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Research and Practice of Cultural Creative Product Design Teaching Based on Semantic Innovation

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ABSTRACT

This topic makes an exploratory research on the teaching mode of cultural and creative product design. Besides, via the research method of semantic combination, we make a product redesign of Liaoning traditional culture. Through the cognitive construction and semantic innovation of the semantic vocabulary of regional characteristics, crowd characteristics, innovation characteristics and metaphorical features, it provides new ideas for the innovation and dissemination of regional cultural product design. Verify the design hypothesis through the practice of design model, so as to obtain the solution of Liaoning cultural product design.

1. Introduction

With the rapid development of tourism economic industry, cultural products show a diversified development trend, Chinese cultural and creative product design is gradually forming an industry new business type. Cultural product design is to integrate some cultural characteristics or elements into the product design, and then make the product more connotative and have a sense of design, so as to meet the needs of consumers for the product^[1]. In the teaching of product design, the establishment of teaching contents and educational models that depend on and promote each other with the dissemination of regional culture is an important form of expression that can better spread regional culture, enrich the connotation of design and highlight the service

of design to regional economy.

2. Cultural Design and Product Design Education

At present, as an important direction of product design teaching, cultural design provides new teaching requirements in the aspects of social economy, mass aesthetics, and cultural communication and so on. The purpose of this paper is to establish a design research method which is in line with the characteristics of design teaching and can be taught, so as to provide theoretical and practical support for the teaching of product design. It is a new requirement for the teaching of product design to renew students' design thinking and use design to serve the needs of the industry.

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Product innovative design education in the traditional sense has been unable to meet the development needs of the current society. Enriching product connotation design and cultural dissemination has become a necessary condition for design education. Through the in-depth study of the representative population, especially the users' lifestyle, product cognition, product experience and so on, the emotional preferences of users are predicted to provide important support for product design^[2].

Nowadays, the main consumers of cultural and creative products is young, aged 25-40, are well educated and pay attention to the experience of identity in the concept of consumption. The young new mainstream group has gradually formed the pursuit of the quality of fashion, knowledge, art and culture. They usually have higher education or professional skills training experience, not only in consumer behavior is more rational, can fully understand the connotation of cultural products, the pursuit of personalized, from the psychological needs. For example, the Imperial Palace Literary creation as a successful case, with a series of iterative updates of cultural products, lock in the needs of mainstream consumer groups, and provide new service areas for product design.

At present, with the rapid iteration of cultural products, the life cycle of products is different from that of traditional products. In order to meet the needs of the new mainstream consumers in terms of cultural taste and concept of life, product design innovation tends to be more and more personalized. These changes put forward new requirements for the design and development of cultural and creative products, thus promoting the rapid change of the direction and content of product design education.

3. The Design and Research Method of Semantic Innovation

The theoretical framework of "product semantics" began with the design semiotics of Ulm University in Germany in 1950, and can be traced back to the semiotics of Charles (Charles) and Morris (Morris) of the New Bauhaus School in Chicago. From the perspective of product semantics, the external form and internal culture of the product are designed, the primary and secondary relationship of semantic expression in the product is balanced, and the design solution of cultural and creative products is obtained and verified by design practice.

The product is the carrier of culture, which can meet the spiritual and cultural experience needs of consumers. Design-driven innovation focuses on the breakthrough

innovation of product semantics, and builds differentiated competitive advantage through cultural attributes such as emotion and implication of the product.^[3] In the teaching of product design, semantic theory is introduced into the symbolic language features such as user population, use environment, social culture, and spiritual culture and so on, so as to enrich the connotation of product design from the aspects of product shape, color and processing technology. Make the product obtain the function of cultural transmission, strengthen the physiological and psychological interaction of the product to people, so as to realize the product design innovation through semantic innovation.^[3]

3.1 Instructional Design

The teaching of product semantic innovation is realized through four links.

3.1.1 Construct Semantic Cognition

Synchronize the design cognition in the design team to complete the semantic description of the specified adjectives. Network data analysis is a relatively new and rapid research method, which visually makes quantitative statistics on the specified vocabulary language to obtain the cognitive scope and development trend of lexical semantics. At the same time, taking the designated vocabulary as the research object, the mass cognition of vocabulary is synchronized within the team to establish a cognitive framework of lexical semantics.

3.1.2 Visualization of Semantic Innovation

The design and derivation of the specified vocabulary is carried out, and the basic semantic concepts and scope of the vocabulary are obtained in the form of mind map. Through the combination of four semantics, the semantic innovation framework is formed, and the design hypothesis is established.

3.1.3 Semantic Import into Product Design

According to the semantic composition of the design hypothesis, the design sketch is drawn. Adjust the primary and secondary relationship of the semantic design of the four words, and clarify the core content of innovative semantics. Express the use function of the product through the external form design of the product, and enrich the internal design through the introduction of visual symbols and innovative semantics^[4].

3.1.4 Design Model Verification

According to the selected product innovation design scheme, the computer modeling, rendering and exhibition board production of the product are carried out, and the design hypothesis is verified by means of comparative analysis, questionnaire analysis and so on.

3.2 Four Semantic Features

Semantic design is a mode of thinking as a whole, which requires a clear subordinate relationship between words, so that the detailed design of the product plays a positive role in the core vocabulary. In teaching, lexical semantics is set in four directions: the regional characteristics of cultural design direction, the crowd characteristics of experiential design direction, the innovative characteristics of functional design direction, and the metaphorical features of internal design direction. Among them, the three features of region, crowd and innovation are the external morphological semantic design of the product, and the metaphorical feature is the recessive design of the product design^[5].

3.2.1 Regional Feature Setting, Cultural Design

Study the material and non-material cultural expressions such as historical relics, cultural forms, social customs, production and life styles that have been formed for a long time in the region. It is shown in the way of constructing the cognitive framework of lexical semantics. In semantic cognition, we focus on constructing the inclusiveness and development characteristics of regional culture.

3.2.2 Crowd Feature Setting, Experience Design

This paper studies the differences and development trends of current product users in demand, focuses on the construction of the characteristics of young consumer groups, and analyzes the universality of their purchase form, price pursuit, aesthetic style, conformity psychology and so on.

3.2.3 Innovative Feature Setting, Functional Design

Study the pain point problems in product design, by changing the product use, work, service, structure and other specific research content, to find a solution to the problem, to form a new function.

3.2.4 Metaphorical Feature Setting, Internal Design

This paper studies the design expression of product

metaphor emotion, focusing on the emotional and cultural needs to be conveyed by the product. Metaphor here is no longer a rhetorical device in language, but as a way to express thoughts and emotions. The cognition of the original different systems is conveyed to consumers through the integration of design, so that the product has a broader and more profound metaphorical meaning^[6].

4. Research on Semantic Innovation of Liaoning Culture

Liaoning, China, referred to as “Liao”, formerly known as “Fengtian Province” and “Shengjing”, has accumulated a lot of characteristic folk culture over a long period of time. In the teaching of product design, it mainly studies the cultural design elements such as architecture, story, language, non-material, folklore and so on, and carries on the cultural creative design combined with the characteristics of youth consumer groups.

Table 1. Classification of Liaoning cultural characteristics

Main culture	Buildings, etc.	Folk literature	Folk heritage	Traditional skills	Chinese opera, Fine arts
Quantity (unit)	More than 120,000	6	6	3	27
Representative culture	Hand-grasped mutton	The Story of Ancient Fish and Goose	Folk fire. Benxi social fire	Traditional cooking skills of Liao cuisine	Xibo people's beliefs and customs

There are two ways of semantic innovation commonly used in the course: one is to change the original understanding of the semantic meaning of a single culture, through semantic redesign to form a separate creative product design solution for commercial applications. The other is to innovate the semantic fusion of multiple cultures in Liaoning, establish an IP image of multi-cultural integration, and form a series of product design solutions that can serve commercial applications^[7].

4.1 Research and Practice on the Redesign of Single Culture

4.1.1 Research on Semantic Innovation of Hongshan Culture

Through the study of Liaoning Hongshan culture, the semantics of Jade Dragon is innovated, and the symbols of Incense vessel are extracted and verified in the aspects of shape, color, material, craft, symbolic meaning and so on.

Regional characteristics (Liaoning): Jade Dragon image redesign, dragon appears in the water, showing

smart characteristics, color reflects the jade cultural characteristics, pattern design combined with silk-choking process features to enrich the cultural connotation of the products.

Crowd characteristics (tourism): based on tourist souvenirs, redesign souvenirs and memories, the size is easy to carry, in line with the aesthetic characteristics of the mainstream consumer population.

Innovative characteristics (combination): two layers of meaning are reflected, one is the appearance, the combination of incense and dragon creates an atmosphere of dragons entering the sea, and the other is the inheritance of culture, using material combinations and line features to express the integration and innovation of Hongshan culture and industrial culture^[8].

Metaphorical features (cultural inheritance): the redesign of Chinese Hongshan culture presents the economic application concept of service business combined with the function of products, which embodies the non-legacy characteristics visually and psychologically, and realizes the spread of culture through the commercialization of products.

4.1.2 Design Model Verification



Figure 1. Design of Jade Dragon Incense vessel (Industrial Design Level 2017: Zhang Ming)

4.2 Research and Practice of Multicultural Semantic Innovation

4.2.1 Research on Semantic Innovation of Liaohai Culture

Liaoning takes Kanto as its surrogate name, and has established “Liaohai” as a regional cultural symbol in recent years. In teaching, based on the regional characteristics of Liaoning, the historical stories with the connotation and characteristics of Liaohai culture are selected for IP design, and the creative design method of “Liaohai” is formed through a series of product design. (As shown in Table 2).

Table 2. Analysis of the characteristics of the folktale of “Ancient fishing geese”

Uniqueness	“fishing goose community”: fishermen in the Erjiegou area of Liaoning migrate from north to south like migratory birds, which have long been extinct in the estuaries of coastal rivers in China and the world, but they are still preserved in the estuaries of the Liaohe River.
Openness	The story increases flexibly with the change of people’s activities and the migration of time.
Innovation	Distinct characteristics of the livelihood of fishing geese and the charm of primitive culture. History and life, customs and traditions, beliefs and cultural creation
Diversity	Ancestor worship, Poseidon worship, Dragon King worship, sacrifice and celebration, origin and evolution of fishing gear, etc.

4.2.2 Lexical Semantic Construction

Regional characteristics (Liaoning): the study of Liaoning ancient fishing goose folktales, combined with Liaoning Manchu cultural characteristics and industrial cultural background, the semantic redesign of the story image. Dress reflects the characteristics of the story, clothing reflects the characteristics of industry.

Crowd characteristics (youth): take the creative tourism products as the design object, associate culture with purchase, and produce commemorative value. Combined with the aesthetic characteristics of youth consumer groups, enrich the modeling connotation by refining the traditional cultural elements. For example, it embodies the red and black combination of Chinese traditional culture, the pink-green combination of youth aesthetics and the wood-porcelain combination of simple and elegant Chinese style^[9].

Innovative features (interest): break the inherent modeling features of tea sets, combined with the cultural image of Liaohai, introduce the semantic image of sea and fish into the design, and form a new solution of modeling design. Through the comparative design of the shape and size of human and fish, on the premise of meeting the use function, the interesting design semantics and regional culture are managed to form a brand-new design solution.

Metaphorical features (cultural communication): the folktales are visually expressed in the form of IP image design, Liaoning culture commercialization design is realized through derivative products, used in the sales of tourism commemorative products, and the dissemination of Liaohai culture is realized through product promotion.

4.2.3 Design Model Verification

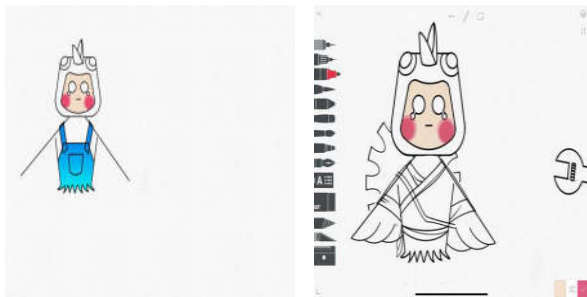


Figure 2. IP Design of Ancient Fish Goose-2D



Figure 3. IP design of ancient fishing geese-3D



Figure 4. Derivative design of ancient fishing geese (Industrial Design Level 2016: Bi Xinyue)

Semantic innovation is shown in two aspects: first, creative products should properly reflect the characteristics of Liaoning regional culture (originality, openness, diversity, innovation); second, we should pay attention to the design and development of cultural derivatives to expand the influence of regional culture. Take the “fishing goose community” as the starting point, innovate the modeling symbols, and apply them to the design and development of new products to form a distinct cultural product family^[10].

5. Conclusion

Through the double-layer design of external semantics and internal semantics, this topic provides a theoretical basis for the integration of culture and product design. The design research method of semantic combination innovation provides more ideas for design hypotheses, which meets the current consumption demand of rapid iterative updating of cultural and creative products, and is easy to be taught and used in teaching. In the course teaching, the design hypotheses are verified through a large number of design practices, and the design and development solutions of Liaoning cultural and creative products are obtained. At present, the research on the pedigree characteristics of Liaoning culture still needs to be improved, and the follow-up research can continue to expand in the product marketing link to form a creative product design teaching model to serve the cultural industry.

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