

Digital Technology Empowers the Development of Folk Cultural and Creative Design

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Abstract: In order to realize the deep integration of culture and science and technology, the traditional folk culture is promoted and inherited by constructing an immersive interactive experience system “face memory” which integrates the functions of display, customization and entertainment. Using traditional folk culture symbol elements as the basic material for users' creation, a gamification and virtual reality digital dough sculpture real-time interactive design system is created, which is combined with the experience hall to create an immersive experience atmosphere. The completed works can provide digital and physical cultural creation customization services. This paper reveals the trend of modern cultural and creative development to digital evolution, and analyzes the realization mode of technical empowerment. Based on exploring the common ground between traditional and modern concepts, we can enhance the visual or immersive experience effect, so that more traditional cultures can better integrate and develop in the digital age.

Keywords: Folk culture; Digital technology; real-time nteraction; Inheritance and Innovation

1 Introduction

In order to realize the deep integration of culture and science and technology, the traditional folk culture is promoted and inherited by constructing an immersive interactive experience system “face memory” which integrates the functions of display, customization and entertainment. Using traditional folk culture symbol elements as the basic material for users' creation^[1], a gamification and virtual reality digital dough sculpture real-time interactive design system is created, which is combined with the experience hall to create an immersive experience atmosphere. The completed works can provide digital and physical cultural creation customization services. This paper reveals the trend of modern cultural and creative development to digital evolution, and analyzes the realization mode of technical empowerment. Based on exploring the common ground between traditional and modern concepts, we can enhance the visual or immersive experience effect, so that more traditional cultures can better integrate and develop in the digital age, While maintaining the original authenticity of traditional folk customs, we should actively implement active protection, adapt traditional folk customs to modern life^[2], and creatively develop traditional folk cultural resources^[3]. In order to better enhance cultural self-confidence and meet the aesthetic needs of the public.

2 Innovative Strategies for Traditional Folk Culture

2.1 Promote cultural popularization and youthfulness development

The development needs of traditional cultural creativity are determined by the latest trends in cultural and creative design development, and it is necessary to break free from conventions and inject fresh blood into them. For example, the Palace Museum borrowed the term “Aobai” and extended it to the English word “All buy”, which happened to be linked to purchasing, forming the unique content of the Palace Museum's cultural and creative IP. Utilizing the IP craze to lead the development of folk cultural and creative design, making Xi'an's traditional folk culture “trendy”. One is to create a regional IP image design and cultural industry, based on Xi'an tradition to create festival exclusive cultural and creative works; The second is to achieve large-scale development of the cultural industry through the construction of themed folk cultural parks; Secondly, pay attention to the compatibility between cultural content and usage environment, and comply with the social development characteristics and public aesthetic requirements of the Z times.

2.2 Explore the meeting point between culture and the times

Culture is an important carrier for the dynamic inheritance of traditional culture. The development of cultural creativity in Xi'an should be based on excellent traditional culture. Whether in terms of theme or content selection, it should follow and reflect the charm of traditional culture, and pay attention to regional cultural characteristics. From the perspective of aesthetic function, adhering to the practical function of "people-oriented", the design of cultural and creative products is no exception in the application of traditional folk customs in Xi'an, enhancing people's participation and reducing blind abuse. For example, Fan Zidong, a writer of Qin Opera and founder of Yisu Society, created the "three drops of blood" series of cultural and creative product designs, which both have national characteristics and conform to the principles of daily use. In terms of design, we have kept up with the times and continuously innovated.

2.3 Enhance visualization and immersive experience

In the harsh environment where traditional folk culture is on the brink of extinction, innovative transformation of existing cultural connotations is carried out through new technological means to create a “digital” communication system^[4]. Utilize folk handcrafting techniques to engage in online real-time interactive DIY activities. By combining 3D printing technology, for example, divide the basic shapes of animal dough sculptures into several parts such as the head, facial features, and limbs for digital modeling; Secondly, label the decoration style and color matching; Finally, it is integrated into the “3D dough kneading game” system (Figure 1), where users can use system material patching or AI generation technology to design their favorite dough sculptures, immersing themselves in the charm brought by traditional folk techniques. Through the new media art form, more and more people can understand the traditional culture of the new era and make the traditional folk culture “live”.

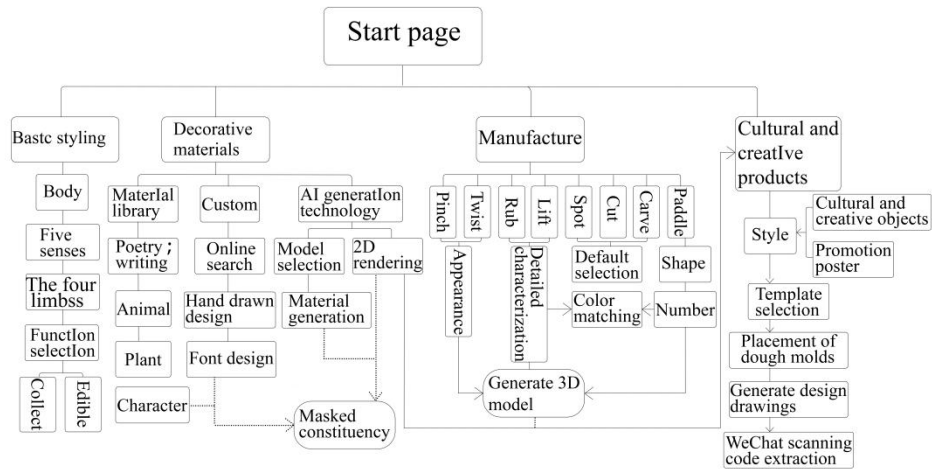


Figure 1: digital empowerment cultural innovation development model and technology roadmap

3 Extraction of Xi'an Folk Culture Symbols

3.1 Xi'an Traditional Folklore - Chang'an Flower Lantern

Lantern, one of the important artistic expressions in Chinese folk customs, has a long history and can be traced back to the Western Han Dynasty. Its styles include animal lanterns and plant lanterns, and there are many varieties, such as pomegranate lanterns and unicorn lanterns. The dyeing techniques are complicated and the colors are gorgeous, mainly red and yellow. In the first month of the lunar calendar, there is a custom of sending lanterns, which symbolizes the auspicious meaning of happiness and early birth. Lantern was widely used by the royal family in the Tang Dynasty. According to Miscellaneous Records of the Ming Emperor, the Ming Emperor set lanterns in Shangyang Palace on the Lantern Festival. The lanterns tied by animals, such as dragons, phoenix tigers and leopards, became the objects to be imitated by Chang 'an folk lanterns, and the custom of praying for good weather in the coming year outside the court on the day of the year has been popular among the people so far^[5]. Therefore, Chang 'an Lantern Festival is combined with the traditional Chinese New Year culture in China. The picture is composed of up and down. The lower part is intended to show the scene of the Spring Festival in ancient Chang 'an. The left part is fireworks with Spring Festival elements, and the right part is tiger Lantern Festival. This work harmoniously integrates the lantern elements into the picture, highlighting the festive atmosphere of celebrating entertainment festivals (Figure 2), wishing people happiness and well-being every year.



Figure 2 Chang'an Flower Lantern “Years and Years”Series Dining Box Cultural and Creative Products

3.2 Xi'an Traditional Folklore - Doucun Da La

The production technique of Doucun wax has gone through a development process of about 1300 years. The production process is cumbersome, with shapes such as grapes, lotus flowers, cranes, etc., full of auspicious meanings, distinctive features, and high artistic research value. According to legend, during the mid Qing Dynasty, the White Lotus Sect bloodied Guanzhong, and Doucun was besieged. Emperor Guandi saved the army and civilians from fire and water. That day happened to be the eighth day of the fourth lunar month, and the villagers jointly discussed and requested permission from the observation tower to leave the ancestral wax in the village to worship Guandi^[6]. From the Qing Dynasty to the present, Doucun has made exquisite 100 Jin wax every year. On the eighth day of April, a temple fair was held to commemorate Guandi, and a folk activity called “You Da La” was organized to wander the streets and alleys. Da La is regarded as a mascot by villagers, and wherever it passes, it will be greeted by firing cannons, giving gifts of tobacco, wine, and pastries in gratitude, and praying for a bountiful harvest and favorable weather in the coming year. Finally, it will be lit and enshrined in the Guandi Temple in Doucun to show worship and commemoration of Guan Gong. Taking the characteristics and spiritual connotations of the Da La pattern as the entry point for the design of Doucun Da La cultural and creative products, the dragon pattern is used to refer to the emperor. With the help of traditional festival images such as dragon boat races during the Dragon Boat Festival, the overall yellow tone is used to showcase the grand momentum of ancient emperor worship and folk dragon boat races during the Dragon Boat Festival (Figure3). Modern illustration techniques are used to express the design, and historical basis and folk element characteristics are used as design support, To achieve the goal of continuing traditional cultural colors in modern life.



Figure 3 Doucun Da La's “devout” series trendy clothing

4 Development significance of folk cultural and creative products

4.1 Promote the development of cultural and creative industries

Traditional folk culture is an integral part of Chinese traditional culture, and its spiritual and cultural connotation is an important reason for Chinese national culture to enhance its self-confidence in the new era. At present, traditional folk culture and handicraft skills are facing great challenges. Under the background of advocating cultural self-confidence, combining traditional cultural elements with modern cultural and creative product design not only promotes the development of traditional culture, but also enhances the aesthetic interest of the public, which has promoted the development of traditional folk culture in northern Shaanxi.

4.2 Promote the development of traditional folk culture

The key to enhancing Chinese cultural self-confidence in the new era lies in the inheritance and development of traditional folk culture, and the spiritual and cultural connotation contained in folk culture is an important reason. Both traditional folk culture and folk handicraft skills are facing great challenges, and the influence of traditional folk culture on traditional folk culture is enormous. Under the background of advocating cultural self-confidence, combining traditional cultural elements with modern cultural and creative product design not only promotes the development of traditional folk culture in Xi 'an, but also enhances the aesthetic taste of the public.

4.3 Promote rural revitalization and development

Through the design practice of traditional folk cultural and creative products in Xi 'an, among them, big wax, lantern and dough sculpture, as representative works of folk art, have become the source of inspiration for artists in the design process. Using local tourism industry to promote the excavation and industrial development of traditional folk culture makes traditional culture more modern and practical, bears people's pursuit of a better life and aesthetic requirements, and is of great benefit to the economic development of the region where traditional folk culture is located, which is a new idea for rural revitalization and development^[7].

5 Conclusion

Under the social background of the rapid development of digital technology, digital intelligence technology has enabled the development of cultural and creative industries, and started to participate in the application scenarios of the whole chain of cultural and creative products, such as design, production, interactive experience, display and sales, which has brought more development space for the design of folk cultural and creative products, and the publicity methods and design concepts are more novel. At the same time, culture and art have gradually realized the self-adaptation of science and technology to adapt to the boosting function of digital intelligence technology in the allocation of cultural resources. Folk cultural and creative design should be based on the foundation of national culture, constantly absorb the nutrition of traditional culture, be based on practicality and people's needs, and be flexible

in the design of cultural and creative products, so as to create a cultural and creative industry that follows the international fashion trend, thus forming a new industrial system of "digital technology and ten cultural innovations" and further innovating and carrying forward traditional folk culture^[8].

Acknowledge. Thanks to the careful guidance of Professor Feng Guo and Professor Mingyong Zhou, they have given great help in the writing and translation of the thesis. Thank you, Li Shuai, for your valuable advice on the content of the paper.

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