Research on Digital Dissemination Strategies and Innovative Approaches for Intangible Cultural Heritage

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Abstract: The so-called "intangible cultural heritage" refers to traditional cultural expressions widely disseminated among various ethnic groups and regarded as integral components of their cultural heritage. In the current era, leveraging digital dissemination to innovate intangible cultural heritage not only helps embed it into the framework of a culturally powerful nation but also facilitates its preservation and integration into cultural innovation pathways, thereby strengthening the cultural identity and confidence of the Chinese nation.

Keywords: Intangible Cultural Heritage; Digital Dissemination; Innovative Pathways; Strategic Research

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Introduction

Intangible cultural heritage is a distinctive hallmark of a nation and a great crystallization of human wisdom. It embodies profound historical connotations, educational significance, and heritage value, serving as a vital window to showcase the unique charm and cultural depth of various ethnic groups and regions. In the new era, fostering cultural awareness and enhancing China's cultural soft power and core competitiveness necessitate the efficient dissemination and promotion of intangible cultural heritage, which holds significant practical importance. Currently, the methods of inheriting and protecting intangible cultural heritage in China have undergone substantial transformations, with rapidly advancing digital technologies emerging as a key driving force for its transmission and innovation. The application of digital dissemination strategies not only effectively facilitates the inheritance and preservation of intangible cultural heritage but also transcends temporal and spatial limitations, integrating traditional intangible cultural heritage into people's daily lives.

1.Analysis of the Importance of Digital Dissemination and Innovative Development of Intangible Cultural Heritage

1.1 Establish a Digital Archive of Intangible Cultural Heritage

The collection, processing, and storage of digital intangible cultural heritage archives focus on the digital recording of inheritors, heritage works, cultural spaces, etc. Through artificial intelligence technologies such as computer vision and language recognition, the physical characteristics of intangible cultural heritage are fully and accurately described to prevent external influences. Using these digital intangible cultural heritage archives as an intangible cultural heritage information database can provide assistance for future scholars in searching and researching. In addition, recording the survival, development, evolution, and innovation trajectory of intangible cultural heritage is essential for improving cultural awareness and identity among various ethnic groups, as well as enhancing people's cultural confidence.The construction of digital intangible cultural heritage archives is not only a static preservation of cultural memory, but also a dynamic process of activating the dialogue between tradition and modernity. At the technical level, it is necessary to establish a multimodal database that integrates 3D modeling, motion capture, high-precision scanning, and other technologies to restore the process details and scene context of intangible cultural heritage projects. At the same time, the introduction of blockchain technology for archive ownership confirmation ensures the digital copyright of inheritors. At the application level, digital archives should break through the single function of "database" and develop immersive experience platforms to shift intangible

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cultural heritage from "museum style preservation" to "dynamic dissemination".

1.2 Enhancing the Vitalization and Interaction of Intangible Cultural Heritage

Firstly, utilizing digital methods to restore, design, and recreate intangible cultural heritage. Staff can use image, audio and other restoration methods to intelligently restore damaged and aged intangible cultural heritage images, audio and video, achieving the restoration of intangible cultural heritage. At the same time, with the continuous development of digital technology and artificial intelligence technology, traditional intangible cultural heritage is also constantly being endowed with new connotations and forms. With the passage of time, some intangible cultural heritage activities are gradually fading out of the public eye and disappearing from their sight. The use of digital methods can endow intangible cultural heritage with necessary innovative elements, allowing it to regain vitality and energy, no longer a forgotten pearl, but more accessible to people's daily lives. Taking the Seven Treasures Shadow Puppetry's "The Great Sage Arrives" as an example, it adopts a multi sensory interactive method, allowing the hand to use drumming as a medium to independently develop the plot and promote changes in character behavior, achieving a process from passive acceptance to active creation, giving shadow puppetry a unique "sense of life".

1.3 Promote the development of intangible cultural heritage products

With the continuous development of digital technology, intangible cultural heritage has also gained certain vitality in the current era, and has generated huge social and economic benefits, which has provided a deeper interpretation of the core ideas of intangible cultural heritage. Firstly, in the process of developing intangible cultural heritage products, innovation can be made in the raw materials, tools, and other aspects required for product production, and digital development strategies can be applied to the manufacturing process, making the development of intangible cultural heritage products more scientific and reasonable, and ensuring the sustainable development of the intangible cultural heritage industry. Secondly, by adopting digital acquisition, CAD and other technological means, the efficiency and quality of innovative design, production and processing of intangible cultural heritage products can be improved, thereby enabling them to be industrialized more efficiently and adding new vitality to the national economy. Finally, by utilizing digital technology in the context of the new era, intelligent elements can be integrated into the development process of high-quality intangible cultural heritage products, making the display of intangible cultural heritage products more vivid[1].

2.Research on innovative paths for digital dissemination of intangible cultural heritage

2.1 Integrating advanced digital technologies

2.1.1 Integrating big data technology

Based on big data, accurate collection, effective preservation, and rapid dissemination of intangible cultural heritage resources can not only improve the depth and breadth of dissemination of intangible cultural heritage, but also enhance its influence. Intangible cultural heritage inheritors and government administrative agencies can use big data technology to effectively manage the content of intangible cultural heritage. In addition, professional departments and institutions can be established to classify intangible cultural heritage, improve the management efficiency of intangible cultural heritage, and further improve the database of intangible cultural heritage resources in China.Meanwhile, big data technology can also assist in the dynamic inheritance and innovative development of intangible cultural heritage. By deeply mining and analyzing the historical origins, technical characteristics, and inheritance status of intangible cultural heritage projects, endangered intangible cultural heritage projects can be identified and precise protection measures can be formulated. For example, using artificial intelligence to analyze data such as the age structure and geographical distribution of inheritors, predict the risk of inheritance and discontinuity, and take timely rescue records and digital preservation. Big data can also promote the integration of intangible cultural heritage and modern industries, such as analyzing market demand, guiding the development and promotion of intangible cultural and creative products, and enhancing the economic value of intangible cultural

heritage.

2.1.2 Integrated interactive technology

Currently, many inheritors of intangible cultural heritage are elderly and not yet familiar with some new media and digital content. They cannot effectively utilize new media technology to promote intangible cultural heritage, which has become an obstacle in the process of protecting and inheriting traditional culture. In the context of digitalization, the communication barriers between traditional intangible cultural heritage and its audience are becoming increasingly prominent, posing severe challenges to its digital dissemination. By introducing integrated interactive technology, intangible cultural heritage can be combined with modern science and technology to achieve visual expression of intangible cultural heritage. In this way, the inheritors of the older generation can also demonstrate their operations on the Internet, while the young people can interact and communicate with them effectively through bullet screens, likes and other ways to improve people's understanding and understanding of intangible cultural heritage.In response to the challenges of digital dissemination of intangible cultural heritage, it is recommended to establish a "three in one" collaborative development system. First of all, establish the "Intangible Cultural Heritage Digital Assistance Station", where the local government and Internet enterprises provide customized technical training, such as the development of dialect version of the operation guide, equipped with intelligent voice assistant equipment, to help inheritors cross the digital divide. Secondly, establish a system of "intangible cultural heritage digital brokers" to select composite talents who understand both traditional culture and new media, and provide full process digital services for inheritors. These brokers can help complete the whole chain work from content planning to platform operation, such as setting up a column of "Intangible Cultural Heritage Master Course" in Tiktok, and using AI subtitles and smart tags to improve the content exposure. Finally, we will build an open digital co creation platform to encourage Generation Z to activate the intangible heritage IP through secondary creation. For example, we will transform Paper Cuttings patterns into dynamic stickers, adapt traditional folk art into electronic music, and expand the communication volume through the way that young people like to hear and see. At the same time, establish a reasonable profit sharing mechanism to ensure that inheritors receive the economic benefits brought by digitalization and form a virtuous cycle of sustainable development.

2.2 Improving the efficiency of intangible cultural heritage dissemination

On the basis of deep exploration and accurate supply of cultural content, by complementing digital and traditional media, a comprehensive communication environment can be built for intangible cultural heritage. On this basis, integrating the existing big data of intangible cultural heritage with virtual reality can achieve accurate alignment between communicators and audiences, build immersive communication experiences, and greatly improve the effectiveness of digital dissemination of intangible cultural heritage. In recent years, numerous innovative practices have emerged, providing new avenues for the inheritance of traditional culture. The highly popular game "Black Myth: Wukong" creatively blends traditional culture in this game, greatly enhancing its charm and giving people a sense of immersion, allowing them to better understand traditional ethnic culture while playing; Dunhuang Xiaobing "is an intelligent communication robot called" Dunhuang Xiaobing "jointly developed by Microsoft Asia Research Institute and Dunhuang Research Institute. Through AI technology, it can quickly introduce users to relevant information about Dunhuang; The "Digital Silk Road" project jointly initiated by Tencent and Dunhuang Academy has utilized artificial intelligence to achieve high-precision restoration of some cultural relics in the Dunhuang area, making this ancient cultural relic shine with new light in the context of digital dissemination. Therefore, in order to achieve intelligent exchange of intangible cultural heritage, it is necessary to combine virtual reality, online exhibitions, and social media. Through digital communication methods, traditional intangible cultural heritage products can be presented in a dynamic and interactive way, breaking through the many limitations of traditional communication methods and promoting long-distance exchange and sharing of intangible cultural heritage[2].

2.3 Strengthening Copyright Protection

Given China's unique national conditions and the thriving development of its cultural industry, it is particularly important to provide effective legal protection for intangible cultural heritage copyright during the digital transformation period. The intangible cultural heritage and its intellectual achievements are unique, therefore, on the basis of the current intangible cultural heritage protection law, it is necessary to increase the protection of intangible cultural heritage copyright. In addition, if blockchain, an emerging digital technology, can be deeply integrated with intangible cultural heritage, it will bring unprecedented changes and opportunities in innovation, production, promotion, and business exchanges. It will also help promote the construction of digital dissemination methods for traditional Chinese culture to better meet the development needs of the current era. At the same time, blockchain technology can also permanently preserve and trace the digital copyright of intangible cultural heritage, thereby providing rewards and encouragement for its commercial utilization[3].In addition, the decentralization, immutability, transparency, and traceability of blockchain technology can provide strong technical support for the recognition, authorization, and protection of intangible cultural heritage copyrights. By building a blockchain based intangible cultural heritage digital copyright registration platform, key data such as creation time, author information, and ownership of intangible cultural heritage works can be verified on the chain, effectively solving the problems of cumbersome traditional copyright registration processes and long confirmation cycles. In the authorization process, the introduction of smart contracts can automate the execution of copyright licensing agreements, ensuring that inheritors and creators of intangible cultural heritage receive reasonable benefits in the circulation of their works, while reducing transaction costs. In terms of rights protection, the full traceability feature of blockchain can provide a reliable evidence chain for infringement disputes, greatly improving the efficiency of judicial rulings.

2.4 Develop intangible cultural heritage peripheral products

Under the guidance of current design concepts and online marketing strategies, it is necessary to continuously cultivate high-quality intangible cultural heritage products, fully leverage the role of new media and online platforms, enhance the dissemination and influence of intangible cultural heritage, and maximize the utilization of this precious resource. The digital preservation and dissemination of intangible cultural heritage requires breaking through the limitations of simple recording, preservation, and display, and accelerating the development and promotion of cultural and creative products related to it. For example, utilizing high-tech methods such as 3D printing to innovate and design distinctive intangible cultural heritage elements, or tailoring exclusive products for contemporary users based on their individual needs. This measure can not only effectively enhance the public's understanding, love, and participation in intangible cultural heritage, but also use the economic benefits it generates to give back to the protection and inheritance work, ensuring that intangible cultural heritage in the new era will receive more comprehensive, effective, and sustainable development.

Summary: Protecting and inheriting intangible cultural heritage is an important historical task in the development of the times. Digital communication provides a new space for the development of intangible cultural heritage, making its dissemination more extensive and closely integrated with modern society[4]. Therefore, in the future, it is necessary to increase support and cooperation among various departments, promote the integration of intangible cultural heritage with emerging technologies and creative industries, and establish a multi-level digital communication ecosystem. Only through cooperation among all parties can intangible cultural heritage be better disseminated and efficiently innovated to showcase its unique cultural value and charm.In addition, the innovative dissemination of intangible cultural heritage also needs to be combined with immersive experiences and cross-border integration. By using VR/AR technology to restore traditional skill scenes, users can "travel" to ancient workshops to participate in production; Collaborate with popular gaming and film IPs to develop intangible cultural heritage skins or story replicas. E-commerce platforms can set up a "Renewal of Intangible Cultural Heritage" section, collaborate with designer brands to launch lightweight products such as seasonal themed blind boxes and dialect expression

packs, and simultaneously launch short video creation competitions to encourage users to spread the message again. Establish a digital asset library for intangible cultural heritage, open up creative authorization for some patterns and crafts, and attract young entrepreneurs to develop joint ventures. The government can launch a digital subsidy policy for intangible cultural heritage, providing traffic support to inheritors whose online sales exceed one million, forming a virtuous cycle mechanism of "dissemination transformation feedback", and ultimately building a digital ecosystem where traditional aesthetics and modern consumption coexist[5].

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