

# A Study of Service Innovation Design in Cultural and Creative Industry

Yu-Yuan Ko<sup>1</sup>, Po-Hsien Lin<sup>2</sup>, and Rungtai Lin<sup>2</sup>

<sup>1</sup> Department of Industrial Education and Technology,  
National Changhua University of Education  
N0 516, Chung Shan Rd, Sec 2, Huatan Village, Changhua county, 503, Taiwan  
service@jaguarcar.com.tw

<sup>2</sup> Crafts and Design Department, National Taiwan University of Art  
Ban Ciao City, Taipei, 220, Taiwan  
rtlin@mail.ntua.edu.tw

**Abstract.** Service design is considered to be one of the pivotal components in cultural and creative design industries which has a significant impact on consumer perception of innovation. Despite service design's recognized importance, cultural and creative industries lack a systematic approach to it. Therefore, based on the "Taiwan experience", this paper proposes a service innovation design model and provides examples illustrating how to transfer cultural features into service design, and design these cultural features into modern products to reinforce their design value. Results presented herein create an interface for looking at the way service innovation design crosses over cultures, as well as illustrating the interwoven experience of service design and cultural creativity in the innovation design process.

**Keywords:** service innovation design, creative industries, experiencing culture.

## 1 Introduction

There has been a recent shift from technological innovation to service innovation based on discovering new opportunities in the marketplace. Companies are more focused on adapting new technologies and combining them in ways that create new experiences and value for customers. With the development of industrial tendency, most companies gradually realize that the keys to product innovation are not only market and technology aspects but also service innovation design [2,4,12]. Ulrich and Pearson [25] point out that service design has received increased attention in the academic and business communities over the past decade. Both academics and practitioners emphasized that the role of service design in innovative product development relates not only to aesthetics, but also to aspects such as ergonomics, user-friendliness, efficient use of materials, functional performance [8].

However, we now live in a small world with a large 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. In the global market - local design era, connections between culture and design have become increasingly close. For

service design, cultural value-adding creates the core of product value. It's the same for culture; service design is the motivation for pushing cultural and creative industries development forward [17, 18, 19]. While service innovation design is under tough competitive pressure from the developing global market, it seems that the local design should be focused on "service" to adapt "innovation" to product "design."

The importance of studying service innovation design is shown repeatedly in several studies in all areas of the design field. Despite the recognized importance of service design in cultural and creative design industries, they lack a systematic approach to it. Therefore, the main purpose of this paper is to study factors affecting service innovation design. These factors are discussed in order to understand the change of service innovation design in cultural and creative design industries [28].

A service innovation design approach is proposed which integrates the difference between products and services of cultural and creative design industries into the service innovation design activities of current service development practice. A model is then provided illustrating how the National Taiwan University of Arts (NTUA) has established the link between service innovation design and cultural and creative industries through Our Museum, Our Studio and Our Factory respectively. It is the service innovation design approach that joins design, culture, creativities and economy, and further illustrates some implications through the cultural perspective.

## 2 The Change of Service Innovation Design

A literature review summary on innovation and service design is presented. From a design point of view, we examined previous studies on innovation design and the concepts used. There is no widely agreed definition of service design in the literature [1, 5, 6, 7, 13, 14, 20, 26, 27]. Through the review, it was noted that no matter what the interpretations for service design were, it was agreed to be crucial to the overall service development process [28]. However, we will discuss the change of service innovation design from the design point of view as follows.

### 2.1 From "Function" to "Feeling" in Design History

In the early 20th century, when users thought about "design", "form follows function" often came to mind. Today, the technology progress has shifted dramatically and provides platforms for completely new forms of "design" and "service" delivery. Now, we communicate with our friends using a cell phone (design) or plan and buy a trip around the world using the internet (service). From a design point of view, we could use five "Fs" to describe the change from designing "function" for the user's need to servicing "feeling" for the user's pleasure as shown in Figure 1. These five F's include: (1) 1930's - design for "Function", (2) 1950's - design for "Friendly", (3) 1970's - design for "Fun", (4) 1990's - design for "Fancy", and (5) 2001's - design for "Feeling", respectively [17,18].

Along with the technology progress, if we examine the design history of the last century, we find "form follows function" to be the motto to design for function, and dominated design conceptualization. After world war II, the new discipline of human

factors was introduced and the concept of “design for human use” applied to product design. The concept of “user friendly” become common sense with the popularity of the PC in the commercial market. In the 1970’s, talking too much about “function” and “friendly” in designing products became boring, and some designers tried designing “Fun” into the product. The application of post-modernism in the design field is a typical example of designing for fun. Then, in the 1990s, designers tried designing “fancy” into their design based on advance technology such as concurrent engineering or RPT (Rapid Prototyping Technology).and the concept of product personality became a tool for differentiating the market.

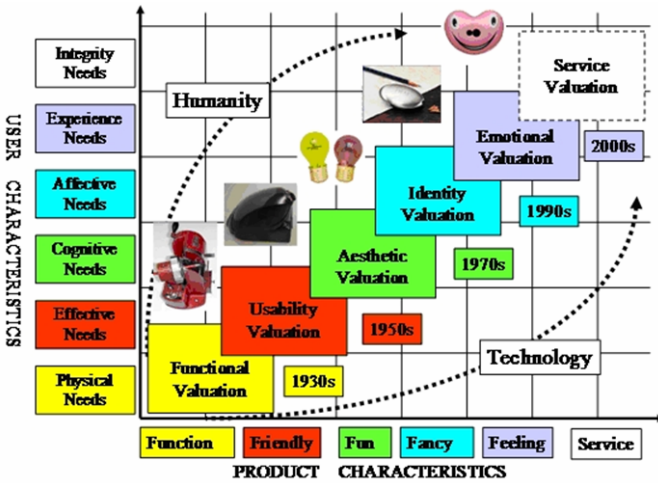


Fig. 1. The change of innovation design from “function” to “feeling”

Finally, designing “Feeling” into products to present the emotional communication of user experiences become a design trend in the 21<sup>st</sup> century. As a result, “design for feeling” became the key factor for innovative products. In other words, the product must be endowed with an immediate attraction and this therefore renders user perception of innovative product form an important issue for “pleasure” [9, 10, 11]. In Figure 1, we use a pencil sharpener as an example to demonstrate the change from “design for function” to “design for feeling”.

This change of service in innovation design has also created even more complex organizations and systems of service delivery to satisfy user needs. The users not only need the 5 Fs but also innovation service for their integrity needs. The only way to deal with this complexity is to keep user needs and desires central to any design development. Indeed, service innovation design is part of the solution to this challenge, with deep user involvement throughout the creative process and a keen view of the functional and emotional details that enable people to enjoy the services that are important in their lives [26, 27].

### 2.2 From OEM to OBM in Taiwan Design Development

Taiwan’s industrial design is developing along with its economic development. The design development could be represented as a smile face, proposed by the former ACER president Shi, from OEM (Original Equipment Manufacture), ODM (Original Design Manufacture), to OBM (Original Brand Manufacture) as shown in Figure 2. Before 1980, OEM vendors in Taiwan reduced costs to produce “cheap and fine” products to be successful in the global manufacturing industry. With the OEM style of having “cost” but without a concept of “ price” in mind, or just by knowing “ cost down” but not knowing “ value up”, these vendors created Taiwan’s economic miracle by earning a low profit from manufacturing. Those dependent upon hard-working patterns from the OEM pattern became obstacles in developing their own design. These vendors were extremely busy producing products to meet manufacturing deadlines; there was no time to develop design capabilities, so that environment could not nurture design talents [17, 19].

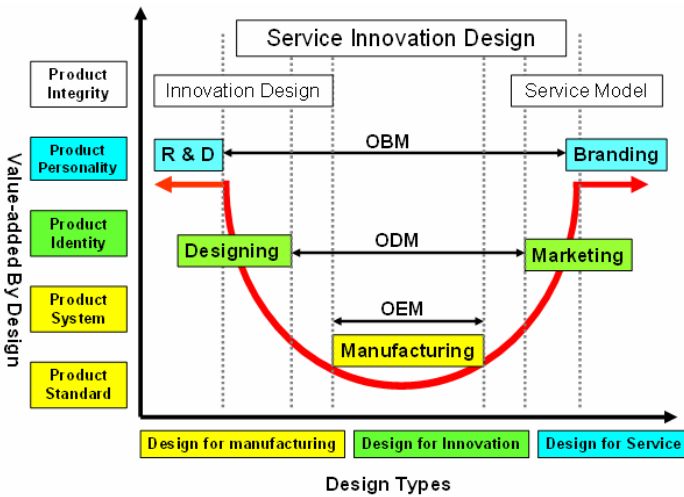


Fig. 2. From OEM to OBM in Taiwan design development

After 1980, Taiwan enterprises began to develop ODM (Original Design Manufacture) patterns to extend their advantages in OEM manufacturing. Taiwan’s government addressed a series of measures to stimulate the nation’s economic growth, including the “Production Automation Skill Guidance Plan”, and the “Assisting Domestic Traditional Industrial Skill Plan”. These plans were to guide vendors to make production improvements, to lower costs and to increase competition. Especially starting from 1989, the industry Bureau pushed the “Plan for total Upgrading of industrial Design Capability” within three consecutive five-year plans to build up working models of experienced design scholars from universities and their students to work on designs. The design students worked with the enterprises on specific projects to set up a working pattern of industrial design based on enterprises’ real needs [17, 18, 19].

Recently, product design in Taiwan has stepped into the OBM (Original Brand Manufacture) era. In addition, cultural and creative industries have already been incorporated into the “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 [17, 18, 19]. Designing “culture” into modern products will be a design trend in the global market. Obviously, we need a better understanding of service innovation design in cultural and creative design industries 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 service innovation design and culture becomes a key issue making both local design and the global market worthy of further in-depth study as shown in Figure 2.

### **2.3 From” 3Cs” to” 4Cs” in Taiwan Industry Development**

In the past, Taiwan developed information technology to produce hi-tech 3Cs products as “Computer”, “Communication”, and “Consumer” electronic products and many related accessories. As mentioned above, Taiwan’s economic miracle was promoted by small enterprises through the hard working spirit and cheap labor of the people. But all these advantages have been replaced by China in recent years. If Taiwan still wants to play a role in the global economy, it should establish a Taiwanese cultural brand. Besides its skill leverage, it has to cover both ODM and OBM, which is the purpose of promoting cultural and creative industries from the service innovation design point of view. Therefore, the required change in Taiwan’s design industry structure is to maintain its cost down advantage, to reinforce design value up and to seek service innovation design in cultural and creative design industries [17, 18].

Cultural and creative design industries are the “4Cs” industries: “Cultural”, “Collective”, “Cheerful” and “Creative”. The 4Cs will be a design evaluation key point in the future. Many countries that are major in design popularity are promoting service as design as part of cultural and creative design industries. Taking England as an example, service design has been the second highest output value of their creativity industry. The potential market is quite large. In the knowledge economy era, the connections between culture and industry have been increasingly close.

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. 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 [15, 16]. The increasing emphasis on localized cultural development in Taiwan demonstrates an ambition to promote the Taiwanese style in the global economic market. However, in order to reach this purpose, some changes need to be made in Taiwan’s industry structure. If we can mix cultural concepts with diverse service innovation design to make art livable, then we can create a new design model of cultural and creative design industries and become culturally industrialized to highlight Taiwan’s international image.

### 3 Conceptual Framework

National Taiwan University of Arts (NTUA) established an art museum, known as “Our Museum”, in 2007 for the purpose of linking professional teaching with the museum’s research, education, and display functions while presenting cultural and aesthetic ideas about art and artifacts to the public. Developing craftsmanship and creativity as well as competences related to the arts are of strategic importance to NTUA. For turning “Art” to “Business”, we need “Creativity” and “Design” [24]. Therefore, a design studio, known as “Our Studio”, was set up at the college of design in NTUA following the “Our Museum” for providing innovative products. NTUA is located in the Taipei metropolitan area, one of the most competitive regions in Taiwan. This area contains a significant concentration of craftsmanship and research establishments, linked by various formal and informal networks. Due to the challenging nature of cultural and creative industries, NTUA is devoted to developing its regional and international networks by operating a cultural and creative industry park, known as “Our Factory.” NTUA has established the link between “Art” and “Business” and combined “Creativity” and “Design” through Our Museum, Our Studio and Our Factory respectively. It is a new approach that integrates design, culture, artistic craftsmanship, creativities and service innovation design in cultural and creative design industries [23].

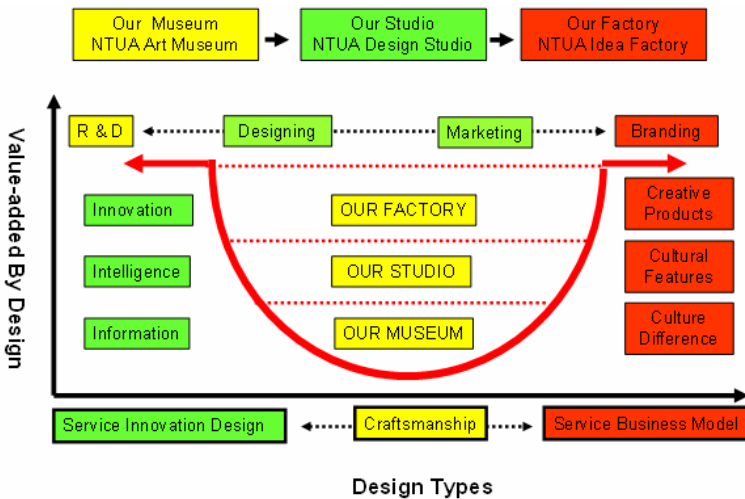


Fig. 3. A conceptual framework for service innovation design

With increasing globalization of the economy, rapidly developing information technology, rapidly growing market competition, shortening life cycles of products and services, and increasing customer demands, companies and public sector actors will find it increasingly difficult to survive just on their past operating models. Therefore, based on the previous review of service design change, we propose a conceptual framework to innovation service design of cultural and creative design industries by using the smile paradigm as shown in Figure 3.

According to the smile paradigm, craftsmanship is a part of Cultural creativity, and like the mouth in the smile face, it must still go up through innovation design and branding before it can become a “business”. However, craftsmanship is not the entirety of culture, nor is creativity the whole of business; good craftsmanship at best earns outsourcing money, like an OEM vendor. The key to innovation design is to blend craftsmanship, creativity and service design, and “branding” is the key to any business [21].

In general, craftsmanship is the use of local materials to develop localized skills; localization is an important force behind the globalization of any international conglomerate, especially in the employment of cultural creativity. Crafted products produced in small volume seek to represent the spirit of “attention to details”, and are a demand on the person, a representation of the person, an expression by the person, and a story from the person. Craftsmanship plumbs the depth of skills, while creativity seeks the height of impression, and branding asks for the width of acceptance. Only through culture and creativity, by allowing craftsmanship and creativity to facilitate branding, can one make one’s way in this field [22].

The goal of the cultural and creative park is to combine artistic craftsmanship and economy with service design, and ultimately establish NTUA as a distinctive trademark of the park. To accomplish this goal, NTUA aims to combine artistic craftsmanship from “Our Museum” with cultural creativities from “Our Studio” in order to result in aesthetics in business for “Our Factory”. Creativity and business are the elements for reaching an aesthetic economy. It is the concept of “Think Globally - Act Locally” to process the “Digital Archive” of Our Museum through the cultural creativities of Our Studio, producing cultural products in Our Factory in order to establish a local industry making aesthetic and economical products.

The current development of the Cultural Creative Park at NTUA is based on using creative knowledge of crafts elements and materials from Our Museum and, through Our Studio to transform this cultural information into creative industry. In the near future, we will further practice this exclusive mode of cultural creative production to promote the “Savoring Culture”, forming “Taiwan industry concept”. We are encouraging more and more creative products which contain colorful Taiwanese culture and styles. By supporting the development of cultural creative industry of NTUA, we can enjoy the fruitful success of an aesthetic culture in creative industry.

#### **4 Experiential Journey to the NTUA Cultural and Creative Park**

To accomplish this goal, NTUA has taken public education as a commitment since its beginning. One example is the establishment of the *Taiwanese UFO Cultural Creative Park*, known as “Our Factory”, with the cooperation of Taipei County providing an innovation service by the *Holiday Cultural Bus Tour*. The *Holiday Cultural Bus Tour* is operated between NTUA main campus, the *Taiwanese UFO Cultural Creative Park*, and the *Lin Family Mansion and Garden*. The major purpose is to prompt the cultural creative development of Banciao City where the University is located. The tour journeys first to The Lin Family Mansion and Garden for experiencing cultural aesthetics. Then, based on the structure of *Our Museum*, *Our Studio* and *Our Factory* of NTUA, the tour customer can appreciate arts in *Our Museum*, experience crafts in *Our Studio*,

and also purchase creative products from *Our Factory*. The purpose of this customer journey is to fulfill the aesthetic experience by connecting design and culture through which to synthesize technology, humanity, cultural creativities, and thus achieve the aim of service design promotion in public.

The *Taiwanese UFO Cultural Creative Park* is established by NTUA in the Fu-Jhou suburb of Banciao City, only ten minutes walk from the main campus. UFO is an abbreviation for “high quality Fu-Jhou suburb” in Chinese and it also describes the *Taiwanese UFO Cultural Creative Park*. There are four crafts companies which are incorporated with the Innovation and Incubation Center of NTUA. Within additional ceramic and metal studios, each studio provides hands-on workshops in different craft materials. The public can physically understand and experience fascinating crafts of ceramic, glass, metal, and fabric.

NTUA has taken the commitment of improving Taiwanese cultural qualities. The *Taiwanese UFO Cultural Creative Park* is a significant step to benefit the surrounding area. Many exclusive projects are under construction by NTUA. We are expecting a fulfilling aesthetic environment in the near future.

## 5 Conclusion

With increasing global competition, service innovation design is not merely desirable for a company; rather, it is mandatory. The importance of studying service innovation design is shown repeatedly in several studies in all design areas. However, there is a lack of a systematic approach that covers service design in cultural and creative design industries. Therefore, a new approach was proposed by applying service innovation design to the domain of cultural and creative design industries. The service innovation design model is presented herein to provide designers with a valuable reference for designing “service” into a successful cross-cultural product. The purpose of this paper is to fulfill the aesthetic experience by connecting design and culture, through which to synthesize technology, humanity, cultural creativities, and then, achieve the aim of service design promotion in public.

For future studies, we need a better understanding of the acculturation process not only for the service design, but also for innovative product design. While cultural features become important issues in the interactive experiences of users, the acculturation process between human and culture becomes a key issue in cultural product design and worthy of further in-depth study. However, the effectiveness of using service innovation design in cultural and creative industries can be further enhanced. This can be done by incorporating more information of the best practices in service industries into the service innovation design in cultural and creative design industries.

**Acknowledgments.** The authors gratefully acknowledge the support for this research provided by the National Science Council under Grants No. NSC-97-2410-H-144-005. The authors wish to thank the various students who have contributed to this study over the years. Especially, the authors would like to thank Dr. J. G. Kreifeldt for his valuable comments.



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