

Integration and Innovation: Learning by Exchanging Views - A Report of the Cross-Cultural Design Workshop for Stone Craving

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Abstract. This article reports on a cross-cultural design workshop held at Fuzhou, China, 25–30 December 2015. The workshop was intended to provide a platform that would bring together artists in stone carving, academic researchers, and managers from stone carving industries, in order to focus exclusively on the teaching of creativity in stone carving for the future. Sessions were devoted to works exhibition, cross-disciplinary courses and cross-cultural design workshops. This study focuses on the cross-cultural workshop which included the desirability of creativity throughout the curriculum, and particularly focuses on coaching, learning, and practicing. The purposes of the workshop emphasized interactive learning and addressed the interactions of practicing. Results are presented herein to establish a platform for examining the way artists communicate across culture as well as the interwoven experience of stone carving and culture in the creation process.

Keywords: Stone carving · Cross-cultural · Design workshop · Cultural product design

1 Introduction

Stone carving is one of Chinese historic and profound arts and crafts [17]. As early as in the Stone Age, China's ancestors had mastered the skills of stone processing. The stoneware was both decorative and functional. Its variable ornamentations have been carrying on ancient Chinese civilization. Jade carving, and inheriting the ancient stone processing craft, are the outstanding embodiments of Chinese ancient scientific, technological, and cultural achievements. There were many significant and distinctive stone and jade carvings in every dynasty during the long Chinese history [4]. With the social stability and economic prosperity especially since the Ming and Qing dynasty, the traditional handicrafts did better than before [19]. Many stone carving skills had

developed, such as protruded carving, circular engraving, shadow carving, hollow carving and openwork carving in the Kangyongqian Prosperity Times (康雍乾盛世).

As carving materials extended further, there emerged the building stone carving, jade carving, ink-stone carving, seal-stone carving and so on. The stone carving art taste promoted as the scholars' artistic concept joined in it. What Chinese stone carving expresses is the pursuit of the spirit of perseverance and the aesthetic thought of profound consideration. Traditional stone carving has gradually entered into a new transitional period with the development of modern processing techniques, the transformation of life style and the diversified aesthetic tendency in the 20th century [3, 8]. On the one hand, the emergence of new tools and new technology has greatly improved the production efficiency and reduced the production cycle and cost; on the other hand, the promotion of public artistic taste has required higher technology and ideas in traditional stone carving [15].

Contemporary stone carving inherits the traditional handicraft, as well as being influenced by contemporary art in creative concepts, process techniques and patterns of manifestation. Young stone carving artists with pioneering spirit and outstanding creativity are emerging in large numbers. They are not only the inheritance of folk culture, but also the pioneers of modern stone carving art [3, 8]. Thus, stone carvings are increasingly broader in spanning geographical and cultural boundaries. The variety and distinction of Chinese culture offers potential application in the field of design. By enhancing the original meaning and images of cultures and taking advantage of new production technology, stone carving will have great potential for enhancing product design value thus increasing cultural product recognition in the global market. Yet little research is available on the influence of culture as it pertains to the creativity of stone carving in cultural product design.

To address these considerations, a forum was organized on Chinese stone carving in 2015, the aim of which was to bring together young and middle-aged inheritors of Chinese stone carving art from a variety of disciplines to present current skill and theoretic issues and contribute to a collaborative in the stone carving field. The forum were devoted to three events: (1) an open works exhibition for displaying skill, material, topics, contents and metrics for selecting participants; (2) organizing discipline-based and cross-cultural disciplinary courses; and (3) conducting a cross-cultural design workshop in stone carving [2].

The works exhibition displayed the masterpieces of 100 stone carving artists from all over the country, involving jade carving, ink-stone carving, seal-stone carving, and so on. It typically reflects the achievements of Chinese contemporary stone carving art, some of which are shown in Fig. 1. The works demonstrate not only the artist's persistence in traditional culture but also the artist's exploration in new materials and new technologies. This exhibition was also an open platform for learning from each other by exchanging views. We are looking forward to driving folk art thought interactions and cross-border exchanges by means of this show of "Chinese stone carving art senior workshop for young and middle-aged artist." We wish to transform heart impulses and thoughts into new creative inspiration and motivation. As the philosopher says; the ideal state of art, is not lost in the past, but found in the future. The future of Chinese stone carving art is in the eyes, hands, dreams and hearts of numerous gifted youths. We have been feeling the booming of the art of stone carving [18].



Fig. 1. Some works display in stone carving exhibition

Then, inter-disciplinary courses were arranged for the participants following the works exhibition. Finally, a cross-cultural design workshop was conducted to provide a platform that would bring together sculptors in stone carving, design researchers, and managers from stone carving industries, in order to focus exclusively on the teaching of creativity in stone carving for the future. This article focuses on the cross-cultural design workshop which has established a cross-cultural design model to provide designers with a valuable reference for designing a successful cultural product. Results presented herein create an interface for examining the way stone carving artists communicate across cross-cultural issues and the interwoven experience of creation and culture in the stone carving [13].

2 Cultural Product Design Model

From the design point of view, designing a product with local features in order to emphasize its cultural value has become a critical issue in the design process. Cultural product design has played an important role in embedding the cultural elements into products and in increasing the cultural value in the global competitive product market [6]. Using cultural features to add extra value to a product not only benefits economic growth, but also promotes unique local culture in the global market. Lin [10] proposed a framework for studying cultural objects summarized in Fig. 1. The cultural product design model in Fig. 1 consists of three main phases: 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 the design model. The design model is composed of three phases: identification (extract cultural features from original cultural objects), translation (transfer them to design information and design elements) and implementation to finally design a cultural product.

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, as shown in the bottom of Fig. 2 [10]. These three culture layers can be fitted into Leong's three culture levels given above [9].

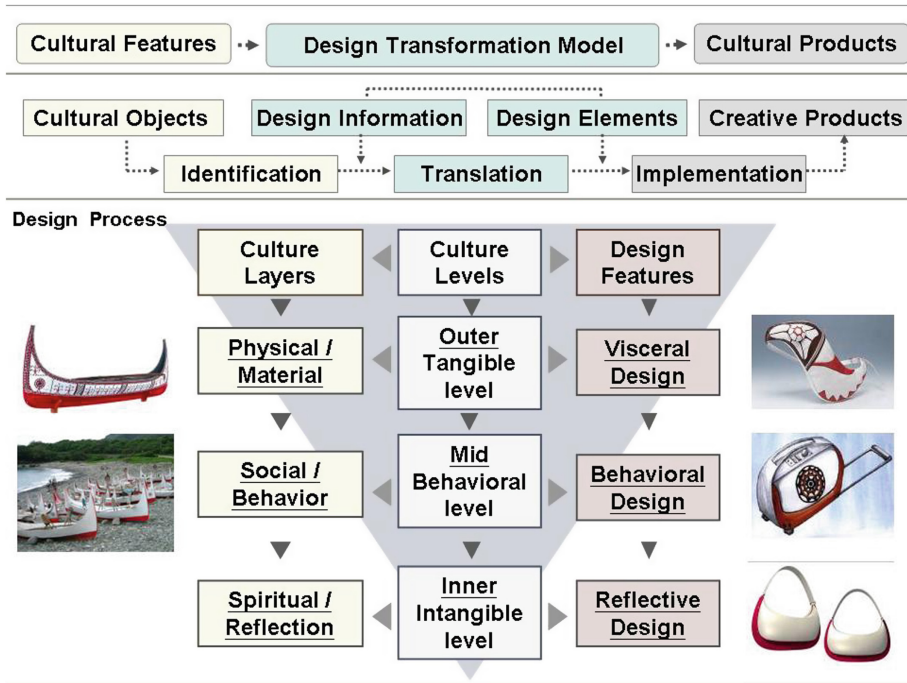


Fig. 2. Cultural product design model

Since cultural objects can be incorporated into cultural design, three design features can be 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, line quality, and details [9, 10]. For the design process, three levels are identified as: transfer, transit and transformation, which can be mapped into three levels of design features: visceral design, behavioral design and reflective design [16].

Lin also proposed a cultural product design process using scenario and story-telling approaches. In a practical design process, four phases are used to design a cultural product as shown in Fig. 3, included investigation (set a scenario), interaction (tell a story), development (write a script), and implementation (design a product) that will be discussed in detail in Sect. 3. Process for Cross-Cultural Product Design [10].

To test the utility of the cultural design process, Lin [10] took the “Pinban boat”, a canoe, as the cultural object to transfer its cultural features into a modern product. The Tao people are a Taiwan aboriginal people native to the tiny outlying Orchid Island. They are traditionally good at making canoes. The Pinban boat shown in Fig. 4 is a symbol of their tribe. The Tao people live by fishing and usually bring the holy dagger with them while fishing.

Figure 4 shows the final cultural product designed from the Tao’s Pinban boat and holy dagger. According to the four steps of the cultural design process, the scenario is

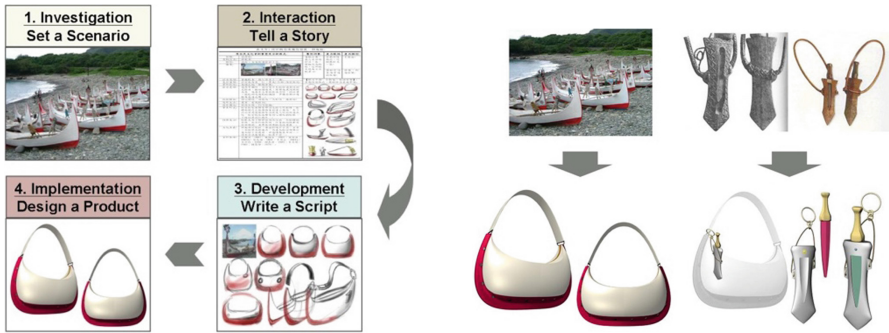


Fig. 3. Four phases of cultural product design **Fig. 4.** An example of cultural product design

that Tao people ride in their Pinban boat with their holy dagger to protect them and sail to the ocean for fishing. Based on this scenario the Pinban boat was transformed into a modern bag and the holy dagger into a knife-like modern alarm. In modern society, one can imagine a woman holding the modern bag and bringing the modern alarm to protect her while walking down the street, matching the previous scenario of Tao people fishing with their Pinban boat and holy dagger [10, 11].

3 Process for Cross-Cultural Product Design

The cultural product design is a process of rethinking or reviewing the cultural features and then redefining them in order to design a new product to fit into society and satisfy consumers through culture and esthetic [10, 11]. Designing new products by adding unique cultural features would not only benefit economic growth, but also promote unique local culture in the global market. Therefore, transforming cultural features into a cultural product becomes a critical issue. In order to facilitate the understanding of the cultural product design process, the design framework and process are proposed for combining consumer attitudes, cultural levels, cultural attributes, transformation, product semantics and design features as shown in Fig. 5.

A good understanding of cultural attributes will benefit articulating the context between the culture and product design and therefore accelerate concept development. Based on the cultural product design framework and process, the cultural product is designed using scenario and semantics approaches. In a practical design process four phases are used to design a cultural product, namely: investigation (set a scenario), interaction (tell a story), development (write a script), and implementation (design a product) as shown in Fig. 5. Following a review of the literature and expert opinions, design guidelines were developed based on the research of consumers' needs, cultural content and design theories. Ten steps of design procedure would provide designers or students a systematic method to designing a cultural product. The four phases and ten steps of the cultural product design process are further described accordingly as follows [7].

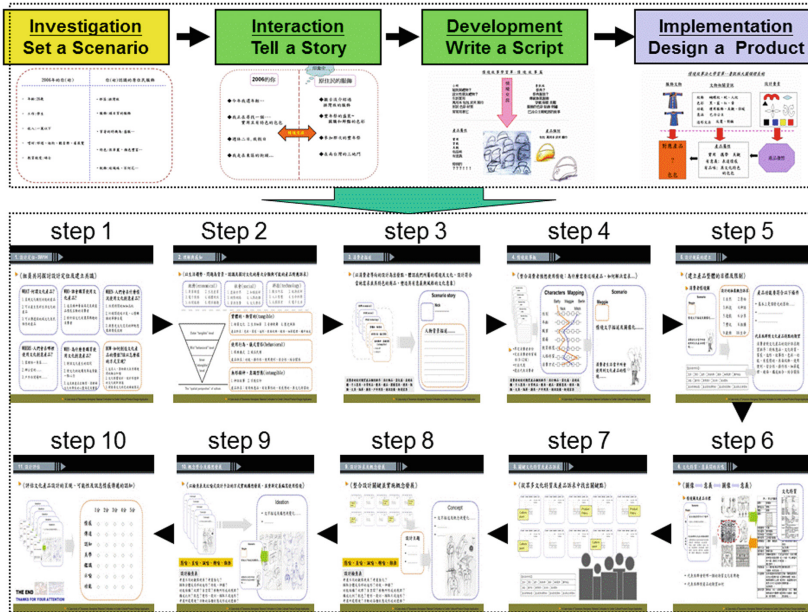


Fig. 5. Design framework and process for cultural products

1. Investigation/set a scenario

Step 1: Discussing the condition: understanding cultural products through discussions. Designers should have explicit understanding of design aspirations and develop a preliminary prioritized attributes hierarchy.

Step 2: Recognizing the trend: based on the cultural attributes, observe, compare and incorporate related issues such as economic developments, social trends, technological applications, and related existing products into the new product design.

2. Interaction/tell a story

Step 3: Targeting the consumer: make a good observation of customer needs and explore the consumer society in order to define a product image with meaning and style derived from culture features concerns.

Step 4: Describing the scenario: this step allows designers to describe scenarios of users who have a preference for a particular style and identify with the features, meaning, category, and appropriateness of the product.

Step 5: Establishing the direction: this step establishes design specifications which will identify the goal, function, target group, and limitations of the design. All of these concerns should match attitudes of consumers [12].

3. Development/write a script

Step 6: Analyzing the culture: Identify original cultural features including tribal affiliation, object, type, image, material, color, characteristic, operation, pattern, form grammar, form construct, formation, using scenario, cultural content, and resource.

- Step 7: Connecting the relationships: based on reasonable connections such as product semantics, describe product features and develop a product with these cultural attributes. The analysis and synthesis will be processed back and forth between cultural analyses and design concepts as shown in Table 1.
 - Step 8: Selecting the rationale: assessing, selecting, and integrating semantically feasible manifestations into expressive wholes. In addition, describe the product performance and sketch the preliminary design image.
4. Implementation/designing a product
- Step 9: Developing the concept: this step is the concept development and design realization by figurative product semantics (e.g. metaphor, simile, metonymy, analogy, and allegory), in order to transform the cultural meaning into a logically correct cultural product.
 - Step 10: Completing the design: examining the details and integrity of the cultural product as product features, supply cultural attributes to transform them reasonably into the product performance.

Based on the foregoing study phase, we specifically propose a design framework and process for cultural product design, proving the effectiveness of this systemic approach by many design examples, some of which are shown in Fig. 6 [7, 10, 11].

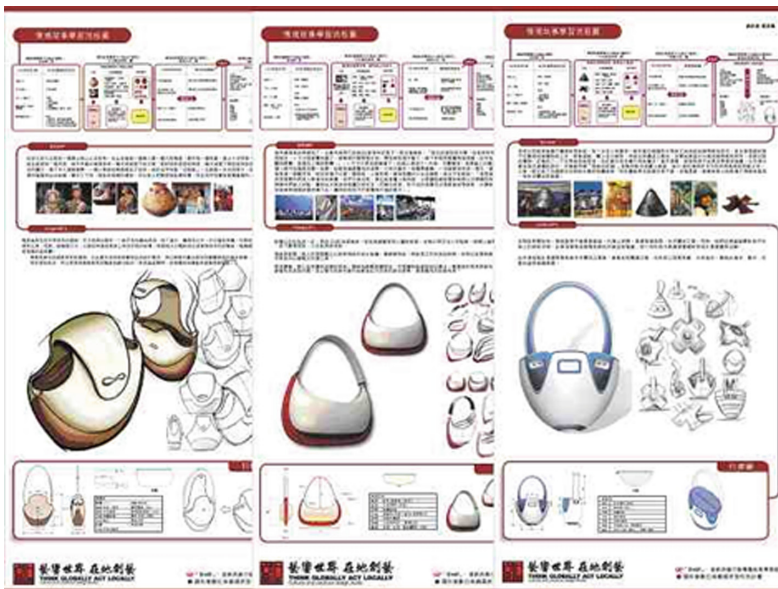


Fig. 6. Cultural products design using the systemic approach

4 Design Practice in Cross-Cultural Creativity Workshop

To conduct the design practices in the cross-cultural workshop, the participants were randomly assigned into 12 groups, each group members diverse in geographical, skill, and material attributes. Each group was asked to design a cultural product based on the previous process. The results are summarized by the process of integration of brain-storming, interaction of design concepts from local culture, and the category of products related to daily-used products. China has many different local features. Each local culture has dissimilarities in their respective features. Therefore the purpose of this workshop was to teach group members how to extract cultural features for demonstrating their craving skills into their works even for daily-used products which could be easy recognized by consumers.

The workshop started with presentations by Professor Lin on the concept of ‘culture’, cross cultural usability and creativity issues for cultural product design, and studies of design process across cultures as shown in Fig. 7 [7, 10, 11]. The workshop that ensued established a roadmap for artists in cross-cultural design for stone carving in the further development [14].

According to Fig. 7, participants are led through the process for implementing design practices in the cross-cultural creative workshop which include: building a design conceptual model, follow the research approach, format related information, and conduct the scripting method. First: a design concept model was built to help understand both the hard and soft contents of the cultural object, then interaction between both culture-product and designer-user was conducted (Fig. 7-1). Second: a conceptual model was studied following the research method and design practice as shown in Fig. 7-2. Third: a cultural object or a local feature was chosen for exploring the cultural

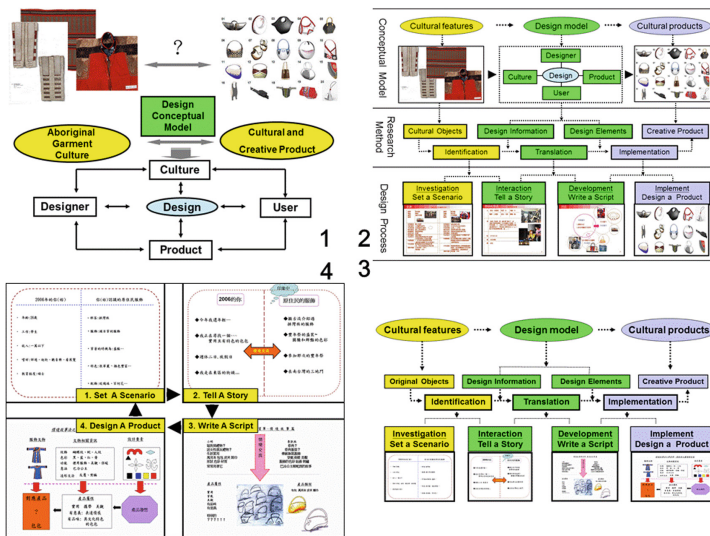


Fig. 7. Process of design practice in cross-cultural creativity workshop

attributes and developing a cultural product (Fig. 7-3). The most important part is the scripting approach for setting a scenario, telling a story, writing a script, and designing a product as shown in Fig. 7-4. The scripting approach simplifies iterations in the design process. In the presentation, an example of using the scripting method to assist in the design of an old picture transformed to a traffic sign was explained and discussed. The result indicated the proposed scripting technique is effective (Fig. 8).

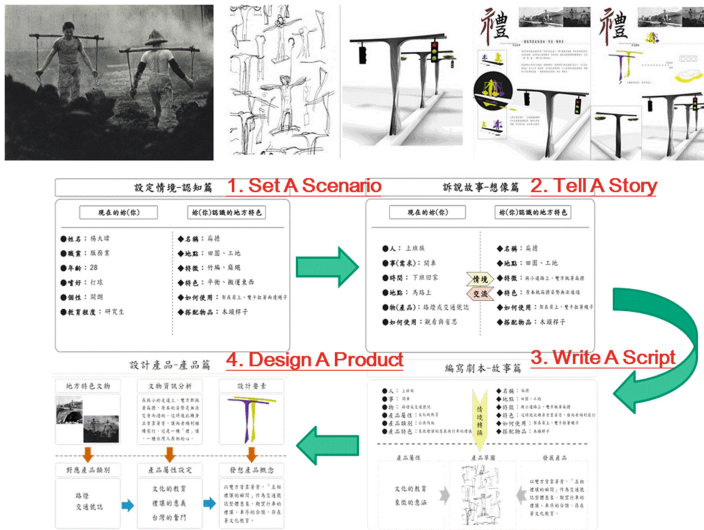


Fig. 8. A scripting approach for designing cultural product design

During the workshop, the participants were involved in the design process (Fig. 9), and modern products were developed using the culture features as examples to explore the feasibility of the design reference from the cultural features. Hence, the workshop provided designers with a valuable reference for designing successful cultural products. In the discussion session, each group presented the concept of the design and sought out the appropriate daily-uses of the products (Fig. 10). The workshop also discussed many questions related to cross-cultural ergonomics and participants agreed that more research is needed in the stone carving field (Fig. 11). Especially important are user behavior studies of culturally diverse user groups for market segmentation [1]. These studies can form the basis for culturally sensitive design for stone carving. Before



Fig. 9. The design practices Fig. 10. Some of the results Fig. 11. The discussion session

leaving, participants made commitments to work toward change at least in their own fields. In addition, participants' specific commitments to future actions were also given.

5 Conclusions

This report focuses on the cross-cultural design workshop, the goals of which were: (1) to increase awareness about the area of cross-cultural creativity in the stone carving community; (2) to identify new tools, techniques and methodologies for cross-cultural study of stone carving, and (3) to establish a platform for generating new research directions and cross-disciplinary collaboration. Through case studies from diverse workshop groups and comparative studies of different contents in stone carving fields, two areas were identified:

1. Stone carving and the preservation of cultural heritage: Culture is a complex issue that is very hard to operationalize in practice. The workshop participants called for more research to be undertaken on defining culture in the context of cultural features as an approach to assess whether and to what extent culture can be considered a design variable in the construction of stone carving.
2. Cross-Cultural ergonomics of Stone Carving: Cross-cultural ergonomics is concerned with the usability and comprehensibility of marketing based on user needs from different cultural backgrounds. Cross-cultural ergonomic issues have been explored in the area of cultural product design; design guidelines have been created, design and evaluation methodologies have been devised to implement cross-cultural and international user needs. The user population of stone carving is often just as international as those of globally marketed cultural products. Designing for culturally diverse users is a challenge that deserves more attention when creating stone carving resources.

One clear outcome of the workshop was the strong need for research on cross-cultural issues in the design and implementation of stone carving fields. It is the intention of the authors to report the results of the workshop and invite the stone carving community to include cross-cultural creativity issues and concerns into its future research. For more information, please visit the platform: <http://fj.artron.net/20151223/n803722.html>.

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