Research on the Development Strategy of Non legacy Cultural and Creative Products in Leshan Empowered by Digital Technology

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Abstract: *This article takes the intangible cultural heritage of Leshan as the research object, and explores the strategies of digital technology empowering the development of intangible cultural and creative products. By analyzing the current situation and challenges faced by intangible cultural heritage in Leshan, this study explores the application of digital technology in the protection and inheritance of intangible cultural heritage, and proposes specific strategies for empowering the development of intangible cultural and creative products in Leshan through digital technology, including digital collection and storage, virtual reality and augmented reality technology applications, 3D printing technology applications, and blockchain technology applications. Finally, the feasibility of the strategy is verified through case analysis, and future development prospects are discussed.*
Keywords: *digital technology; Intangible cultural heritage; Cultural and creative products; Development strategy; Leshan*

In recent years, based on the new characteristics of the integration of culture and technology in the new era, the Ministry of Science and Technology and six other departments have jointly issued the "Guiding Opinions on Promoting the Deep Integration of Culture and Technology", which points out the need to extract excellent cultural and spiritual symbols of intangible cultural heritage, integrate intangible cultural heritage with technological innovation, promote various theme innovation activities, accelerate the industrialization development of the integration of intangible cultural heritage and technological innovation, and empower the protection and inheritance of intangible cultural heritage with technological innovation. Intangible cultural heritage is a living inheritance of a nation's historical and cultural heritage, carrying rich cultural connotations and spiritual values. As a historical and cultural city, Leshan has numerous precious intangible cultural heritage resources. However, with the acceleration of modernization, many intangible cultural heritage projects are facing difficulties in inheritance and inadequate protection. The rapid development of digital technology provides new opportunities for the protection and inheritance of intangible cultural heritage. This article aims to explore how to use digital technology to empower the development of intangible cultural and creative products in Leshan, providing new ideas for the dynamic inheritance and innovative development of intangible cultural heritage.

1 The current situation of intangible cultural heritage and cultural and creative product development in Leshan area

Leshan City has abundant intangible cultural heritage resources that have been passed down for a long time. It has 4 national level intangible cultural heritages, 44 provincial-level intangible cultural heritages, and 157 municipal level intangible cultural heritages, covering multiple categories such as traditional music, dance, drama, folk art, skills, medicine, and folk customs. Especially Emei martial arts, Jiajiang New Year paintings, bamboo paper making techniques, Muchuan Grass Dragon, etc. are well-known both at home and abroad. Under the guidance of the concept of "protection first, rescue first, rational utilization, and inheritance and development", more than 100 intangible cultural and creative products have been developed, and 17 intangible cultural heritage transmission bases have been established, effectively protecting and inheriting intangible cultural heritage. The famous intangible cultural heritage in the Leshan area mainly includes traditional drama (Jiayang River Opera Art), folk literature (the legend of Ganlao Aniu), traditional music (Jianghe Haozi), traditional dance (Zhixiang Yangge), traditional art (Emei Xicaolong), traditional skills (Xiaoliangshan Yi embroidery), traditional folk customs (Yi people's dress changing ceremony), etc. Cultural and creative product development: Leshan has many cultural and creative products, such as the animated short series of Leshan Stories and Intangible Cultural Heritage Series. With the creation background of Leshan's intangible cultural

heritage, it selects the cultural elements of Leshan Giant Buddha Scenic Area, Mount Emei, Muchuan Grass Dragon and other intangible cultural heritage, and presents them in the form of digital animation, which has a good promotion effect on Leshan's tourism across the region, and has also become a shining card for Leshan's tourism culture promotion. Some cultural and creative products include: Gu Shi Xiang Qiao Jiao Beef White Jade Square Brick Hot Pot Bottom with Hand Gift, Gu Zhen Ji Bowl Bowl Chicken Seasoning Package with Hand Gift, Jianwei Century Zhang's Mortise and tenon Small Box with Hand Gift, etc. However, the protection and inheritance of intangible cultural heritage in Leshan still face many challenges. Firstly, many inheritors of intangible cultural heritage projects are aging and lack successors, facing the danger of "death of people and extinction of art". Secondly, the traditional display and dissemination methods of intangible cultural heritage are relatively single, making it difficult to attract the attention and participation of young people. Once again, the development of non heritage cultural and creative products lacks innovation, suffers from severe homogenization, and lacks market competitiveness. Finally, the insufficient funds and professional talents for the protection of intangible cultural heritage have constrained its sustainable development.

2 Design of Digital Non legacy Cultural and Creative Products in Leshan Area

2.1 Extracting cultural symbols through visual form and functional experience

Digital game design generally involves the secondary creation of certain cultural elements, symbols, images, scenes, etc., and their presentation in the game. Sort out representative intangible cultural heritage projects in Leshan (such as Emei martial arts, Jiajiang New Year paintings, Muchuan grass dragons, etc.), extract visual elements (patterns, colors, props) and technical processes (such as grass dragon weaving steps). Leshan intangible cultural heritage such as Emei martial arts and Muchuan grass dragon are very suitable for developing into digital game products. The Emei martial arts moves can be broken down into game skill action libraries, and the Jiajiang New Year painting patterns can be transformed into character skins or scene textures. Design a simulation game of "Muchuan Grass Dragon Weaving", set up virtual intangible heritage task points in real places such as Leshan Giant Buddha Scenic Area and Suji Ancient Town, and players scan landmarks to trigger AR interactions such as "repair New Year pictures" and "grass dragon parade". Based on the history of the Leshan Confucian Temple, incorporate Emei martial arts techniques into puzzle solving levels (such as specific combinations of techniques that can activate mechanisms). Game cultural and creative products can bring users closer, spread traditional culture to users through game products, and also allow users to experience the fun of games, relax their body and mind, and release stress.

2.2 Inspiring Brand Effect through Attracting Topics and Scene Experience

Emojis are a way of expressing emotions through images or animations, and they are a popular culture that emerged after social media became active. Integrating intangible cultural heritage into emoticons is a digital carrier that transforms intangible cultural heritage (such as traditional crafts, opera, folk symbols, etc.) into dynamic visual symbols used in online social scenes through modern design language, combining cultural inheritance and fun expression. Using animation modeling combined with current popular language and life hotspots, and incorporating Leshan intangible cultural heritage to create emoticons, such as the Muchuan Grass Dragon and the legend of Ganlai Aniu, designing anime IP images with patterns, colors, and other elements from intangible cultural heritage, allowing characters to integrate into people's daily lives in a special, humorous, and friendly way through social media, spreading Leshan's unique culture and allowing more people to understand Leshan's intangible cultural heritage.

2.3 Building product carriers using traditional processes or emerging technologies

Digital DIY production refers to the creative behavior of individuals using digital technology tools or digital materials to independently design and create physical/virtual objects. Especially using mini programs for product experience production, through experience, it can arouse the audience's interest in understanding operational skills. Jiajiang New Year paintings and Xiaoliangshan Yi embroidery are very suitable for developing into digital DIY production mini programs. Users can obtain design patterns by selecting graphic resources such as patterns and colors in the mini program, using methods such as deformation, perspective, two sided continuity, and four sided continuity. They can choose existing patterns or self-designed patterns for digital product customization, such as phone cases, pillows, paper cups, fans, handbags, etc., and can also customize physical items. Through digital DIY production, even audiences without production skills can experience the joy of handmade production in a short period of time.

3 Development Strategy for Digital Non legacy Cultural and Creative Products in Leshan Region

3.1 Highlighting regional characteristics and deepening cultural connotations

At present, there is homogenization in the development of intangible cultural heritage products in various regions, and the regional characteristics are not obvious. Some products only involve simple element grafting and lack deep connotations. Combining intangible cultural heritage elements with modern design concepts, innovating the design concepts and appearance of cultural and creative products, and enhancing the cultural connotation and characteristics of the products. Therefore, the development of cultural and creative products in Leshan must have a deep understanding of various intangible cultural heritage contents and the cultural connotations behind them, analyze the cultural connotations, element characteristics, historical context, and cultural symbols of various intangible cultural heritage, understand the stories behind them, extract representative elements and cultural symbols, and carry out innovative design based on the regional characteristics of Leshan.

3.2 Based on user needs, optimize user experience

A good cultural and creative product must be designed based on user needs. Extensive research before product development can help designers accurately grasp user needs. Research should be conducted from different age groups, professions, genders, and other aspects such as product type, consumption ability, personal hobbies, consumption willingness, and consumption purpose. Analysis should be conducted from the perspectives of consumer psychology and design psychology to make the design more reflective and meet people's psychological needs, and to ensure that the developed product is recognized by consumers. Pay attention to user experience, design digital cultural and creative products with users at the center, and improve user experience and satisfaction. Establish a digital intangible cultural heritage resource platform to achieve resource sharing; Develop a digital cultural and creative product trading platform to promote production and sales integration; Building a digital intangible cultural heritage education platform and cultivating professional talents; Build a digital intangible cultural heritage experience center to enhance public participation. By connecting various links such as intangible cultural heritage protection, creative design, production and manufacturing, marketing and promotion through digital means, a virtuous cycle of industrial ecology is formed.

3.3 Flexible application of technology to explore future space

With the rapid advancement of computer technologies such as AR and VR, as well as the audience's recognition and pursuit of technology, the types of digital cultural and creative products are becoming increasingly diverse. The traditional development process often starts with physical samples, while the digital process starts with digital assets. Firstly, digital technology is used to collect images, models, and motion data of intangible cultural heritage projects, such as 3D scanning, virtual reality, augmented reality, etc., to digitize and transform intangible cultural heritage culture, establish a digital resource library, and provide materials and inspiration for cultural and creative product design. Then, designers use digital resources for creative design and utilize computer-aided design tools for rapid iteration; Next, samples will be produced using technologies such as 3D printing; Finally, optimize and adjust based on market feedback. This digital process greatly improves development efficiency and innovation capabilities, filling the future development of intangible cultural heritage characteristic cultural and creative industries with usable space. It is conducive to enhancing the cultural attributes carried by cultural and creative products and enriching the presentation of cultural and creative product content.

3.4 Expand publicity channels and promote coordinated development of industries

The expansion of digital marketing and communication channels is an important aspect of digital technology empowerment. Utilizing digital channels such as social media, short video platforms, and live streaming to promote and sell digital cultural and creative products can expand the dissemination scope, popularity, and influence of non heritage cultural and creative products. We will make full use of WeChat, Tiktok and other APPs to expand publicity channels, for example, we will show the production process of intangible cultural heritage through short videos, sell cultural and creative products through live broadcast, use the power of We Media to promote and promote products, and strengthen communication with consumers. Active and frequent interaction between cultural and creative enterprises and consumers can enhance consumers' cultural awareness and recognition of their products, thereby improving the marketing effectiveness of cultural and creative products. At the same time, collaborate with related industries such as tourism, education, and film and television to jointly promote the development and promotion of digital non heritage cultural and creative products, and achieve industrial integration and development.

4 Conclusion

In summary, digital technology has provided new ideas and methods for the development of intangible cultural and creative products in Leshan. The application of digital collection and storage, VR/AR technology, 3D printing, blockchain and other technologies can effectively solve the problems in the protection and inheritance of intangible cultural heritage, and promote the innovative development of intangible cultural and creative products. In the future, with the maturity of new technologies such as 5G and artificial intelligence, digital technology empowering the development of non legacy cultural and creative products will show greater potential. It is suggested to strengthen the training of digital technology talents, improve the construction of digital infrastructure, promote cross-border cooperation, and jointly promote the creative transformation and innovative development of intangible cultural heritage in Leshan.

References

[1]. Zhang Mingyuan Research progress on digital protection of intangible cultural heritage [J]. Cultural Heritage, 2020,5 (3): 45-52
[2]. Wang Xiaohong Exploration of the Application of VR/AR Technology in Intangible Cultural Heritage Inheritance [J]. Digital Art, 2019, 12 (2): 78-85
[3]. Department of Culture and Tourism of Sichuan Province Report on the Protection and Development of Intangible Cultural Heritage in Leshan City [R]. Chengdu: Sichuan People's Publishing House, 2022
[4]. Song Huaqing, Wang Zhongnan Research on the Protection and Inheritance of Intangible Cultural Heritage in Dalian City [J]. Journal of Dalian University of Education, 2020, 36 (4): 72-73
[5]. Yin Xiong, Tao Liping, Pan Weichen Research on the Digital Protection and Display Platform of Intangible Cultural Heritage: Taking Jianghan Plain Shadow Play as an Example [J] Modern Information Technology, 2021, 5 (15): 156-159