Research on Cultural and Creative Design of Liao Porcelain Art from the Perspective of Aesthetic Education in Colleges and Universities: A Case Study of the Phoenix-headed Vase Bottle Opener

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Abstract. Liao porcelain is a unique shape in the history of the development of ancient Chinese ceramic art. It is the inheritance of the national spirit by the Khitan people and also the continuation of their national culture. Its exquisite appearance makes it have unique appreciation and aesthetic value in modern art. This study focuses on the cultural and creative design of Liao Porcelain art from the perspective of aesthetic education in colleges and universities, conducting in-depth exploration with the phoenix-headed vase bottle opener as a specific case. It aims to realize the inheritance and innovation of Liao Porcelain culture, while providing rich teaching resources and practical platforms for aesthetic education in colleges and universities.

Keywords: Aesthetic Education in Colleges and Universities; Liao Porcelain Art; Cultural and Creative Design; Phoenix-headed Vase; Cultural Inheritance.

1. Research Purpose and Significance

1.1 Purpose

To deeply explore the cultural connotations and aesthetic characteristics of Liao Porcelain Art, especially the historical information and cultural symbols carried by typical artifacts represented by the Phoenix-headed Vase. It aims to explore strategies and methods for Liao Porcelain cultural and creative design suitable for the environment of aesthetic education in colleges and universities, and conduct practical creation with the Phoenix-headed Vase bottle opener as an example, so as to realize the organic integration of tradition and modernity, art and practicality. Through this research, it is expected to provide new teaching contents and cases for aesthetic education courses in colleges and universities, enrich teaching forms, and enhance students' learning interest and participation.

1.2 Significance

Theoretical Significance: It supplements and improves the theoretical research on the application of traditional ceramic art in contemporary college aesthetic education [1], and provides new perspectives and ideas for academic discussions in related fields.

Practical Significance: It is conducive to promoting the creative transformation and innovative development of Liao Porcelain culture [2], enabling more people to understand and love this ancient art form. Meanwhile, it also provides a beneficial attempt for the reform of aesthetic education teaching in colleges and universities [3], and promotes the all-round development of students.

2. The Artistic Features of Liao Porcelain

2.1 Modeling Features

The shapes of Liao porcelain are rich, diverse and full of variations. The prominent representative shapes include leather bag pots, phoenix-headed vases, crabapple-shaped long plates, square plates, etc.

Taking the phoenix-headed vase as an example, as shown in Figure 1, it gets its name from the fact that the head of a phoenix is used as a decorative element on the bottleneck. Its image is vivid

and lifelike, with smooth and graceful lines. The proportions of the vase body are well-balanced and moderate, giving a sense of roundness and fullness while maintaining a tall and straight posture. The overall shape not only reflects the bold and unrestrained character of the nomadic peoples in northern China, but also integrates the delicacy and exquisiteness of the Central Plains culture. In addition, other types of Liao porcelain, such as leather bag pots, feature a unique flat, leather bag-imitating shape and portable design, which also reflect the living habits and usage needs of people at that time.



Figure 1. (Photographed at Liaoning Provincial Museum)

2.2 Decoration Techniques

The decorative themes of Liao porcelain are extensive, covering various forms such as flowers and animals. Among them, the most representative are the application of relief appliqué and scratching techniques—the scratching technique is smooth and free-spirited yet rigorous and meticulous. Craftsmen could skillfully utilize the plasticity of clay to create decorative patterns with ethnic characteristics on the surface of utensils, endowing the works with greater ornamental value and artistic appeal. Meanwhile, attention was also paid to the connection between color matching and ethnic cultural life. The common three-color glaze of Liao porcelain is mostly a combination of yellow (representing the land), white (representing white clouds), and green (representing grasslands), presenting a vivid portrayal of the "three colors of the grassland". This unique decorative style not only reflects the pursuit of artistic life by the people of the Liao Dynasty, but also embodies their yearning for a better life.

2.3 Materials and Firing Technology

Liao porcelain mainly used local kaolin as raw material, which was carefully screened and processed to make the body. During the firing process, two temperature ranges were mostly adopted: high temperature was used for porcelain for daily use, while low temperature was used for burial porcelain. Unlike the Central Plains, where wood was used as fuel for firing, Liao porcelain production used straw or coal from various northern regions. The kilns used were mostly dome-shaped "mantou kilns" (steamed bun kilns). Firing was achieved through technical exchanges with craftsmen from the Central Plains and the accumulation of long-term work experience. The later-stage craftsmanship was also extremely exquisite: the body became thinner than that of early products, and the technology was mature. Especially for some large utensils or works with complex shapes, strict temperature control and atmosphere regulation were required to achieve the desired effect.

3. Cultural and Creative Design Practice of the Phoenix-headed Vase Bottle Opener

3.1 Design Concept and Positioning

The phoenix-headed vase bottle opener designed in this study aims to integrate traditional Liao porcelain elements with modern life, creating a cultural and creative product that combines practicality and artistry [4]. The design concept revolves around "inheritance and innovation"—it not only retains the classic shape and cultural symbols of the traditional phoenix-headed vase but also

conducts appropriate modification and optimization according to modern people's usage habits. The product is positioned at a price acceptable to the general public, focusing on the market and cultural and creative product fields. Its target audiences mainly include consumers interested in traditional culture, collection enthusiasts, and people pursuing a quality life. Through the design and development of this product, it is hoped that more people can understand and recognize the charm of Liao porcelain art, while injecting new vitality into the inheritance and development of traditional culture.

3.2 Design Process and Methods

Market Research: First, conduct comprehensive and detailed research on the target market. Search through all online shopping platforms to understand consumers' demand preferences, purchasing behaviors, and the situation of competitors. Collect data and information through questionnaires, interviews, and other methods to provide a basis for subsequent design decisions.

Preliminary Sketch Design: Based on the research results and design concept, create multiple hand-drawn preliminary design sketches, focusing on factors such as the product's appearance, functional structure, and material selection. Combining craftsmanship, materials, and modern aesthetic preferences, continuously attempt to adjust the design proportions and revise and improve the sketches until the optimal plan is determined.

Digital Auxiliary Design: Use computer-aided design software (such as CAD, 3D, ZB, PS, etc.) for modification and assistance, converting the selected design plan into an accurate 3D model to more intuitively display the product's effect and details. Virtual assembly testing can be conducted in this process to check whether the coordination between various components is reasonable and smooth.

Prototype Production: Produce physical prototypes based on the 3D models, select appropriate materials, and adopt corresponding processing techniques for production. This step requires close attention to product quality and process precision to ensure that the prototypes can accurately present the design intent.

User Testing and Feedback: Invite some potential users to participate in the product trial experience activities and collect their opinions and suggestions. Adjust and optimize the product according to user feedback to make it more in line with market demands and usage habits [5].

3.3 Analysis of Key Design Points

Shape Design: As shown in Figure 2, Design Drawing of the Bottle Opener, the basic contour features of the traditional phoenix-headed vase are adopted, integrated with modern artistic styles. The design is simplified and minimalist, combining silhouette form with the advantages of flat design, reflecting the characteristics of being elegant, generous, and easy to carry, making it more in line with modern aesthetic trends. The lines of the bottle body are smooth and natural, with coordinated and beautiful proportions; the overall shape retains classical charm while not lacking a sense of fashion.

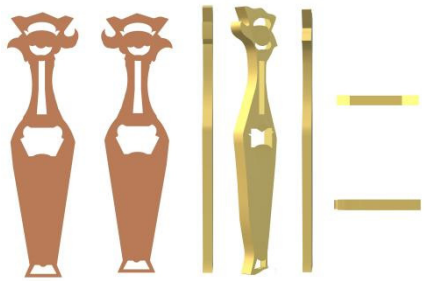


Figure 2. Design Drawing of the Bottle Opener

Functional Design: Considering the actual use of the bottle opener, humanized functional designs are added on the premise of ensuring aesthetics. For example, a groove structure for easy gripping is set at the bottleneck; the top design also incorporates a can opener for canned fish, ensuring versatile

aesthetics and practicality. In addition, the decorative edges and corners are rounded to avoid injury caused by excessive force during use. These detailed designs make the product more convenient, efficient, safe, and reliable in use.

Material Selection: As shown in Figure 3, the bottle opener is mainly used for opening bottled drinks such as soda and beer. Therefore, hard and high-quality metal materials are selected as the main material, such as 304 or 316 stainless steel, which is safe, sufficiently hard and cost-effective.



Figure 3. Bottle opener

Decorative Expression: As shown in Figure 4, the design draws on the "Five Elements and Five Colors" in traditional Chinese culture—namely, gold, wood, water, fire, and earth corresponding to white, green, black, red, and yellow—which enhances the product's artistic value and uniqueness. Taking the Liao porcelain phoenix-headed vase as the design prototype, the work incorporates transformations in form and material, and is paired with the color echoes of traditional Chinese culture. This creates an excellent design that features ethnic characteristics, embodies traditional culture, and is simple yet fashionable.

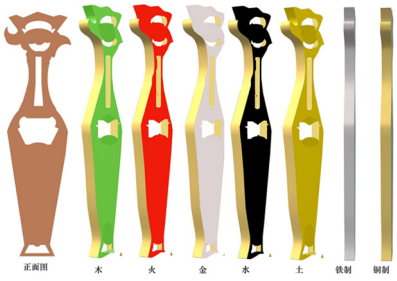


Figure 4. Five Elements and Five Colors" Bottle Opener

4. Exploration of the Teaching Mode for Liao Porcelain Cultural and Creative Design from the Perspective of College Aesthetic Education

4.1 Construction of Curriculum System

Constructing a targeted aesthetic education curriculum system for Liao Porcelain cultural and creative design—covering theoretical teaching, practical operation, and cultural investigation—is the foundation for carrying out such teaching from the perspective of college aesthetic education.

4.2 Innovation of Teaching Methods

Traditional classroom teaching modes are often overly simplistic, relying merely on pictures for instruction, which is boring and not conducive to motivating students' initiative and enthusiasm.

Therefore, diverse teaching methods should be actively explored to stimulate students' interest in learning.

4.3 Construction of Evaluation System

Establishing a scientific and reasonable evaluation system is of great significance for testing teaching effects and guiding students to improve.

By comprehensively considering these factors, students' works are evaluated in a comprehensive, objective, and fair manner, and timely feedback and suggestions are given to help them continuously improve their creative level.

5. Conclusion

Through in-depth research on Liao Porcelain cultural and creative design from the perspective of college aesthetic education and practical exploration of the phoenix-headed vase bottle opener, the following conclusions are drawn:

Liao Porcelain art has high aesthetic value and cultural connotations, so introducing it into the college aesthetic education system is fully feasible and necessary.

Through reasonable design concepts and methods, traditional Liao Porcelain elements can be perfectly integrated with modern life to create cultural and creative products with both practical and artistic value.

Constructing a sound curriculum system, innovating teaching methods, and establishing a scientific evaluation system are key measures to ensure the teaching quality of Liao Porcelain cultural and creative design under the perspective of college aesthetic education.

Such practical activities not only help cultivate students' aesthetic literacy and innovative ability but also promote the inheritance and development of traditional culture, achieving a win-win situation.

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