

# The Application Significance of Virtual Reality Technology Utilized in Service Interaction Platform for Jingdezhen Cultural and Creative Product

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**Abstract:** The service interaction platform for Jingdezhen cultural and creative products is the key material foundation and prerequisite for the design and development of Jingdezhen cultural and creative products. The application of virtual reality technology in the service interaction platform of cultural and creative products will bring good comprehensive effects and practical significance. This article focuses on the application of virtual reality technology in the Jingdezhen cultural and creative product service interaction platform, and launches relevant elaboration and analysis.

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

## 1. Introduction

Cultural and creative products should not only be regarded as a product, but also be endowed with specific regional cultural connotations. Jingdezhen, as the "capital of porcelain" in China, carries a thousand years of traditional ceramic culture, and has a unique ceramic culture unparalleled by various porcelain producing regions in the world. These precious ceramic arts and cultural customs constitute a unique and complete cultural system of Jingdezhen. In this social context, virtual reality technology is being used to develop a service interaction platform for Jingdezhen cultural and creative products, which will become a new way of designing, developing, and selling Jingdezhen cultural and creative products. Its main role is to present Jingdezhen's ceramic culture, tourism culture, and cultural customs to consumers through technical means such as 3D modeling and virtual reality presentation, further enhancing the artistic and cultural content of Jingdezhen's cultural and creative products.

Developed using virtual reality technology, the interactive platform for cultural and creative product services in Jingdezhen will be conducive to further promoting the regional culture of Jingdezhen. Virtual reality technology is a new practical technology developed in the 20th century, the demand for which is increasingly flourishing in all walks of life, with the continuous development of social productivity and science and technology. So far, virtual reality technology has made great progress and gradually become a new scientific and technological field. At present, virtual reality technology has been widely used in education, film and television entertainment, military, medicine, aerospace, and design fields, and is becoming increasingly mature. In view of the current economic situation and the current situation of the Jingdezhen cultural and creative product industry, the development of a Jingdezhen cultural and creative product service interaction platform, with the help of virtual reality technology, has a guiding role for the development of the Jingdezhen cultural and creative product industry [1].

## 2. Construction background of service interaction platform for Jingdezhen cultural and creative product based on virtual reality technology

### 2.1 Market Status of Cultural and Creative Products in Jingdezhen

As a millennium old town with a long history and culture, Jingdezhen has numerous tourist attractions, extremely valuable ceramic relics, and unique ceramic industry customs. Therefore, the market for cultural and creative products is quite prosperous. The construction of the Jingdezhen National Ceramic Culture Heritage and Innovation Pilot Zone has brought new impetus and challenges to the development of Jingdezhen ceramic cultural and creative products. Cultural and creative demonstration bases

represented by Taoxichuan and Letian Ceramic Group have been continuously established, and many excellent design talents and foreign artist teams with innovative design concepts have chosen to stay in Jingdezhen. Thanks to their efforts, many excellent cultural and creative products have been born, and a sales platform has been formed, including Letian Fair, Taoxichuan Fair, Festival Fair on Spring and Autumn, and the annual Jingdezhen International Ceramic Expo, providing a broader development space for Jingdezhen's cultural and creative products. However, there are still some problems, throughout the market development of cultural and creative products in Jingdezhen.

### ***2.1.1 Product homogeneity is serious***

Jingdezhen's cultural and creative products are often dominated by ceramic products, so although each manufacturer has its own design style, the phenomenon of product homogeneity is relatively serious. Due to the lack of innovation and personalization in most products, it is difficult to stand out in the market. At the same time, due to its location in the millennium porcelain capital, ceramics have been widely used in the design and development of cultural and creative products in Jingdezhen. Although Jingdezhen porcelain manufacturing technology is exquisite, using a single material for cultural and creative products is not conducive to highlighting the details of the product, causing consumers to experience aesthetic fatigue.

### ***2.1.2 Product innovation has not been given sufficient attention***

In the Jingdezhen cultural and creative product market, more products adopt the "borrowing principle" model, which not only leads to the similarity of product design creativity, but also leads to the *deja vu* of product form, materials, structure, and use methods. Undoubtedly, it is a disappointment and regret for consumers that cultural and creative products with local regional characteristics and cultural customs cannot be purchased in towns with local characteristics. Moreover, cultural and creative products that are too similar cannot evoke emotional resonance among consumers, let alone leave a deep impression in their memory for a long time. Cultural and creative products should not only be a cold industrial product produced in batches, but should also be combined with regional cultural characteristics and local customs, so that consumers can recall the happiness about the city where they purchased the product while seeing it in the future. This is not only related to the establishment of the brand image of Jingdezhen cultural and creative products, but also plays an intangible role in promoting the city image of Jingdezhen.

### ***2.1.3 There is a lack of sales ways***

The sales ways of cultural and creative products in Jingdezhen are very limited in the market, mainly concentrated in scenic areas, commodity stores around tourism and other places. The lack of online sales ways and promotion platforms has made it difficult to promote products with Jingdezhen regional cultural characteristics better, and has also brought difficulties in expanding the market.

### ***2.1.4 The Jingdezhen cultural and creative products is of lower popularity***

Handmade porcelain retains the soul and main competitiveness of Jingdezhen's cultural and creative product materials, and has always been the production method of Jingdezhen ceramics that is different from other major ceramic production provinces. However, this small-scale manual template production mode in the porcelain industry will directly lead to the difficulty in mass production of cultural and creative products such as Jingdezhen ceramics, which restricts the formation of a strong brand for Jingdezhen cultural and creative products in the domestic and international markets. As a result, it is naturally difficult to generate influence in the cultural and creative field[2].

## ***2.2 Development Status of Virtual Reality Technology***

Virtual Reality (abbreviated as VR), also known as virtual reality or spiritual reality technology, is a new practical technology developed in the 20th century, including computer, electronic information, and simulation technology. Computer technology is its basic implementation. The latest development achievements of various high-tech technologies are comprehensively utilized, such as three-dimensional graphics technology, multimedia technology, simulation technology, display technology, servo technology, and so on. With the help of computers and other devices, a virtual world of realistic three-dimensional vision, touch, smell, and other sensory experiences is constructed, thereby creating an immersive feeling for people in the virtual world. With the continuous development of social productivity and science and technology, the demand for VR technology is increasingly flourishing in all walks of life. The application prospect of virtual technology is extremely broad, since it can bring people more intuitive, immersive, and realistic experiences in various fields, which will also promote the rapid

development of virtual technology.

### **3. The significance of the application of virtual reality technology in design interaction platform for Jingdezhen cultural and creative product**

By summarizing the market research of cultural and creative products in Jingdezhen and combining the technical characteristics of virtual reality technology (Virtual reality technology is to provide users with immersive experiences by bringing them into a virtual three-dimensional world. Virtual reality technology mainly includes three aspects of technology: virtual environment modeling, virtual environment interaction, and virtual environment presentation), it can be summarized that the significance of introducing virtual reality technology into the Jingdezhen cultural and creative product service interaction platform can be divided into the following three aspects, according to the targeted groups.

#### ***3.1 Significances for designers of cultural and creative products***

Virtual reality technology can provide assistance to designers of cultural and creative products in Jingdezhen in terms of product design and development. With virtual reality technology, a three-dimensional model can be created on a computer. This model can simulate scenes in a real environment, such as scenes in the factory area of a cultural and creative product production enterprise in Jingdezhen, exhibits, and other scenes. Various problems in the product development process can be accurately understood through this model, which helps designers more accurately grasp the design requirements of cultural and creative products, and can timely identify and solve problems.

Designers' design efficiency and quality have been greatly improved. Traditional cultural and creative product design often requires multiple steps such as manual drawing and sample production, resulting in high time costs and prone to errors. With virtual reality technology, the shape, color, material, and other elements of a product can be easily simulated on a computer and visually designed and adjusted, which can not only greatly shorten the design cycle, but also avoid waste and unnecessary losses caused by errors.

The competitiveness of cultural and creative products in Jingdezhen can be improved. with the help of virtual reality technology, product design schemes can be quickly adjusted, and product updates and upgrades can also be implemented more quickly, which is beneficial for Jingdezhen cultural and creative products to catch up with market changes faster and better meet consumer needs. At the same time, designers of cultural and creative products can more intuitively understand consumers' needs and preferences through the interactive platform, and optimize and upgrade products based on consumer feedback.

More innovative ideas and inspiration have been incorporated into Jingdezhen cultural and creative products, injecting novelty and artistry into Jingdezhen cultural and creative products.

#### ***3.2 Significances for consumers***

Consumer experience and engagement have been improved. The core of Jingdezhen cultural and creative products is the cultural connotation and artistic value of the town of Jingdezhen, which can be more vividly presented to users through virtual reality technology. Special scenic spots in Jingdezhen, such as Taoxichuan, Ancient County office in Fuliang, Ancient Kiln Folk Custom Expo Area, Royal Kiln Factory National Archaeological Heritage Park, China Ceramic Museum, Royal Kiln Ceramic Culture Tourist Area, and Scenic Area in Yaoli, were visited and investigated to achieve scene simulation and interactive design of these tourist attractions on the cultural and creative product service interaction platform. Consumers can freely explore and feel in the virtual cultural environment of Jingdezhen, which can not only enhance their understanding and cognition of Jingdezhen's regional culture, but also indirectly promote the development of Jingdezhen's tourism industry. In addition, through virtual reality technology, multi-person online interaction can be realized, enabling better sharing and communication between users, and enhancing social attributes.

Customization and design of personalized cultural and creative products are feasible. Jingdezhen's cultural and creative products are highly praised for their unique artistic value and cultural heritage. With virtual reality technology, consumers can customize according to their needs and preferences, and truly participate in the design and production of cultural and creative products[3].

Jingdezhen's regional cultural characteristics and ceramic history and culture are readily available without leaving home. The fame of Jingdezhen's cultural and creative products lies not only in their artistic value, but also in the profound cultural heritage they contain. With virtual reality technology, real cultural scenes can be created to present Jingdezhen's ceramic culture and historical stories to consumers. In this way, consumers' awareness and understanding of Jingdezhen culture can be improved, promoting cultural inheritance and development.

### **3.3 Significance for manufacturers of cultural and creative product**

The channels for product sales and promotion have been expanded. Previously, the sales forms and channels of cultural and creative products in Jingdezhen were relatively single, mainly relying on traditional sales methods, such as souvenir shops or exhibitions in tourist attractions. However, in the interactive platform for cultural and creative products and services, virtual reality technology has been introduced to play a more active role in product sales and promotion. Virtual reality technology makes it possible to combine online and offline, and different types of virtual display methods can be designed, such as virtual cultural and creative product museums, virtual cultural and creative product sales stores, so as to expand sales channels. In addition, online promotion methods such as social media and online advertising are fully utilized for product promotion, increasing exposure and visibility.

With the assistance of virtual reality technology, the three-dimensional models of Jingdezhen cultural and creative products can be integrated into virtual reality scenes, enabling consumers to experience the details, processes, and characteristics of the cultural and creative products. Through wearable smart devices, consumers can experience and purchase products at home, breaking the constraints of time and space.

## **4. Summary**

The application of virtual reality technology in the service interaction platform for Jingdezhen cultural and creative product is of great significance. With the help of virtual reality technology, designers can better understand Jingdezhen ceramic culture, optimize the design scheme of cultural and creative products, and thereby improve the quality and market competitiveness of cultural and creative products. The problems existing in the design, sales, and consumer purchasing experience of Jingdezhen cultural and creative products have also been effectively addressed. Moreover, thanks to virtual reality technology, more intuitive and realistic cultural scenes can be created to promote the inheritance of Jingdezhen culture and the development of tourism industry.

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