Designing "Culture" into Modern Product:
A Case Study of Cultural Product Design

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Abstract. "Culture" plays an important role in the design field, and "cross cultural design" will be a key design evaluation point in the future. Designing "culture" into modern product will be a design trend in the global market. Obviously, we need a better understand of cross-cultural communication not only for the global market, but also for local design. While cross-cultural factors become important issues for product design in the global economy, the intersection of design and culture becomes a key issue making both local design and the global market worthy of further in-depth study. The importance of studying culture is shown repeatedly in several studies in all areas of technology design. Therefore, this study focuses on the analysis of cultural meaning, operational interface, and the scenario in which the cultural object is used. This paper establishes a cultural product design model to provide designers with a valuable reference for designing a successful cross-cultural product.

Keywords: cross cultural design, cultural difference, Taiwan aboriginal culture.

1   Introduction

We now live in a small world with a global market. While the market heads toward "globalization", design tends toward "localization." So we must "think globally" for the market, but "act locally" for design. Designing local features into a product appears to be more and more important in the global market where products are losing their identity because of the similarity in their function and form [3]. Cultural features then are considered to be a unique character to embed into a product both for the enhancement of product identity in the global market and for the fulfillment of the individual consumer's experiences [10]. The increasing emphasis on localized cultural development in Taiwan demonstrates an ambition to promote the Taiwanese style in the global economic market as for example, the use of aboriginal music from the Amis tribe at the 1996 Olympic Games which brought that form of music to the global arena. Additionally, martial art movies from Bruce Lee to Jacky Chan to the Oscar-winning movie director Ang Lee, have promoted recognition of the Taiwanese culture at the international level [5,2].

The "Economic Miracle" of Taiwan was made possible by the hard work of Taiwanese "industriousness and thrift". In the OEM (Original Equipment Manufacture) era, Taiwan's manufacturers reduced costs to produce "cheap and fine" products to be successful in the global market. After 1980, Taiwan enterprises began to develop ODM (Original Design Manufacture) patterns to extend their advantages in OEM manufacturing. Recently, product design in Taiwan has stepped into the OBM (Original Brand Manufacture) era. In addition, cultural and creative industry have already been incorporated into "Challenge 2008: National Development Grand Plan", demonstrating the government's eagerness to transform Taiwan's economic development by "Branding Taiwan" using "Taiwan Design" based on Taiwanese culture and aboriginal culture [10].

In the global market - local design era, connections between culture and design have become increasingly close. For design, cultural value-adding creates the core of product value. It's the same for culture; design is the motivation for pushing cultural development forward [4]. Therefore, based on the "Taiwan experience", this article intended to propose a cultural product design model and examples illustrating how to transfer "Taiwan culture" to design elements, and design these cultural features into modern products to reinforce their design value. Results presented herein create an interface to look at the way Taiwan designers communicate across cultures, as well as the interwoven experience of design and culture in the design process.

2   Taiwan Aboriginal Culture

Taiwan is a multi-cultural blend of traditional Chinese with significant East Asian influences including Japanese and such Western influences as American, Spanish and Dutch. Over time, Taiwan gradually developed its own distinct culture, mostly from a variation of Chinese culture coming from southern China. Of course, the Taiwanese aboriginals also have a distinct culture. The Taiwan Aborigines are the original inhabitants of Taiwan, residing there long before the Chinese immigrants came from Mainland China to Taiwan during the Ching Dynasty from mid-17th century. They originally derive from the Austronesian Language Family. According to anthropological studies of physical features, customs, thoughts, language, and verbal narrative history, they are identified with twelve tribes: Atayal, Saisiat, Bunun, Tsou, Thao, Paiwan, Rukai, Amis, Puyuma, Tao, Kavalan, and Truku [1,7,8,9].

Among these 12 tribes, there are different customs and material cultures from one tribe to the other, particularly in different geographical environments. For instance, the culture of tribes located near the ocean reflects their fishing based living, while mountain tribe culture develops from a dependence on hunting [18,19]. However, in general, traditional tribes have self-sufficient societies which are dependent on agriculture, fishing, hunting and animal husbandry. It is very important to study Taiwan Aboriginal totem art in order to understand their culture because of their lack of a written language [9,13,14,16]. The totems appeared on textiles and sculptures and can illustrate the culture itself. With their beautiful and ancestral visual arts and crafts, Taiwan aboriginal cultures should have great potential for enhancing product design value thus increasing recognition in the global market. By enhancing the original meaning and images of Taiwan Aboriginal cultures and taking advantage of new

production technology, designers in Taiwan are trying to transform aboriginal cultural features into modern products and fulfill the needs of the contemporary consumer market.

3   A Cultural Product Design Model

Cultural product design is a process of rethinking or reviewing cultural features and then to redefining the process in order to design a new product to fit into society and satisfy consumers with via culture and esthetic. Using Cultural features to add extra value to a product can not only benefit economic growth but also promote unique local culture in the global market [6,15]. Therefore, how to transfer cultural features into a cultural product becomes a critical issue. A cultural product design model which facilitates understanding of cultural product design is proposed as shown in Figure 1 [11].

In Figure 1, the cultural product design model consists of three main parts: conceptual model, research method, and design process. The conceptual model focuses on how to extract cultural features from cultural objects and then transfer these features to a design model to design cultural products. The research method consists of three steps: identification, translation and implementation, to extract cultural features from original cultural objects (identification), transfer them to design information and design elements (translation), and finally design a cultural product (implementation).
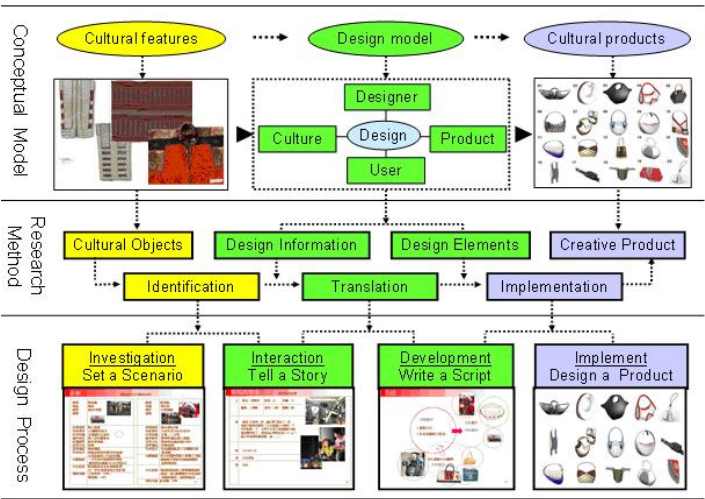

Fig. 1. Cultural product design model

Based on the cultural product design model, the cultural product was designed using scenario and story-telling approaches. In a practical design process, four steps are used to design a cultural product, namely, investigation (set a scenario),
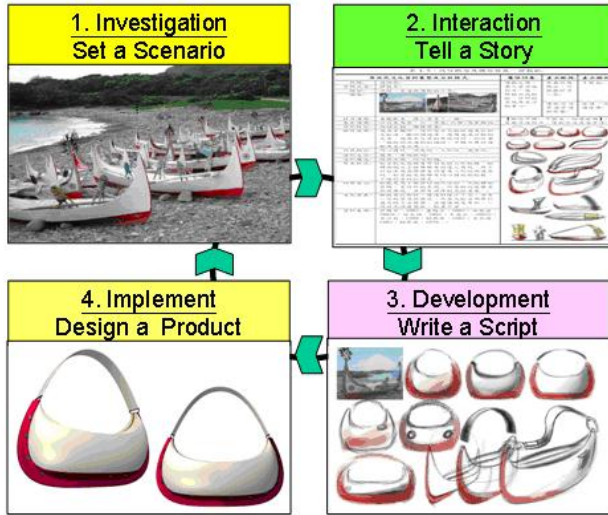
Fig. 2. The cultural product design process

interaction (tell a story), development (write a script), and implementation (design a product) as shown in Figure 2.

(1) Investigation/set a scenario: the first step is to find the key cultural features from the original cultural object and to set a scenario to fit the three levels: outer 'tangible' level, mid 'behavioral' level, inner 'intangible' level. Based on the cultural features, the scenario should consider the overall environment such as economic issues, social culture, and technology application. This step tends to analyze the cultural features in order to determine the key cultural features to for representing the product.

(2) Interaction/tell a story: based on the previous scenario, this step focuses on a user-based observation to explore the social cultural environment in order to define a product with cultural meaning and style derived from the original cultural object. Therefore, some interactions should be explored in this step including interaction between culture and technology, dialogue between users and designers, and understanding the user's need and cultural environment. According to the interaction, a user-centered approach was used to describe the user need and the features of the product by a story-telling.

(3) Development/write a script: this step is the concept development and design realization. The purpose of this step is to develop idea sketch in text and pictograph form through the access of scenario and story. During this process, modification of the scenario and story might occur in order to transform the cultural meaning into a logically correct cultural product. This process provides a way to confirm or clarify the reason why a consumer needs the product and how to design the product to fulfill the users' need.

(4) Implement/design a product: this step deals with identified cultural features and the context of cultural products. At this stage, all cultural features should be listed in a matrix table which will help designers check the cultural features in the design process. In addition, the designer needs to evaluate the product features, product meaning, and the appropriateness of the product. The designer may make changes to the prototype based on the results from the evaluation, and implement the prototype and conduct further evaluations.

4   Design Case Study of Scenario and Story-Telling Approach

Taking Tao culture as an example, the Tao people are a Taiwan aboriginal people who are native to the tiny outlying Orchid Island. The Tao people are traditionally good at making canoes. The Pin-Ban boat shown in Figure 2 is a symbol of their tribe. The Tao people live by fishing and usually bring the holy dagger with them while fishing. Figure 3 shows the final cultural product designed from the Tao's Pinban boat and holy dagger. The scenario is that Tao people ride in their Pin-Ban boat and bring their holy dagger to protect them and sail to the ocean for fishing. Based on the scenario, the Pin-Ban boat was transformed into a modern bag and the holy dagger into a knife-like modern alarm. In modern society, one can imagine a pretty woman holding the modern bag and bringing the modern alarm to protect her while walking down the street as matching the previous scenario of Tao people fishing with their Pin-Ban boat and holy dagger [11].

Fig. 3. The cultural product from Pin-Ban boat and holy dagger

Based on the cultural product design model, figure 4 showed how to transfer the original object -- 'Pottery-pot' from Paiwan tribe to design a modern bag. Different cultures use textile containers designed for their own storage and transportation needs.
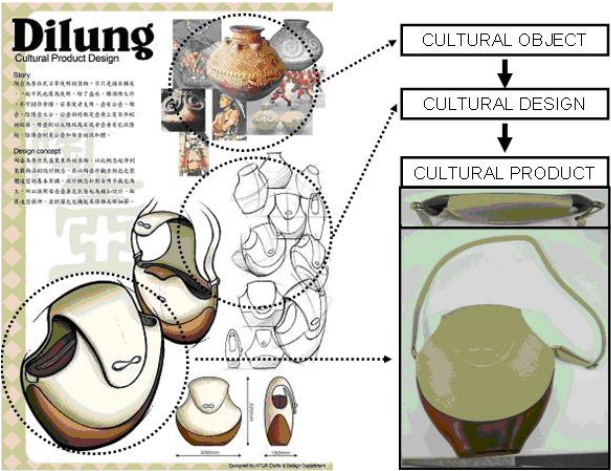
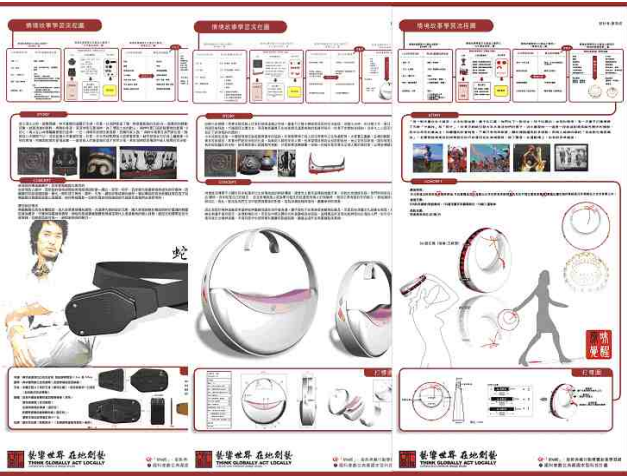**Fig. 4.** The modern bag deigning from the pottery pot

Fig. 5. The process of designing modern bags from cultural objects

Unlike bags or containers made from rigid materials such as clay or glass, textile containers offer flexibility of use by adapting to whatever item they are carrying. Figure 5 shows how to use the Taiwan aboriginal garment as the original cultural objects to design modern bags. In addition, figure 6 demonstrated the cultural features extracted from Taiwan aboriginal garment culture and transformed into modern bag design.

Fig. 6. Various bags from the Taiwan aboriginal garment culture

5   Conclusion

In recent years, if you have seen BENQ, ASUS, DUCK, or other design teams on the prize list of international design contests and wondered if there were Taiwanese designer behind them, you would have been correct. Recently, Design teams from Taiwan have become regular winners of international design contests. The capability of Taiwan's industrial design is coming to the fore in of the global design arena through international design contests. Therefore, based on "Taiwan culture", the purpose of this article is to show how "Branding Taiwan" into "Taiwan Design" can reinforce design value upwards. For "Branding Taiwan", we must think about how to use the Taiwan culture. For the "Taiwan Design", we need to design "Taiwan cultural features" into modern products.

The aboriginal garment culture provides a good example of applying cultural features to design while still retaining a meaningful cultural value. This paper demonstrated the cultural features of aboriginal garment culture and how to transform those features into a new cultural product design which can fit into the contemporary market. Cultural products, hence, can extend the heritage and traditional values of Taiwan Aboriginal Culture to the consumer and increase the sense of spiritual essence in human life. Perhaps the best way to extend Taiwan Aboriginal Culture is to promote it in consumers' daily lives through impressions made by the use of products such as garments, crafts, decorations, utensils, furniture, ornaments, and packages whose designs are based on that culture.

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