

# Research on the Innovative Application of Jingdezhen Red Cultural Elements in Digital Cultural and Creative Product Design

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**Abstract:** This paper studies the innovative application of Jingdezhen red cultural elements in the design of digital cultural and creative products. The paper first summarizes the importance of Jingdezhen red culture, analyzes the current situation and trend of digital cultural and creative product design, and points out the shortcomings and potential of the application of red cultural elements. This paper discusses in detail the extraction and spiritual extraction process of red cultural symbols, and the application value of these elements in the design. It emphasizes the design concept of traditional and modern integration, the design principle of highlighting the characteristics of red culture and the design orientation of giving priority to user experience. Finally, some suggestions are put forward to strengthen the mining of red cultural elements, expand the application field of design, and strengthen the evaluation of design effect and feedback mechanism construction, so as to promote the innovative development of cultural and creative industry.

**Keywords:** Virtual Reality Technology; Design of Cultural and Creative Product; Significance of Application.

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## 1. Introduction

### 1.1. Overview of Jingdezhen Red Cultural Elements

Jingdezhen, as the porcelain capital of China, is not only famous for its exquisite ceramic skills, but also carries a profound red cultural heritage. In this land, the red cultural elements are rich and diverse, not only the mark of revolutionary historical events, but also the inheritance of red cultural symbols, and the cohesion of red cultural spirit. These elements not only reflect the revolutionary course and the fighting spirit of the people under the leadership of the Communist Party of China, but also provide valuable resources for the cultural and creative industries in Jingdezhen.

### 1.2. Current Situation and Development Trend of Digital Cultural and Creative Product Design

With the rapid development of science and technology, digital cultural and creative product design is gradually becoming an important part of the cultural industry. At present, the design of digital cultural and creative products presents a trend of diversification, personalization and interaction. According to statistics, in recent years, the global market scale of digital cultural and creative products continues to grow, and it is expected to maintain a rapid growth trend in the next few years. Behind this trend is consumers' pursuit of personalized, high-quality cultural and creative products, as well as their enthusiasm for the new experience methods brought by digital technology.

In the current situation of digital cultural and creative product design, we can see that more and more designers begin to pay attention to the combination of traditional cultural elements and modern design concepts to create products with unique charm and cultural connotation. For example, in terms of visual design, designers use traditional

color collocation and graphic design to skillfully integrate cultural symbols into the product, so that the product not only has a beautiful appearance, but also can convey a profound cultural connotation. In terms of interaction design, designers improve user experience by innovating interaction methods and processes, so that users can feel the charm of culture while enjoying product functions.

Looking into the future, digital cultural and creative products will continue to develop in a more intelligent, emotional and immersive direction. With the continuous application of artificial intelligence, big data and other technologies, digital cultural and creative products will be able to more accurately meet the personalized needs of consumers and provide a richer interactive experience. At the same time, designers will also pay more attention to the emotional design of products, by deeply exploring the emotional value of cultural elements, so that the product can have a deeper emotional resonance with users. In addition, with the continuous development of virtual reality, augmented reality and other technologies, digital cultural and creative products will be able to bring users a more immersive experience, making users feel as if they are in a real and imaginative cultural world.

### 1.3. Research Background and Significance

With the advent of the digital era, cultural and creative products, as an important carrier of inheriting and promoting culture, are facing unprecedented development opportunities. Jingdezhen, as the representative of Chinese traditional ceramic culture, its red cultural elements contain rich historical connotation and era value. However, in the current market of cultural and creative products, the innovative application of red cultural elements in Jingdezhen is still insufficient, and it fails to give full play to its unique advantages in the design of digital cultural and creative products. Therefore, this study aims to deeply explore the elements of Jingdezhen red culture and explore its innovative application in the design of digital cultural and creative

products, so as to provide useful reference for inheriting and carrying forward the red culture and promoting the innovative development of cultural and creative industry.

## **2. Mining and Arrangement of Jingdezhen Red Cultural Elements**

### **2.1. Extraction of Red Cultural Symbols**

In the process of mining and sorting out the red cultural elements in Jingdezhen, the extraction of the red cultural symbols is a crucial link. These symbols not only carry the rich historical information, but also are the concrete expression of the red cultural spirit. Through in-depth study of red historical events in Jingdezhen, we successfully extracted a series of representative and recognizable red cultural symbols. For example, landmark buildings and revolutionary sites that are closely related to the history of red have become important sources for us to extract red cultural symbols.

In the process of extracting red cultural symbols, we used various methods and technical means. First of all, through the collection and sorting of documents, we sorted out the context of red historical events in Jingdezhen area, and defined the scope and focus of symbol extraction. Secondly, we used image recognition technology and big data analysis to screen and classify the massive historical pictures and image data, and extracted the most representative and recognizable red cultural symbols. Finally, we also invited historical experts and designers to participate in the extraction and screening of symbols to ensure that the extracted symbols have both historical value and meet the modern aesthetic and design requirements.

In the process of extracting red cultural symbols, we pay special attention to the accuracy and representativeness of symbols, pay attention to the diversity and richness of symbols, and strive to extract a variety of different types of symbols to meet different design needs and application scenarios.

The extracted red cultural symbols have a wide application value in the design of digital cultural and creative products. By integrating these symbols into the visual design, interaction design and functional design of products, we can effectively convey the spiritual connotation and values of red culture, and enhance the cultural attributes and market competitiveness of products. At the same time, these symbols can also be used as design elements and creative inspiration, providing designers with more creative possibilities and space to play.

### **2.2. Refining of the Red Cultural Spirit**

The red cultural spirit, as the precious spiritual wealth of the Chinese nation, contains firm ideals and beliefs, indomitable will to struggle and the lofty spirit of selfless dedication. In the excavation and arrangement of red cultural elements in Jingdezhen, the extraction of red cultural spirit is particularly important. Through sorting out the rich red historical events in Jingdezhen area, we can not only deeply understand the heroic deeds of the revolutionary martyrs, but also extract the core elements of the red culture spirit. For example, during the War of Resistance against Japanese Aggression, the ceramic workers in Jingdezhen actively devoted themselves to the great cause of resisting Japan and saving the country. With their own hands and skills, they provided a large number of daily necessities for the soldiers

at the front line. This spirit of selfless dedication is an important embodiment of the spirit of red culture.

In the process of refining the spirit of red culture, we have adopted many methods. First of all, through consulting historical documents and archives, we systematically combed the red historical events in Jingdezhen area, and dug out the representative red cultural symbols. Secondly, we use the methods of semiotics and cultural analysis to deeply interpret these symbols and extract the red cultural spirit contained in them. Finally, we combine modern design concepts and principles, and integrate these red cultural spirit into the design of digital cultural and creative products, so that they can not only have a sense of The Times, but also inherit and carry forward the spirit of red culture.

In the design of digital cultural and creative products, the refining and application of the red cultural spirit not only enhance the cultural connotation of the products, but also enhance the market competitiveness of the products. For example, in the design of red theme cultural and creative products, we make full use of red cultural elements, and show the unique charm of red culture through unique color collocation and graphic design. At the same time, in the interaction design and functional design, we also pay attention to integrating the spirit of red culture. Through emotional design and the development of innovative functions, users can deeply feel the power of red culture in the process of using products.

## **3. Design Concept and Principle of Digital Cultural and Creative Products**

### **3.1. Integration of Traditional and Modern Design Concepts**

In the design of digital cultural and creative products, the integration of traditional and modern design concepts is the key to the innovative application of Jingdezhen red cultural elements. This concept emphasizes that on the basis of maintaining the essence of traditional culture, the use of modern design techniques and technical means, to create both with historical deposits and in line with the modern aesthetic and practical products.

Taking Jingdezhen red cultural elements as an example, its rich historical connotation and unique cultural symbols provide a deep soil for the design. In the visual design, we can learn from the color collocation and graphic design of the traditional ceramic art, such as the use of red as the main color, combined with gold, black and other auxiliary colors, to create a solemn and warm atmosphere. At the same time, the modern design software is used for graphic design, and the red cultural symbols are presented in a simple and modern way, which not only retains the identification of traditional elements, but also conforms to the trend of modern aesthetics.

In the interaction design, it is equally important to integrate the traditional and modern design concepts. We can learn from the production process and user experience of traditional handicrafts, such as by simulating the interactive link of ceramic production, so that users can feel the charm of traditional culture. At the same time, the modern interaction design principles are applied to optimize the interaction process and improve the user experience. For example, when red cultural elements can be integrated into digital games, levels with storylines can be designed to let players

experience red historical events in the game and enhance emotional resonance.

In addition, the integration of traditional and modern design concepts is also reflected in the functional design. We can combine traditional cultural elements with modern technology to create practical and cultural products. For example, in the design of cultural and creative products, modern technological means can be used to realize the digital display and interactive experience of traditional culture. For example, AR technology enables users to appreciate the production process and cultural connotation of Jingdezhen ceramic art on mobile phones or tablet computers.

To sum up, the integration of traditional and modern design concepts is of great significance in the digital cultural and creative product design. It can not only inherit and carry forward the traditional culture, but also can meet the aesthetic and practical needs of modern consumers, and promote the innovation and development of the cultural and creative industry.

### **3.2. Design Principles Highlighting the Characteristics of Red Culture**

In the design of digital cultural and creative products, the design principle of highlighting the red cultural characteristics is crucial. This principle not only requires designers to dig deep into the essence of Jingdezhen's red culture, but also to skillfully integrate it into every detail of the product. Take color as an example, red, as an important symbol of red culture, should be fully reflected in the design. Designers can use red as the main color, with other auxiliary colors, to form a strong visual impact and cultural identity. For example, in the design of red theme cultural and creative products, the designer uses high saturation red as the main color, and combines gold and black for the ornament, which not only shows the solemnity and majesty of red culture, but also reflects the sense of fashion and high-end sense of the product.

In terms of graphic design and symbolic expression, designers should extract the classic symbols and elements in Jingdezhen red culture, such as the revolutionary historical buildings in Jingdezhen, transform them into symbols with specific significance, and recreate them through modern design techniques, so that they can have a sense of history and modern aesthetics.

In addition, the design principle of highlighting the characteristics of red culture also requires designers to pay attention to the combination of practicality and culture in the functional design. Designers can, through innovative functional design, integrate the red cultural elements into the practical functions of the products, so that the products can convey the values and spiritual connotation of the red culture while meeting the needs of users. For example, in the design of Jingdezhen red theme cultural and creative products, designers can develop a ceramic intelligent speaker with red culture characteristics, and introduce the red history of Jingdezhen and spread the red culture to users through voice interaction. This design method not only improves the added value and competitiveness of the product, but also brings a brand new use experience and cultural enjoyment for users.

As the famous designer Kim Tai-keung said, "Design is not a skill, but the ability to feel and understand the ability to capture the essence of things." To highlight the characteristics of red culture in the design of digital cultural and creative products requires designers to have profound cultural heritage

and keen insight, to deeply explore the connotation and value of red culture, combine it with modern design concepts, and create digital cultural and creative products with unique charm and cultural value.

### **3.3. Design Orientation of User Experience First**

In the design of digital cultural and creative products, the design orientation of user experience priority is the key to ensure the success of the product. Taking Jingdezhen red cultural elements as an example, we should not only dig deeply and sort out the red cultural elements, but also integrate these elements into the user as the center and every detail of the product. Through user research and data analysis, we found that users have a high demand for products with cultural characteristics and good interactive experience. Therefore, in the design process, we adopted multiple methods to optimize the user experience.

First of all, in terms of visual design, we pay attention to color collocation and application, and adopt the classic colors in Jingdezhen red culture, such as red, gold, blue and white blue, etc., to create a strong cultural atmosphere. At the same time, we use graphic design and symbolic expression to skillfully integrate these elements into the interface of the product, so that users can feel the charm of culture in the process of use.

Secondly, in terms of interaction design, we focus on the optimization of interaction process and user experience. Through user testing and feedback collection, we constantly adjust and optimize the interaction process of the product to ensure that users can complete the operation easily and smoothly. At the same time, we use the method of emotional design to integrate the red cultural elements into the interaction process of the products, so that users can have emotional resonance in the process of using the products.

In addition, we also focus on the combination of practicality and culture. In terms of functional design, we fully consider the needs and habits of users, combine red cultural elements with practical functions, and create products with both cultural characteristics and practical features. For example, in the functional design of cultural and creative products, we have added some interactive functions related to Jingdezhen red culture, such as Jingdezhen red story sharing and red song playing, etc., so that users can have a deeper understanding of red culture in the process of using the products.

As the famous designer Donald Norman said: "Good design is to let people understand, a use will, a use to like." In the design of digital cultural and creative products, we always adhere to the design orientation of user experience first. Through in-depth excavation and sorting out of Jingdezhen red cultural elements, we integrate the user-centered way into the product design, and create products with cultural characteristics, practical and easy to use. Such products can not only meet the needs and expectations of users, but also can inherit and carry forward the red culture, and make contributions to the development and progress of the society.

## **4. Summary**

Strengthen the mining and arrangement of Jingdezhen red cultural elements, establish a more comprehensive and systematic red culture database, and provide more inspiration and materials for designers. Secondly, expand the application

field of digital cultural and creative product design, explore the integration and innovation with other fields, and provide users with more diversified and personalized design experience. Finally, the evaluation of the design effect and the feedback mechanism construction should be strengthened, and more objective and quantitative evaluation methods should be adopted to provide more accurate and effective guidance for designers.

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