from the previous unitary manufacturing pattern to comprehensive experience economies. Similarly, Taiwan's economic activities have switched from traditional agriculture to business and services. With rapid industry and community changes, local characteristic industries have adopted diverse and comprehensive development directions [9]. Interdisciplinary resource collaboration for local characteristic industries endeavors to increase the design service capacity and expand the application dimension of design aesthetics. The incorporation and cooperation of different industry disciplines can generate innovative creative elements (Fig. 3). Service design is also known as experience design, which suggests that the products sold contain consumer experience as well as their face value. This type of design achieves an intangible and invaluable consumer experience by re-designing the contact point with customers. Using interdisciplinary collaboration to resolve financial and aesthetic issues through design requires the participation and cooperation of interdisciplinary qualified design professionals. Thus, innovative local characteristic development can be achieved, stimulating the clustering of design service activities and facilitating the development of local characteristic industries [10].

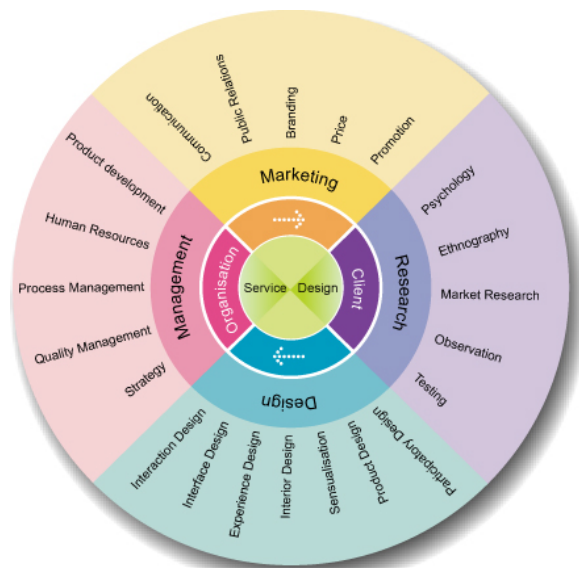


Figure.3 Service design requires an interdisciplinary collaborative team and collaborative creation methods

3. Research Methods

This study primarily employed a literature review and content analysis methods to conduct an investigation. The primary topics discussed were as follows: (1) the correlation between local crafts industries and crafts cultural products; (2) the relevance of crafts cultural products regarding the mode of emotional experience design; and (3) the connection between local crafts industries and design in interdisciplinary collaboration. This study was conducted in four phases, which are briefly described below.

- Phase 1: Based on related literature and using the Taiwan OTOP Design Awards as a case study, the business philosophy and development of this project was examined and analyzed. In addition, this phase targeted the background development of the Taiwan OTOP, assessing and tabulating the differences compared to that of other countries.
- Phase 2: In this phase, 32 winning entries in the crafts cultural products design category of the Taiwan OTOP Design Awards from 2007 to 2012 were analyzed. Specifically, the product design elements of each entry were examined regarding cultural significance, cultural characteristics, and the correlation between brand culture and local industries.
- Phase 3: From the perspectives of design material, function, and Design style, analysis was conducted using the degree of cultural perception regarding the crafts cultural products of the case study. The analysis results were then matched to the three levels of emotional design (i.e., visceral, behavioral, and reflective levels).
- Phase 4: The local characteristic industry development model of the Taiwan OTOP project was investigated using the content analysis method. Four design companies were targeted to conduct analysis regarding interdisciplinary collaboration with traditional crafts industry. An integrated examination was performed after the crafts cultural products that possess the three main elements of emotional design for each company were combined. This was conducted to identify the essence of Taiwan's local cultures and to establish the cultural value and connotations of local crafts industries.

4. Research results and discussion

4.1 Case study background and business philosophy

Development of the OTOP project in various countries has improved local residents' quality of life and produced several tangible and intangible benefits. Similar to the international brands Franz Porcelain and Liuligongfang, local traditional industries in diverse regions of Taiwan have gradually increased their product quality and production scale with the addition of value through design. For example, Yuan Soap, which began as a small studio that produced soaps, has since established the Yuan International Herbs Research and Development Center. With local industries as the foundation, the Ministry of Economic Affairs has promoted the Taiwan OTOP project to achieve various goals, such as establishing an innovative economy, encouraging consumerism, and building a lifestyle of health and sustainability (LOHAS). Consequently, the policy objectives of revitalizing and promoting local economies and employment can be accomplished. The Taiwan OTOP project can be categorized into the following four levels: (1) the transformation of potential characteristic industries as determined by an expert consultant team; (2) counseling of local and thematic characteristic industries; (3) using channels to promote characteristic tours and products; and (4) positioning local industries within the product-, tour-, or image-based structure and using local industry characteristics to improve local economies and prosperity (Fig. 4).

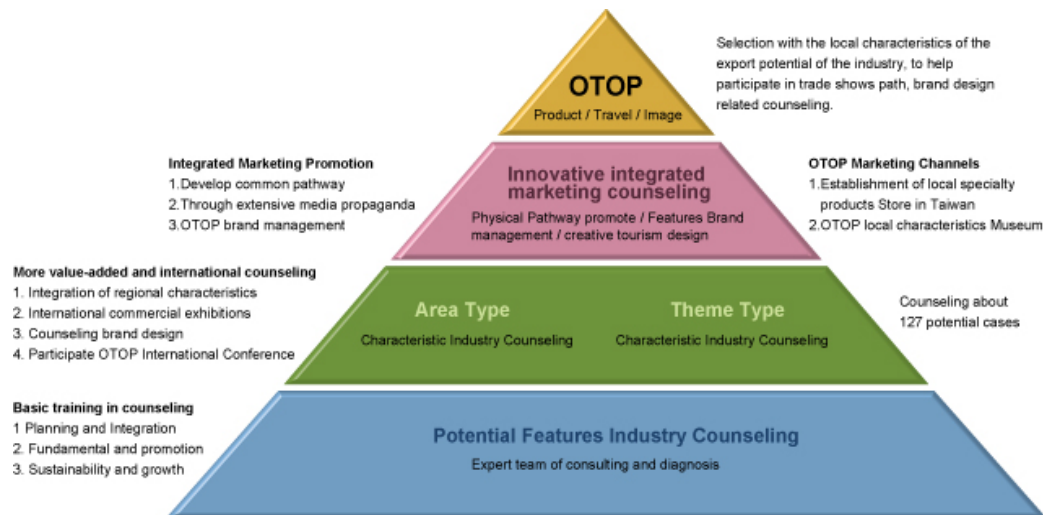


Figure.4 Overall promotional framework for cultivating, adding value to, and advising characteristic industries in the Taiwan OTOP project

Table 1. Various global representatives promoting the OTOP/OVOP (One Village One Product) movement each year

Country	Japan(OVOP)	Taiwan(OTOP)	Malaysia(SDSi)	Thailand(OTOP)	Malawi(OVOP)	Philippines(OTOP)	Indonesia(OVOP)	Peru(OVOP)	Senegal(OVOP)	Kenya(OVOP)
Age	1979	1989	1992	1997	2003	2004	2004	2010	2011	2011
Logo										

This global chronology shows that the OTOP movement, which originated in Asia, has spread to most countries throughout the world. This movement has attracted the attention of industries and markets and is the primary development policy of several governments worldwide, thereby achieving globalization. Table 1 shows that Taiwan began considering and promoting local characteristic policies fairly early; however, Taiwan's local cultural industries continue to experience subsistence difficulties. Further investigation of local industry attributes and maturity is required to effectively address the inadequate depth and scope of local crafts industries and provide assistance accordingly.

4.2 Product design elements of crafts cultural products

This study sampled and tabulated 32 winning entries in the product crafts design category of the Taiwan OTOP Design Awards for 2007 to 2012. In this study, five commonly examined Product design elements (i.e., text, Shape, Assembly, Material, Color, and Texture) were summarized and analyzed. The results, as presented in Fig. 5, show that the majority of the designers used structural shapes complemented with local impression to strengthen the link between the cultural characteristics and the product. The second most commonly employed design element was the inclusion of Process materials that expressed the essence of the work and demonstrated the integration of a unique local endemic product.

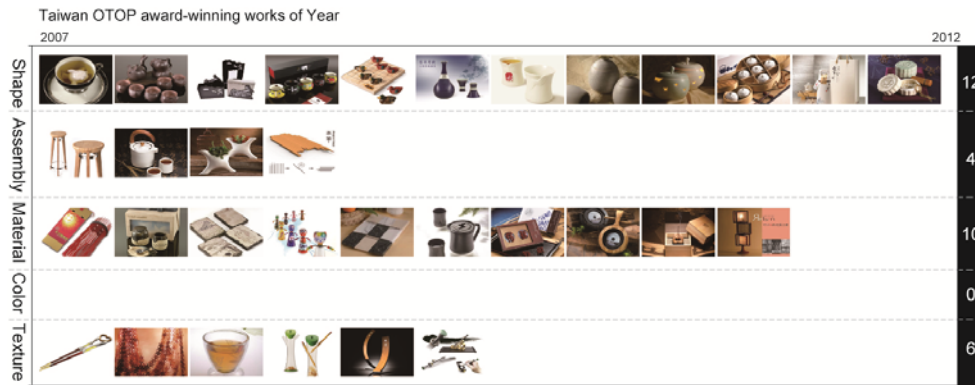


Figure.5 Product crafts design element analysis of the entries winning Taiwan OTOP Design Awards

4.3 Analyzing crafts cultural products through emotional design

This study conducted a three-level emotional design analysis of the 32 winning entries in the product crafts design category of the Taiwan OTOP Design Awards. Visceral design refers to the product's external appearance, form, and texture. The visceral level is users' first impression of the product appearance; thus, functional design has a direct effect on the affect and resonates with the viewer. Attraction is a visceral-level phenomenon, a reaction to the object's appearance [11]. This study analyzed the texture and material dimensions of local crafts cultural products, which were defined by the extrinsic cultural attributes of visceral design. The classification of general and local materials shown in Fig. 6 indicates that most (21) of the 32 designers used general materials, and Eleven used local materials. A comparison between the entries "An Exquisite Tea Set Featuring Wheat" and "Stool of Triangle Rush" shows that the crafts design for the former used production of tea utensils of clay materials, whereas that for the latter used triangle rush from a locally known traditional materials from the Yuanli, Miaoli.

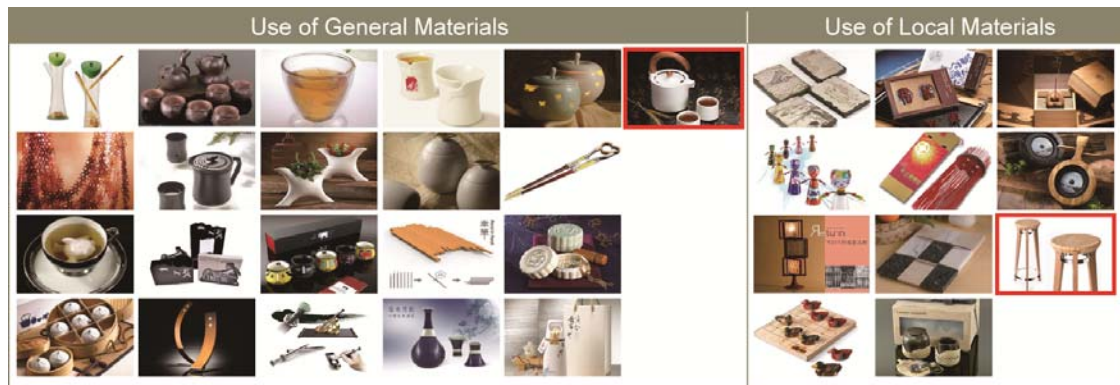


Figure.6 Visceral design analysis of local crafts cultural products

Typically, behavioral design is directly correlated to usage and comprises functionality, comprehensibility, ease of use, and physical sensation. Among these, functionality is considered the most crucial on the behavioral level regarding product experience [12]. The behavioral design of local characteristic products emphasizes functional significance. At this level, designers strive for a supplementary function that enables users to experience Taiwan's unique cultural atmosphere when using the product. This study conducted behavioral design analysis of the functional of local characteristic product crafts designs. As shown in Fig. 7, a classification of adornment and daily use articles designs shows that most (6) of the designs were adornment, although Twenty-six were daily use articles. A comparison of the entries "Ata Ohiyah" and "Divider Plate" showed that one possessed adornment

crafts cultural products, whereas the other had daily use articles crafts cultural products that permits the marble material into containers.

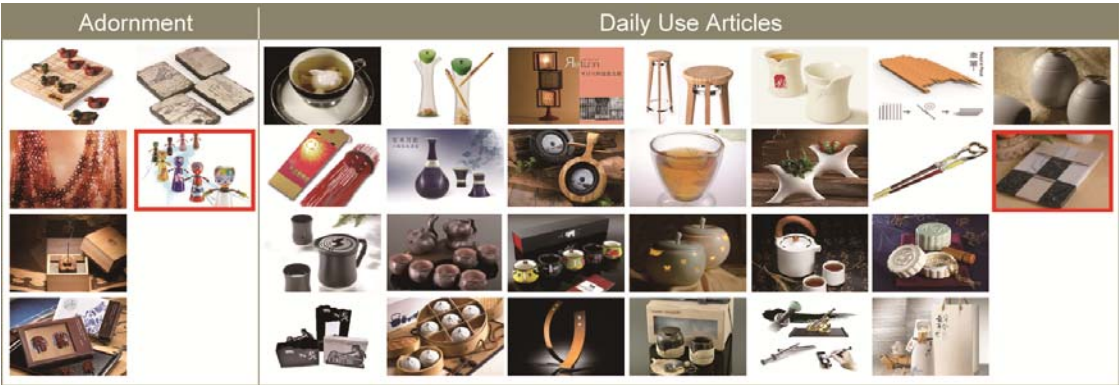


Figure.7 Behavioral design analysis of local crafts cultural products

Reflective design focuses on the meaning of the message, culture, and product. Awareness, feelings, emotions, and perceptions exist only on the reflective level, which easily varies according to differences in culture, experience, education, and among people. Design on the reflective level can induce strong and continuous effects in users that typically require a reaction and time to develop [13]. The reflective design of local characteristic products emphasizes memories and individual perceptions and cognition. At this level, designers endeavor to create a memorable and shareable story for users. A classification of the tradition and modern elements indicates that either of these two elements accounted for 50% of the entries (Fig. 8). The entry “Tales by Pave-Song of Flying Fish” provides a context of local natural images through the natural landscape, and the entry “Flower City” reflects the cultural respect and preservation. Each piece has a modern “X”-shape in imitation of a rustic bamboo fence.



Figure.8 Reflective design analysis of local crafts cultural products

According to the results of the three-level emotional design analysis of cultural products examining the visceral, behavioral, and reflective levels (Figs. 6 to 8), this study differentiated the variations by quantity and concluded the following: (1) From a visceral design perspective, the number of local crafts cultural products that used general materials more almost doubled the number of crafts products that used local materials; (2) from a behavioral design perspective, the number of daily use articles winning entries exceeded the number of adornment winning entries; and (3) from a reflective design perspective, the difference between the number of culture style designs that used the tradition and the designs that used modern was minimal. Detailed results are shown in Table 2.

Table 2. Emotional design analysis of local crafts cultural products by level

	Use of General Materials	Use of Local Materials
Visceral	21	11
	Adornment	Daily Use Articles
Behavioral	6	26
	Tradition	Modern
Reflective	16	16

4.4 Interdisciplinary collaboration analysis of local crafts industries

Taiwan OTOP project recommended collaboration by combining differing industries and pathways and using these cooperative relationships to design products with developable value. The results of the survey are summarized as follows: (1) Applying design to create value: transform cultural products, preliminary products, services, and experiences into optimal products or services acceptable to consumers, and promote the value perception of design throughout industries and society to enhance the overall quality of life and the environment. (2) Using creative ideas for design: revitalize traditional products by combining the creative ideas of local characteristic business owners and design professionals, applying local characteristics, and adopting Taiwan's native local materials. (3) Effectively employing innovative technologies for design: Use the advantage of industry clusters and improve technological innovation to prompt the development of traditional industry values, establish interdisciplinary design exchanges, and enhance domestic design development and competitiveness.

Table 3. Case study of interdisciplinary design collaborative models for local crafts cultural products

Name	Design Concept	Design in Interdisciplinary Collaboration	Product
Si Xiang Qi CD Player	The design for the Si Xiang Qi CD Player was inspired by the shape of the Chinese lute, or the "yueqin", in Hengchun. With the idea of maintaining the environment and endowing the silver wattle tree with new life, modern music players such as the Si Xiang Qi can be manufactured using recycled wood waste from the silver wattle. This raises the standard for the cultural and creativity industry as well. The music of the yueqin fills the mind with images similar to how the traditional Taiwanese composition Si Xiang Qi evokes a sadness and nostalgia for times past.	Award Winner National Kaohsiung Normal University, Department of Industrial Design/ Cooperative Unit Mudouweng Wooden Decorating Enterprise	
Stool of Triangle Rush	Instead of using triangle rush only for weaving techniques to make products, by returning to the intrinsic nature of the triangle rush and reconsidering the characteristics of this material, different manufacturing methods can be used to interpret styles for triangle rush. From Yuanli in Miaoli County which is known as "triangle fiber rush", and its triangular shape reveals a distinctive aesthetic design. By wrapping this type of triangle rush around the seat as a cover, its natural tones are displayed.	Award Winner Lin Jhih Fan Cooperative Unit Miaoli, Yuanli, Shanjiao Community	
Poem & Incense	Lugang in Changhua County is full of historically that tell many stories. Incense was part of the life of the literati in ancient times that created poems during this era. Therefore, incense is made in the shape of characters that are selected from the ancient poems to represent these meanings to help foreign friends to appreciate the beauty of Chinese writing, and when they burn incense they can simultaneously experience the incense-making culture of Lugang.	Award Winner Rocio Yang Cooperative Unit Shih Chin Yu San Fang Incense Product Industrial CO., Ltd.	
Fishing for Tea-Fish-shaped Tea Strainer	By matching the soft hues of ceramic with the durability of stainless steel, this tea strainer can be used with tea cups made from a variety of materials. The image of the leisurely sojourn of a carefree fish through tranquil waters is an expression of the sweet and mellow smoothness of the black tea from Yuchi Township in Nantou County.	Award Winner Chuan-Li Rice Cookie Food Ltd. Cooperative Unit 20/20 Creative Co. Ltd.	

5. Conclusion

Localized life and cultural characteristics and local spirit can sufficiently influence the innovation of local characteristic products. From the perspective of economic development, the emergence of local characteristic industries is based on internal demand. Local characteristic products can be expanded to export sales and, thus,

provide a source of survival for local economies. Additionally, industry supply can be increased by cultivating Taiwanese brands, creating product differentiation, and combining products and service. Successful local characteristic products must satisfy three levels of emotional design (i.e., the visceral, behavioral, and reflective levels), seek design innovation by overturning traditions, and create a newfound awareness of the local area and an accumulated affect for current generations. Subsequently, the development of local characteristic products in Taiwan can expand and prosper, as well as reinforce intangible values, such as residents' influence, generosity, and skills. The integration of local characteristic industries and the experience economy concept requires a platform for interdisciplinary design exchanges to stimulate industry innovation and drive emerging industries. The aesthetics of traditional industries must be continually enhanced, and the sustainable development of these industries is only possible through the incorporation of design. It is noted that the beauty of Taiwan local crafts culture and art demonstrates a great potential for enhancing the design value of modern consumer products. With beautiful and primitive visual art and crafts, Taiwan local culture should have great potential to enhance the design value, and to be recognized in the global market. Evidence shows that the perspective of Taiwan local culture in design will undoubtedly become crucial cultural elements in future design applications. Therefore, a cultural feature transformation model was proposed for transforming Taiwan local crafts culture features into modern product design.

6. Examples Citations

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