

A Study of Applying Metaphorical Approaches to Creative Products Design

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ABSTRACT

Taiwan is now approaching a new era of aesthetic economy powered by cultural creative. In addition to convenience in manufacturing and functionality for problem-solving, new design concepts put more emphasis on the creation of lifestyles, the experience of tastes, and the realization of life values—all with the core essence of culture. Taiwanese culture is rich and diversified. It has become an accelerating force for the pursuit of culture creative product design. The essence of culture creative design lies in refining culture elements and transferring them symbolically through figures of speech, so as to attach new aesthetic significance to the products for a moving experience to the consumers. This study aims to, starting with traditional culture elements, explore how the cultural symbols in our traditional culture could be transferred and integrated into modern product design. A design model was established based on the analysis of traditional Chinese rhetorical theory of metaphor. Cultural elements in holidays, rituals, and utensils were selected from actual case studies to illustrate our investigation process. The results could provide a feasible design model for current culture creative industries, and equally importantly, an opportunity to represent our traditional culture with creative product design.

Keywords

Cultural creative industry, product design, metaphor.

INTRODUCTION

Taiwan is now approaching a new era of aesthetic economy powered by cultural creative. In addition to convenience in manufacturing and functionality for problem-solving, new design concepts put more emphasis on the creation of lifestyles, the experience of tastes, and the realization of life values. Social scholars believed that life itself is culture. Crafts is a vital activity which nestle closely up to life, influence survivorship and create livelihood.

Taiwanese culture is rich and diversified, rooting from actual indigenous living experiences and serving as source of inspiration for culture creative design. This study aims to, starting with traditional culture elements, explore how the cultural symbols in our traditional culture could be transferred and integrated into modern product design.

THE AESTHETIC FOUNDATION OF CULTURAL CREATIVE PRODUCT DESIGN

Taiwanese government has been aggressively promoting culture creative industries in recent years. To achieve the goals of industry transformation and to better the living environment, it further propels the innovative concept of “creative life industry”. Industrial Development Bureau of the Ministry of Economic Affairs, the planner and executive of the industry has set up the “Developments plan for creative life industry” in 2003 and divided the plan into six major areas of food culture experience, life educational experience, natural ecology experience, fashion furniture experience, specific experience with cultural or historical relics, and craft culture experience. The content of creative life industry consists of three elements including core knowledge, in-depth experience, and high quality of aesthetic emotion. The main idea of creative life industry is to provide customers with vital experience and ultimately elicit the sensational demand from customers.

Craft has always comes with artistic and practical facets. According to Shuo Wen Jie Zi (說文解字), one of the most important Chinese ancient writings for interpreting words, “craft means that a skillful craftsman who could master techniques. It is the specialty in applying skills for creating daily items for practical problem-solving.” Zhou Li Kao Gong Ji (周禮考工記), an ancient Chinese book introducing political system of Zhou Dynasty, further explains, “A good product is a combination of best timing, indigenous availability, great material, and skillful craftsman.” Modern crafts puts more emphasis on expressing cultural features and aesthetics, thus consumers would favor those products with the beauty of crafts. Norman points out that usability, practicality and aesthetics are three essential elements for a successful design, among them emotional factor is the most significant [14]. Norman’s appeal for designing for emotion could be realized with the aesthetical value of crafts.

Figure 1 depicts the framework of design concepts for cultural creative industry. In sum, the essence of cultural creative design lies in extracting cultural elements and transforming cultural symbols. As German philosopher Cassirer indicates, culture is the externalization and materialization of humans, is the realization and concretization of symbolic activities, the core element

being symbols. He asserts that symbolic form is the form for all human cultures [2]. The carrier of cultural elements could come from various sources. Through extracting cultural elements and transferring them into symbols, design endows the products with new aesthetic significance and brings the consumers an empathic sensation.

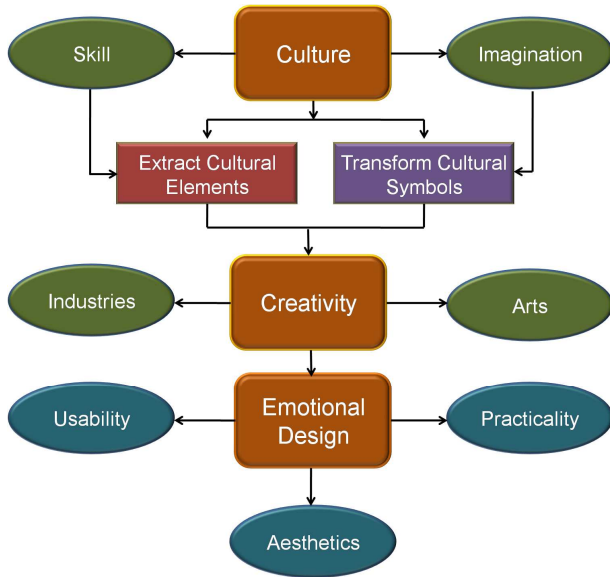


Figure 1. The framework of design concepts for cultural creative industry

American philosopher Susanne Langer was greatly influenced by Cassirer and suggests that “Art is the creation of forms symbolic of human feeling,” which made itself a dominantly influential aesthetic theory in recent years [10]. A good product is a craft which exercises discourse with people through its sensational image and brings inspiration to them. Empathy, what the aestheticians stress, is the essential strength in bringing a heart-moving experience. The foundation of empathy lies usually on the reflections of individual daily life experiences.

Cultural creative industry should stress on heart-felt affection. As Lin indicates, culture is a lifestyle, design is a life taste, creativity is recognition of a touching experience while industry is a medium, means or method in realizing cultural creative [13]. When automation and digitalization make possible production in small scale but with great variety, the craftsmanship of quality industrial products cannot be overstressed. As American design expert Norman states, the emotional side of design may be more critical to a product’s success than its practical elements [14]. Norman’s concepts, representing a new direction for modern design philosophy, also emphasize the great value of craftsmanship in cultural creative industries.

THE MODEL OF CULTURAL CREATIVE PRODUCT DESIGN

The changes in the 21st-century design philosophy have offered a rich theoretical framework for cultural creative design. Norman presents in his book “Emotional Design” three levels of emotional design-visceral,

behavioral and reflective. The visceral level involves direct feelings when in touch with a product, including shape, style, tactile impression, material and weight. The behavioral level is non-conscious, including the pleasure after exercise, or the delight after a shower. The reflective level presents conscious behaviors such as the pop culture or style and tastes [14].

Leong and Clark suggest a brief framework for investigating cultural product design, dividing it into three space structures as the external concrete tactile level, middle behavioral level and the inner invisible spiritual level [11]. Hsu, Lin and Chu expand the three levels, offer more detailed explication, and provide a cultural creative design model which could further facilitate comparison, application and thinking for design (Figure 2) [6]. This theoretical framework could serve as the focal points when investigating individual stages for cultural product design.

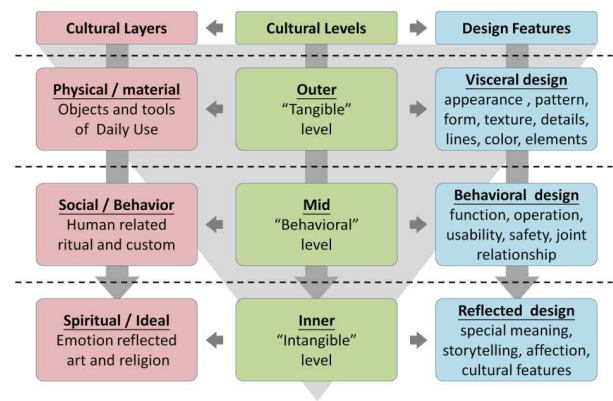


Figure 2. Three layers and levels of cultural objects and design features (Hsu, Lin, & Chu, 2004)

For practice in design, Hsu studied products with aboriginal cultural-elements. He conducted factor analysis on cultural information, product content, design check-up and design evaluation, integrated two additional recognition facets on consumer expectation and design behavior, and then derived a ten-step model for cultural product design concept [5]. This initial model now has been modified by Hsu himself, inducting the ten steps into four stages of describing current status, goal-setting, compiling analysis and product design (as showed in Figure 3) [7].

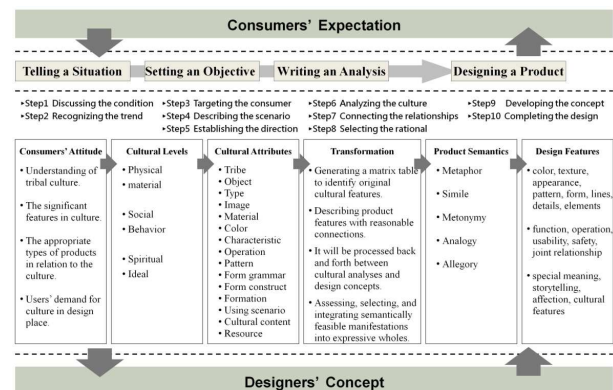


Figure 3. Design framework and process for cultural products (Hsu, Lin, & Lin, 2011)

As mentioned above, the essence of cultural creative design is to extract cultural elements and transform cultural symbols. In the ten steps presented in Figure 7, the first two identify the fundamental starting points for product design, steps three to five emphasize setting design principles from the consumer viewpoints, steps six to eight concretely and thoroughly depict the process in capturing cultural elements, and the final two steps stress the transformation of cultural symbols. As a guideline, the first five steps could be applied to general product design, while the latter five outlines the true essence for cultural creative product design.

Figure 3 illustrated how cultural symbols could be transferred to concrete products, Hsu presented rhetorical methods including metaphor, simile, metonymy analogy, and allegory. Starting the 80s, design scholars has been devoted in research of product semantics. Krippendorff and Butterstated that conventional semantics stress the interrelationship among sign, referent and thought, emphasizing linguistic expression; product semantics, on the other hand, looks at a product as a symbol system, investigates the symbolic qualities of a product from the perspectives of its operation and application and employs the knowledge for product design [8]. They suggested that, from product semantics, the success of product design relies not only on the physical and biological functions of the product but also its psychological functions and its links with the social and cultural context.

In fact, a good product is art, moving people through the discourse of its sensational image. French structuralist Levi-Strauss claimed that art is also a language. That is, language and art are both symbols which carry human thoughts and emotions. Linguistic expressions can become meaningful only when conducted with appropriate rhetoric [16]. Richards defined the term in his book *The Philosophy of Rhetoric* that rhetoric stands for a philosophic inquiry into how words work in discourse [15].

Among various approached of rhetoric, figure of speech is one technique that -- for vivid expression. Employing the method of "signifying intention with an object" (以物託意), the abstract concepts are simplified and expressed vividly. Figure of speech include simile, metonymy, metaphor, etc., with metaphor the most widely used and most important. Cassirer indicated that, in daily discourse, people interact with figure of speech and inevitably uses metaphor [3]. American linguists Lakoff and Johnson stated in their book *Metaphor We Live By* that in our daily life is flooded with metaphor, not only in languages, but also in thoughts and action. They claimed that the nature of human speech, action and thoughts is metaphorical [9].

Metaphor is defined as an expression in which humans uses their recognition of a specific item to illustrate another item [9]. There were such metaphorical methods long in Chinese literature. According to Shi Jing (詩經), an ancient Chinese book of songs, there were three

methods for rhetorical expression-the so called Fu (賦), Bi (比), and Sin (興). Liu Sie, the author of Wen Sin Diao Long (文心雕龍), the earliest Chinese literary criticism written in the 5th century, explains, "Bi is to analogize one thing to another. Sin is to address one thing by the name of something intimately associated with that thing or concept". Chu Si, a famous scholar of the Song Dynasty in the 12th century, further explores, "Fu is to state an event straight forward, Bi is to exemplify one object with another object, and Sin is to address another object before bringing about the target". In sum, Fu is a straightforward description of the event; Bi is exemplify-to analogize an event with image simulation-so as to thoroughly define its nature, making its features more vivid; Sin is to rise or develop, that is, to introduce other phenomenon or current situation, so as to lead to the target.

According to Richards' theory, the components of a metaphor are tenor and vehicle. When describing an idea, the author transferred the features of a vehicle to its tenor [15]. Richards illustrates the interactivity between the tenor and the vehicle. Su points out that the function of a metaphor is not only for rhetoric, it reflects human cognitive means of recognizing the external world [16]. Su further suggests that:

We can find from the metaphorical usage that language, a system in human world, is not only a tool for transmitting information but also a source of information. We employ special symbols to express all phenomena in real world, and interlink semantics from various domains. Such metaphorical process creates our recognition of the external world. Long used symbols could be fixed—in its denotation, new connotation now could be added through metaphorical methods to express the new life we live [17].

The above mentioned presents a thorough exploration for the link between cultural creative design and rhetoric. As for methods for metaphorical design, Wen Sin Diao Long has introduced a concrete operational model when the author stated "There are various methods for metaphorical usage. Sounds could be extracted, appearance could be simulated, moods be transferred, and events be illustrated." That is, there are no fixed rules for metaphors, sounds, appearances, moods, or materials could be freely associated and transferred. Four approaches of metaphorical design could be concluded through the above analysis: (1) associating via homonym, (2) forming via similitude, (3) creating via empathy, and (4) inventing via analogy.

As for carriers of the cultural elements, they could be tangible objects such as personages, animals, landscape, and instrument; they could be invisible idea such as philosophy of life, ritual regulations and doctrines; they could be events in space-time such as folk customs, myths, and festivals; and they even could be linguistic symbols.

In transferring symbols, designers should consider not only the original significance of the carriers but also the derivative meaning the carriers could contain. British

literary critique scholar Bryson mentioned in his book *Vision and Painting: The Logic of the Gaze* that art is the combination of cultural signs, stressing that the connotation and denotation a symbol carries is symbiosis [1]. Connotation reflects the true value of art, demanding viewers to observe and interpret the art from the cultural background. Synthesizing the analyses above, we present the concept model for metaphorical design of cultural products in Figure 4.

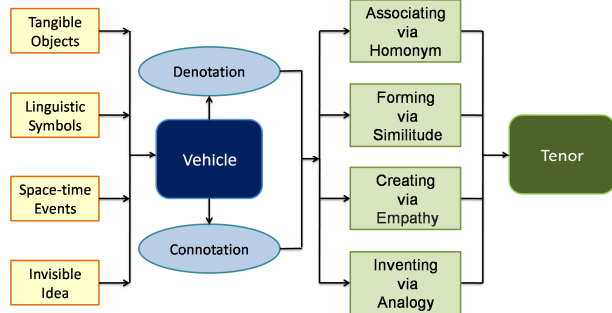


Figure 4. The concept model for metaphorical design of cultural products

APPLYING METAPHORICAL METHODS IN CREATIVE PRODUCT DESIGN

Ninety years ago, Walter Gropius founded Bauhaus in Germany with the slogan of “The new unity of art and technology”. The program was based on contemporary artistic styles, integrating craftsmanship and industrial technologies, and has then become the founder modern design education. For ninety years, Bauhaus’ design ideals has accomplished a worldwide modern design and led the world into what it looks like in the twentieth-century modernized world. It also brought modern design into a brand new status.

Lin indicated that the foundation of future Taiwanese development of cultural creative industries would be the “craftsmanship” and the “art” related to crafts [13]. Use is what industrial products stress while user is the main body. Crafts appeal to aesthetic features of “art” while industrial products emphasize the “standardized” technical specifications. As mentions above, technology and art differs in that art is an emotional expression, the aesthetical foundation of creative crafts lies on the imagination of the creators. Taiwanese culture is diverse and rich. The development in literatures, arts, religious customs, and implement inventions has become a dominant source of inspiration for craft product design. Four cases are introduced below employed the model of cultural creative design.

Associating via Homonym (喻聲取譬)

Figure 5 is a piece co-designed by Cheng Yu Tsai and Gee Wei Wang from Department of Crafts and Design of National Taiwan University of Art for the Creative Design Contest sponsoring by Franz Collection Inc., a famous Taiwanese porcelain company, in 2009. The piece won an outstanding price in the contest. The contest set the theme of Si (繫), a Chinese character refers to tie or link, claiming that the designs would be

modern attractive classics originated from traditional culture, and be created as long-lasting inheritance from the culture. It exemplifies how lines could be linked and inherited. The two students employed the metaphorical method of taking analogy from homonym, taking another word of the same pronunciation Si (戲), a Chinese character refers to game, as its theme, extracting cultural elements from traditional toys of shuttlecock, spinning top, and diablo, and created this set of dining utensils.



Figure 5. Si (game/link), 2009, (Designed and made by C. Y. Tsai & G. W. Wang)

The design used two composite materials of wood and ceramics. The ends of the two pairs of chopsticks are shaped as the feather of a shuttlecock. A couple of bowls could form the shape of a diablo when the bottoms, made with powerful magnets around their wooden rim, met. The seasoning pot is made into the shape of a spinning top, standing on a wooden pad. The products looks like a set of Chinese toys, but becomes several pieces of dinnerware when separated, this is how the design brings attraction and pleasure.

Forming via Similitude (方貌塑形)

Figure 6 is a piece co-designed by two Master’s students Lee Jen Fu and Shi Jie Shen from Department of Crafts and Design of National Taiwan University of Art. The product is a set of seasoning pots, titled “The Flavor of Bodhi (Buddhist phraseology meaning enlightenment)”.



Figure 6. The Flavor of Bodhi, 2007 (Designed and made by L. J. Fu & S. J. Shen)

The work was made through into the shapes of meditating monks with material of indigenous Taiwanese juniper. The monks seem peaceful, giving an impression of peace, ease, and abstinent. The top section of the head is a cover drilled with three scars in the head so as to be a shaker for seasonings such as salt and pepper. The implication of the scars for our daily life is that, pouring seasonings through the scars, we could be reminded, in our daily diet, to obey the religious discipline and be moderate in consuming the seasonings that we mostly overtake. The reminder will certainly help make our diet healthier by taking less seasoning.

Creating via Empathy (擬心開物)

Figure 7 is the piece titled “Reunion”. It was designed by Jian Hua Lee from Department of Crafts and Design of National Taiwan University of Art for the 2009 Young Designs’ Exhibition. The product is a set of key chains and a key box.



Figure 7. Reunion, 2007 (Designed and made by J. H. Lee)

The association of Moon festival is created with the shape of a moon cake, while the concept of reunion is transferred from the festival. The scenario is set for ordinary families—each key is carried away by members of the family when they leave in the morning, leaving the key box empty; the key box becomes full when family members come back in the evening and join each other for a reunion. The piece is made by leather and wood, with an LED light inside the box, giving a warm atmosphere of affinity and thus completes the conception of family reunion with a full moon.

Inventing via Analogy (譬事成器)

Figure 8 presents the pieces designed by Miss Yi Chu Hsieh from Department of Crafts and Design of National Taiwan University of Art for the 2009 Young Designs’ Exhibition. She started with the concept of an abacus, traditional Chinese calculating tool, employing the theme of “Calculated”, the past participle of English “calculate” for crating these three desktop stationary set.

The first is a calendar titled “counting the days”. It contains two groups of beans representing tens digit and units digit for the maximum of 31 days. The tens digit needs only three beans on it. There is a horizontal rod underneath, using one bean for left-right movement in recording the weeks, the rod is divided into seven sections, the left red one stands for Sundays while the right green – for Saturday and the ones in-between for Monday through Friday.

The second is called “Bow Zong Zi”. Zong Zi is a traditional Chinese food, made of glutinous rice stuffed with different fillings and wrapped in bamboo leaves. Bow Zong Zi means wrapping glutinous rice. The pronunciation refers to “definitely hitting the target”. This work is a date-recording calendar for students to count down of the date for the Entrance Exams. There are three groups of beans so that a student can count-down from 365 days ahead of the exam.

The third calendar “loving the days” is also for date-recording, counting the days in love starting from the

first day of the oath for love. The shape of love implies affection. There are four groups of counting beans for accumulating the days in accordance with traditional calculation method of an abacus. There is no worry for running out of beans for there are 9999 days recorded by the whole cycle of calculation. “Nine” has the same pronunciation as “long-lasting” in Chinese. 9999 reflecting the Chinese poetic expression of “as there are endings of the earth and the universe, there is no ending of the love we share.”



Figure 8. Calculated, 2009 (Designed and made by Y. C. Hsieh)

These three pieces extended the “calculation” function of traditional abacus and transferred them to “counting” or “recording” while applying them to situations where a modern society needs date-recording or time-counting. The designer adequately realizes the concept of symbolic transfer and demonstrates the value of modern crafts in cultural creative industries.

Vehicle					
Types of Vehicle	Tangible Objects	*	*	*	*
	Invisible Idea				*
	Space-time Events			*	
	Linguistic Symbols		*		
Approaches of Metaphor	Associating via Homonym	*			*
	Forming via Similitude	*	*	*	*
	Creating via Empathy		*	*	
	Inventing via Analogy		*	*	*

Table 1. The analysis of the metaphorical approaches employed in the four samples

All the four design illustrations transferred cultural symbols into concrete products through metaphorical concepts—through sounds with homonym, shaping with similitude, object with empathy, and utensils with analogy. Designers do not have to rely solely on one specific method because creativity could produce various applications. The following table summarizes

the carrier types and methods for metaphorical of the four sets of products.

Employing the methods of “associating via homonym” and “forming via similitude,” the first piece of “Si” (game/link) uses two homonyms to link the two concepts of gaming playing and cultural heritage and presents the shape of child toys. The second piece of “The Flavor of Bodhi” employs three metaphorical methods of “forming via similitude”, “creating via empathy”, and “inventing via analogy” in shaping the product as a monk. The implication of the philosophy of a monk’s simple life are drawn as its essence, the scars on the head are symbols for expressing the consciousness in to comply with the discipline of food intake. The next piece of “reunion” uses the three identical methods as the second one. The essential significance is a holiday and its symbol of a holiday feast, presenting the shape of a moon cake in implicating the moon festival and thus the major concept of reunion in the holiday.

The fourth piece “calculated” presents a real object of an abacus which—the function of calculation as its vehicle. The term “Bow Zong Zi” is linking to words of “definitely hitting the target”, a method of “associating via homonym”; “counting the days” and “loving the time/days” extends the significance of calculation to counting and recording, a method of “creating via empathy”. The three products retains the shape and function of an abacus, they could be referred to the method of “forming via similitude”.

CONCLUSION

Taiwanese craft master Swei long Yen had foreseen in the mid-20th century that Taiwanese craft industry should create works which could inspire our people, could reflect daily lives, uses local materials and could function for modern life [18]. Zhou Li Kao Gong Ji states that “wise people create crafts, skillful ones depict them, the skill is passed on from generation to generation, and this is craftsmanship.” At the beginning of the 20th century Ya-Tang Lien had written a chapter specifically on “Craftsmanship” when he wrote “The Panorama of Taiwan History” because he considered craftsmanship is a way to benefit all people in the country. He praised the divinity of crafts and claimed that the delicacy of craftsmanship would be able to institute the Universe.

In sum, craftsmanship is the creative activities our pioneers undertook for solving problems in daily lives for food, clothing, inhabitation, and transportation. Along the process of civilization development, they managed to improve techniques, better utility functions, and beautify the appearance of the crafts. The level of craftsmanship thus becomes a significant indicator of civilization. Originated from craft activities, craft has been first meant for solving daily problems and now a means for inspiration and pleasure in addition to functional tools.

The global village is now entering an era of aesthetic economy. To consumers in developed countries, the price of a product is no longer the only consideration for consumption, instead the creativity and the design of the product becomes a dominate factor. Taiwan government’s efforts in promoting culture creative industries is the exact reflection of the trend. The distinction between industrial products and delicate crafts gradually diminishes. Designers of the new generation should be capable of expressing design concepts through craft materials to reflect the actual experience of local living.

Each of the pieces presented in this article shows individual reflections of their cultural environments and their sensitivity towards the trend of culture creative design. Although commercialization and marketing are significant goals for product design, the limitless human creativity and the cultural inspiration are the most precious.

REFERENCES

1. Bryson, N. (1983). *Vision and painting: The logic of the gaze*. New Haven: Yale University Press.
2. Cassirer, E. (1962). *An essay on man: An introduction to a philosophy of human culture*. London: Yale University Press.
3. Cassirer, E. (1979). *Symbol, myth, and culture*. London: Yale University Press.
4. Chinese Culture Academy (2002). *The artistic characteristics of Shi Jing—The expressive approaches of Fu, Bu, and Sin*. Retrieved from: <http://www.chiculture.net/0402/html/b18/0402b18.html>
5. Hsu, C. H. (2004). *An application and case studies of Taiwanese aboriginal material civilization conferred to cultural product design*. Unpublished master’s thesis, Chang Gung University, Taoyuan, Taiwan.
6. Hsu, C. H., Lin, R. T., & Chiu W. K. (2004). Taiwanese aboriginal product design. *International Innovation Design Symposium Thesis*, 157-164.
7. Hsu, C. H., Lin, R. T., & Lin, C. L. (2010). *A study of framework and process development for cultural product design*. HCI International 2011, July 9-14, 2011, Orlando, Florida, USA.
8. Krippendorff, K., & Butter, R. (1984). Product semantics: Exploring the symbolic qualities of form. *Innovation Spring*, 4-9.
9. Lakoff, G., & Johnson, M. (1980). *Metaphor we live by*. Chicago: University of Chicago Press.
10. Langer, S. K. (1953). *Feeling and form: A theory of art developed from philosophy in a new key*. NY: Charles Scribner’s Sons.
11. Leong, D., & Clark, H. (2003). Culture-based knowledge towards new design thinking and

- practice—A dialogue. *Design Issues*, 19, 48-58.
12. Lin, R. T. (2005). Cultural creativity, value-added design. *Arts Appreciation*, 1(7), 26-32 °
 13. Lin, R. T. (2009). Skill could not be abandon, art could not be discarded—The possibility of aesthetic expression of modern arts. *Taiwan Crafts*, 33, 6-12.
 14. Norman, D. A. (2002). *Emotional design*. NY: Basic Books.
 15. Richards, I. A. (1965). *The philosophy of rhetoric*. NY: Oxford University Press. Levi-Strauss, C. (1963). *Structural and anthropology*. C. Jacobson & B. G. Schoepf (Trans.). NY: Basic Books.
 16. Su, I. W. (2005). *Metaphor and cognition*. Taipei: Taiwan University Press.
 17. Su, I. W. (2009). *The expression of metaphor in literature and language—Metaphor and cognition*. Retrieved from:
http://www.hrc.ntu.edu.tw/index.php?option=com_content&view=article&id=237&lang=en&Itemid
 18. Yan, S. L. (1952). *Taiwan crafts*. Taiwan, Taiwan: Guang Hua Press.