Proceedings of the 11th International Conference on Arts and Humanities, Vol. 11, Issue. 1, 2024, pp.1-13
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ISSN 2357 – 2744 online
DOI: https://doi.org/10.17501/23572744.2024.11101

THE APPLICATION OF DIGITAL TECHNOLOGY IN THE PROTECTION AND INHERITANCE OF INTANGIBLE CULTURAL HERITAGE

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Abstract: This study addresses the urgent need to preserve and transmit Intangible Cultural Heritage (ICH) in the face of global cultural homogenization and rapid modernization. The primary aim is to explore how digital technologies can be effectively utilized to safeguard and inherit ICH, ensuring that these cultural practices continue to thrive. The research employs a multi-faceted approach, including case studies, technological assessments, and expert interviews to analyze the application of digital technologies in preserving ICH. Specifically, the study investigates the use of digital tools such as 3D scanning, virtual reality (VR), and multimedia archives in documenting, storing, and disseminating cultural artifacts. By examining both successful and challenging implementations, the study provides a comprehensive overview of how these technologies can be applied in various cultural contexts. The findings highlight the significant advantages of digital technologies in ICH preservation, including their ability to create detailed records, enhance accessibility, and facilitate global dissemination. Specific examples include the use of VR in creating immersive experiences of cultural practices, and 3D scanning for preserving the intricacies of traditional crafts. These technologies not only ensure the preservation of ICH but also contribute to its dynamic transmission across generations and geographies. The study concludes that integrating digital technologies into ICH preservation strategies is not just beneficial but essential for the sustainability of cultural heritage in the digital age. The implications of this research extend to policymakers, cultural institutions, and technologists, emphasizing the need for collaborative efforts in developing and implementing digital preservation strategies that respect and enhance the value of ICH.

Keywords: digital technology, protection, inheritance, Intangible Cultural Heritage(ICH)

Introduction

Intangible cultural heritage (ICH) is an important component of human cultural diversity and has significant implications for social development and people's spiritual life. With the continuous development of human civilization, the modernization and commercialization of countries around the world are increasing, and the natural environment and social space where some ICH exists have been severely damaged and squeezed. How to better inherit and inherit Chinese ICH is a major global issue. It is obviously not suitable for the current trend of development to achieve the purpose of inheritance solely through traditional personal transmission mode. Due to the influence of the local

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living environment, it is a common phenomenon for inheritors to be older and have lower cultural levels. Due to the impact of modernization, the new generation of young people do not pay much attention and passion to the ICH passed down from generation to generation and their identity as inheritors. Due to the successive deaths of the previous generation, the traditional situation of lacking of inherits has also emerged. Due to today's diverse new cultural commodities and media, the development space for traditional culture and art is becoming increasingly limited, especially in terms of arousing the appreciation interest of young people. The regional characteristics of ICH itself, as well as the limitations of traditional display methods, small dissemination scope, outdated dissemination methods, and insufficient publicity efforts, have all affected its prosperity and development. The excessive commercialization and industrialization of development have to some extent damaged the comprehensiveness and practicality of cultural ecology, affecting the inheritance and protection of traditional ICH. While the urbanization process is accelerating, it has also changed the natural and social environment of ICH. Some ICH has been lost or on the brink of loss, or is facing a serious survival crisis. This essay tends to explore the application of digital technology in the protection and inheritance of ICH.

Challenges Faced by the Current Inheritance and Protection of ICH

Destruction and Reduction of the Inheritance Subject

Under the influence of various factors such as society, culture, and nature, the carriers of ICH in some places have been damaged to a certain extent[1]. For example, earthquake, rainstorm, landslide, typhoon and other irresistible natural factors will seriously damage the storage media of ICH, such as paper documents, CDs, museums. With the changes of the times, due to various reasons such as economy and culture, the problem of the gap between inheritors is becoming increasingly serious. With the acceleration of modernization, many traditional handicrafts and technologies are gradually being replaced by machine production and modern technology, leading to the loss of traditional skills. The inheritors of the older generation are gradually passing away, while the younger generation lacks interest and enthusiasm for ICH, resulting in a decrease in the number of inheritors and difficulty in effectively inheriting technology. Some local governments have insufficient understanding of the protection of ICH or lack corresponding policy and financial support due to financial difficulties, resulting in insufficient protection efforts. It is difficult for inheritors to maintain the operation of intangible heritage through performance. The cultural consumption concept in modern society has changed, and young people are more inclined to pursue emerging cultural products and entertainment methods. The demand for traditional culture has decreased, leading to limited performance markets for inheritors. While inheriting ICH, inheritors also need to face economic and life pressures. Due to limited market demand for traditional skills, inheritors often find it difficult to earn enough income through performances to maintain their operations. The inheritance methods of some ICH are relatively unique, such as oral transmission, family inheritance, etc. These methods limit the number and scope of inheritors, and also increase the difficulty and cost of inheritance.

For example, in some rural areas, many inheritors are already old and have very few members, and the training funds for inheritors are also relatively small, making it difficult for many training activities to be carried out normally. The inheritors are increasingly lacking in participation and subjectivity in protecting ICH. The number of inheritors of traditional customs, literature, skills, and

music is decreasing, making the ICH that is already poorly known to many young people in society even more insignificant [2]. In today's unified development of the global village, one-way development is the way world culture evolves, and economic influence is pervasive. Nowadays, young people in rural areas have become accustomed to urban lifestyles and behavioral habits. Their identity awareness is increasingly fading under the impact of new foreign ideas, and their willingness to accept ICH is gradually decreasing.

High cost of using inheritance carriers

In modern society, there are many types of inheritance carriers. According to different media tools, they can be divided into radio and television, the Internet, mobile platforms, newspapers, etc. The more people fully utilize the role of inheritance carriers, the wider the paths used in cultural dissemination, and the easier it is for ICH to spread and spread in society [3]. For a long time, in the case of the use of multiple carriers such as Internet tools, the protection of ICH has made some achievements, but it still faces the problem of high cost of data collection, difficult to share and reuse, and intellectual property rights infringement. It is important to pay attention to the role of the inheritance media environment, which is an intangible educational force in society. However, in reality, the environment in this regard is not optimistic. The promotion mode of ICH is single, with most of it being offline activities led by local governments and initiated by civil organizations, such as some festival performances, and there is relatively little online promotion. Young people's understanding of ICH mainly relies on these programs.

Insufficient investment in protection funds

In today's era of booming economic development, the country's appreciation for ICH has reached an unprecedented level. Although there has been an increase in funds invested in the protection of ICH, compared to a large number of ICH projects, these investments still seem inadequate. The economic foundation in rural areas is generally weak, and there is a significant gap compared to cities, so the government's allocation of funds for ICH protection is limited. At the same time, the enthusiasm of social capital for the development of ICH industry has been low for a long time, and there is a lack of diversified participants, leading to bottlenecks in the development and utilization of ICH [4]. As a special heritage centered around human beings, the research and protection of ICH is particularly important. However, universities and private researchers and protectors of ICH often face difficulties in conducting investigations due to funding shortages, which also makes the technical strength of the ICH protection team relatively weak. Especially in rural areas, there is a shortage of professional and technical personnel for the protection of ICH, outdated equipment, relatively narrow research perspectives, and a lack of innovation in methods and measures. This undoubtedly poses significant challenges to the protection and inheritance of ICH.

Literature Review

The new round of technological revolution, represented by digital technology, is profoundly changing people's production and life. Digitization refers to the use of a certain digital device to digitize various forms of information such as images, text, and sound; The technology of converting images into binary digits that can be recognized by computers, and then performing operations, processing, storage, transmission, propagation, and recovery [5]. In recent years, digital cameras, databases,

computer animation, virtual reality, and other technologies have brought new opportunities for the protection and inheritance of traditional ICH [6].

The digital protection and inheritance approach is to use digital means to transform information related to ICH, regulate its storage carriers, protect and restore it, and achieve information sharing [7]. Its working principle is to collect relevant information through digital devices such as networks and computers, using camera and image processing methods, and using virtual reality to reinterpret various information. Digital acquisition and storage are important ways to achieve comprehensive protection of ICH. Modern high-tech methods, such as digital restoration, have revitalized endangered ICH. Digital display and communication are effective ways to solve this contradiction. Digital information technology has brought unprecedented opportunities and challenges to the protection and inheritance of ICH. With the help of digital technology, ICH can be better preserved and inherited, leaving valuable cultural heritage for future generations [8].

The development of technology has proposed new ideas and methods for the protection of cultural heritage. New technologies such as multimedia, broadband networks, and databases to develop new practical auxiliary systems or means based on computer and network environments, overcome various difficulties, and serve the sustainable development of cultural heritage [9]. By providing digital preservation, organization, storage, and retrieval of cultural heritage related text, images, sound, video, and three-dimensional data information, and further establishing digital cultural heritage museums and exhibition halls, the ICH could be protected and developed more effectively [10].

In the digital age, the combination of museums and digital technology allows people to enjoy the exquisite collections of museums around the world and enjoy 3D immersive exhibitions at home without leaving their homes. Digital museums undoubtedly expand the space and means of museum display, and allow exhibitions that have already ended to survive permanently. Currently, developed countries around the world are transforming cultural heritage into digital cultural forms on a large scale. UNESCO launched the Memory of the World project in 1992, aimed at rescuing and preserving aging, damaged, and disappearing literature records worldwide through international cooperation and the use of best technological means, thereby making human memory more complete. The project places special emphasis on the digitization of cultural heritage, transforming various forms of documentary records into digital formats through digital technology, facilitating long-term preservation and global dissemination. Viewers from all over the world can appreciate these ICH through channels such as the internet, deepening their understanding and recognition of them [11].

Research Objective

To investigate the application of digital technologies in the preservation and transmission of Intangible Cultural Heritage (ICH), addressing the challenges posed by modernization and cultural homogenization. The study aims to evaluate the effectiveness of various digital tools, such as 3D scanning, virtual reality, and multimedia archives in documenting, safeguarding, and disseminating ICH, while identifying best practices and barriers to their implementation across diverse cultural contexts.

Research Methodology

The research methodology in this paper employs a combination of case studies, technological assessments, and expert interviews, which aligns well with the study's aim to explore the application of digital technologies in ICH preservation.

Case studies

Case studies enable a detailed examination of specific instances where digital technologies have been used to preserve ICH. This approach provides contextual insights, illustrating both successful outcomes and challenges, which are crucial for identifying replicable strategies.

Technological assessments

Evaluating the technical capabilities and limitations of tools such as 3D scanning, VR, and digital databases ensures that the study captures the practical implications of applying these technologies, such as their accuracy, cost, and accessibility.

Expert interviews

The inclusion of expert interviews strengthens the qualitative understanding of the subject by incorporating insights from professionals in the fields of digital technology and cultural heritage. This method facilitates a nuanced discussion on challenges, opportunities, and innovative applications.

Application of Digital Technology

Digital acquisition and storage technology

Before the application of digital technology, most ICH was achieved through traditional media and channels such as books and movies, which had shortcomings such as large land area and strict preservation conditions. In the context of digitization, the way ICH information is collected and preserved is changing, making it possible to protect it as a whole. Digital technology contributes to the digitization of recording, recording, and scanning ICH [12]. Digital technology provides a distance education platform, allowing more people to have the opportunity to learn and understand ICH. Through online courses, virtual classrooms, and other tools, more people can be exposed to the learning and practice of traditional skills. Digital education breaks geographical limitations, lowers learning barriers, and provides more possibilities for the inheritance and development of ICH. This method has the advantages of large amount of information, convenient storage, and strong replicability, which can effectively avoid the risk of damage and loss in traditional storage methods. Meanwhile, digital storage also facilitates the classification, organization, and retrieval of ICH data, providing convenience for subsequent research and utilization.

Database storage technology

The construction of ICH database is the most basic and widely used form in the digital protection of ICH. Through the digital collection and storage of ICH information, we can effectively preserve and

pass on this precious cultural heritage. Through the establishment of a database, the relevant information of ICH, such as text, pictures, audio, video, etc., can be effectively stored digitally, thereby avoiding cultural loss caused by the passage of time, physical damage or the absence of inheritors. The establishment of the database enables the resources of ICH to be shared globally, which is conducive to cultural exchanges and cooperation between different countries and regions. Researchers can easily obtain the required information from the database, conduct in-depth research and discussion, and promote the academic research and innovative development of ICH. The establishment of the database also provides strong support for cultural exchanges and cooperation on a global scale. The collected content is processed and processed as raw data, and then saved according to categories. The previously collected digital information is generated into effective links in the database, so that search, browse, download, and share services can be carried out on computer systems or display platforms [13].

In recent years, governments around the world have increased investment in the construction of databases and websites related to ICH. Digital records and archive management is one of the increasingly important fields in the digital age, which involves transforming traditional paper documents and records into digital forms to more effectively preserve, manage, and access information. Digital recording enables information to be stored in electronic form, improving the security and feasibility of long-term preservation of information. Digital records improve the efficiency of information retrieval through indexing and search functions, and also facilitate the sharing and dissemination of information [14]. Digital recording reduces the demand for physical materials such as paper, which is beneficial for space conservation and to some extent reduces environmental burden. In the process of digitizing archives, it is necessary to consider the technical standards adopted to ensure the long-term accessibility and compatibility of digital archives. Large scale digitization of archives may involve high costs, including equipment, manpower, and technical support, which is a challenge that needs to be overcome. In the process of digital recording, it is necessary to handle legal and ethical issues related to intellectual property and privacy to ensure legality and compliance.

Digital camera technology

High precision digital camera technology is a widely used means of collection and recording in recent times, playing a particularly crucial role in protecting ICH. Digital photography needs to clarify the specific goal of ICH, obtain corresponding optical images, then convert optical signals through sensors into digital signals, and finally generate digital images [15]. Representative digital camera devices include digital cameras, camcorders, etc., which store information in digital formats. It is more convenient for staff to collect high-precision audio and video, making it more convenient for post-production editing and application, and reducing workload. Compared with traditional camera methods, the application of digital camera technology to collect ICH information has a relatively higher accuracy, lower cost, and can also be stored for a longer period of time.

3D scanning technology

The scanner uses optoelectronic and digital processing technology to convert information such as drawings, photos, or samples into digital signals in the form of scanning [16]. One and two

dimensions together form three dimensions. Compared to two dimensions, three dimensions can create a more pronounced sense of three dimensionality. The 3D scanner integrates optoelectronic technology, computer technology, and other technologies, and can immediately and instantly obtain the patterns, colors, shapes, and so on of objects. Next, use a computer system to reconstruct calculations and construct corresponding 3D digital stereo models. The 3D scanning technology has higher scanning accuracy, faster measurement speed, and can quickly and accurately obtain three-dimensional data of cultural relics. Moreover, cultural relics scanning does not require contact with cultural relics and will not cause damage to them.

Digital restoration and reproduction technology

In the process of protecting and transmitting ICH, its original living environment plays a crucial role. However, with the rapid economic development and urbanization, the living environment of ICH is undergoing tremendous changes, leading to the scarcity of raw materials and the gradual loss of traditional craftsmanship for some precious ICH resources, which is indeed regrettable. Fortunately, the emergence of digital restoration and reproduction technology has made it possible for the continuation of ICH that is about to disappear or has already disappeared. This technology enables the protection of ICH to be free from the constraints of time and space. Through digital technology, people can accurately restore and reproduce those ICH that have disappeared or are on the verge of disappearance, presenting them in a new look to the world. This digitalized presentation not only allows people to intuitively appreciate the unique charm of ICH, but also greatly enhances public awareness and concern for its protection. Through personal experience and in-depth understanding, people will cherish these precious cultural heritages even more and jointly contribute to their transmission and protection [17].

For some endangered ICH, digital technology provides the possibility of restoration and protection. For example, using digital technology to restore old data to its original appearance; Alternatively, virtual restoration of disappearing cultural heritage can be achieved through digital simulation technology. Digital restoration not only improves restoration efficiency, but also preserves the original appearance and characteristics of cultural heritage.

Virtual reality technology and augmented reality technology

Virtual reality technology, also known as VR technology, is generated by computers and has strong interactivity with humans. The user only needs to wear a helmet to feel the joy of immersing themselves in virtual reality. At the same time, participants can experience visual, auditory, and even olfactory experiences, as if in a real situation. Augmented reality technology, also known as AR technology, is based on VR technology, which reflects the characteristics of human-computer interaction. It combines computer technology with virtual information and auxiliary devices that do not exist in the world, overlaps with actual environments and scenes, and achieves the addition of positioning virtual objects in three-dimensional space, thereby obtaining more practical effects, allowing users to experience beyond reality, demonstrating the basic concept of putting people first. The combination of virtual reality and AR enables people to appreciate and understand ICH across time and space; It also allowed ICH to leave its place of origin and break through the limitations on its geographical scope [18].

VR technology and interactive technology are important means for the protection and inheritance of ICH. This new technological means can bring more profound and vivid cultural experiences, thereby deepening people's understanding and participation in culture. Rebuilding Historical Sites with VR Technology allows people to experience historical culture firsthand. Through VR technology, cultural relics that have disappeared or partially survived can be reproduced, such as ruins, ancient city sites, etc., in order for people to better understand and protect these heritage sites. By utilizing interactive technology, users are allowed to participate in traditional production techniques or performance forms of ICH, such as painting, sculpture, dance, etc., to enhance their personal experience [19]. Develop interactive applications or virtual platforms that allow users to interact in real-time with traditional artists and inheritors, learn skills, ask questions, and communicate. Utilizing virtual reality to create educational resources, providing students with a more vivid experience of learning ICH, and promoting understanding and respect for cultural traditions. Using VR technology to establish a virtual exhibition space, helping audiences from all over the world to appreciate and understand cultural heritage. Using virtual reality and interactive experiences as means to promote ICH, attracting more attention and participation from the younger generation for inheritance.

3D printing technology

3D printing technology is a type of rapid prototyping technology that first appeared in the late 20th century. Its application requires the construction of digital models, the use of photopolymerization and paper stacking technology, and the use of 3D printing equipment to bond and overlay materials such as metals, ceramic. The materials used in regular printers are ink and paper, while the materials used inside 3D printers are metals, ceramics, plastics, and other raw materials that can be glued together. The final output is 3D objects, such as toys, models, etc. 3D printing technology was initially used in the fields of mold manufacturing and industrial design. With the development of digital information technology, it has now been applied in fields such as architecture, engineering, automotive, and education [20]. 3D printing technology can help recreate complete cultural heritage.

Digital Display and Communication Technology

Before the digital age, in the traditional ICH, only inheritors played an important role that could not be replaced. However, some inheritors are generally older, and they cannot devote much energy to the dissemination of ICH, which will have some impact on the display and dissemination of valuable ICH. In addition, preservation and display are also a pair of conflicting relations, too much display is easy to cause restoration failure; On the basis of its protection, refusing to exhibit, it can not reflect its value well. Digital display and communication is an effective way to achieve this goal. Digital media has the characteristics of rapid dissemination and wide coverage, breaking the limitations of time and space, and enabling the wider dissemination and promotion of ICH. Through digital technology, rich display forms can be created, such as virtual exhibitions, digital museums, etc., allowing audiences to have a more intuitive understanding and experience of the charm of ICH [21].

Using the Internet as a medium, information and cultural materials are presented around the world, breaking the limitations of time and space, and allowing more people to join the exchange of information and culture. Digital display can provide interactive and participatory ways, allowing viewers to interact with the displayed content through various digital tools and platforms, providing a

richer participation experience [22]. Digital display can utilize multimedia technologies such as images, audio, video, etc. to present information and content in a more vivid and intuitive way. Digital display provides vast development space for artists and creative talents, who can use digital media to create and showcase creative works. Through interactive platforms, viewers can independently explore and choose content of interest, and display and disseminate information in personalized ways.

The emergence of digital platforms such as the Internet and social networks has created good conditions for the inheritance and sharing of China's ICH. Through digital platforms, cultural heritage can be exchanged and shared worldwide, breaking down geographical and cultural limitations [23]. This helps promotes communication and integration between different cultures. Digital display and dissemination can maintain real-time updates of content, allowing viewers to access the latest information in a timely manner and interact with the content. Digital display and communication enable the audience to access and share content via the Internet anytime, anywhere, conveniently and quickly.

Digital Museum

Digital museums have advantages those traditional museums do not have. It provides the public with a new way to unlock museums. The digital museum greatly increases the fun of visiting by interactive scenes and mobilizing various sensory sensations such as visual, auditory, and tactile senses of the audience, achieving an immersive experience and effectively promoting the dissemination of cultural information [24]. For example, it can enlarge, shrink, and rotate cultural and artistic physical images through touch screens, achieving a dynamic interface with strong interactivity and being loved by the audience. It can allow tourists to have a deeper understanding of ICH. In addition, cultural relics in physical museums are exposed to exhibition halls for years and may be damaged due to accidents, while digital museums effectively avoid this phenomenon and achieve effective protection of ICH.

Artificial Intelligence Technology

Artificial intelligence technology has now entered people's lives, such as voice and text recognition application software that can be purchased, automatic customer service robots that have appeared in public places such as shopping malls, hotels, and airports, and human-computer interaction systems that can use voice commands to enable cars to operate equipment automatically, and even achieve autonomous driving functions. Artificial intelligence can play an important role in the display and promotion of ICH, the interaction between the internet and visitors, and providing consultation for visitors [25]. With the continuous expansion of its application fields, there will be more ways to use it for the protection and inheritance of ICH.

Digital Education and Community Development

Digital technology provides a distance education platform, allowing more people to have the opportunity to learn and understand ICH. Through online courses, virtual classrooms, and other tools, more people can be exposed to the learning and practice of traditional skills. Digital education breaks geographical limitations, lowers learning barriers, and provides more possibilities for the inheritance and development of ICH.

Digital technology has promoted the construction and development of communities related to ICH. Through social media, online platforms and other technological means, a platform for communication and sharing has been provided for inheritors, enthusiasts, researchers, etc., promoting the dissemination and exchange of ICH. The construction of digital communities has strengthened the community connection of ICH, promoting the inheritance and innovation of ICH.

Advantages in the Protection and Inheritance of ICH Based on Digital Technology

Digitalization has injected new momentum into ICH, enabling it to inherit and innovate with greater vitality. Digital information technology not only has powerful storage capabilities, but also has made significant progress in display and dissemination [26].

Significant changes in storage modes

The vast majority of information on ICH is collected through photography, video recording, and written recording. Early photos and videotapes were limited by storage media, and the equipment technology was relatively poor, making it impossible to store them continuously. The integrity of the storage was also poor, and a large number of valuable photos and video files were worn out due to prolonged time. The innovation of digital technology has made this drawback a thing of the past. People can use digital devices to turn photos into digital information, then put these information into the computer port, connect to the Internet, and then upload these data information to the online disk, which can safely and conveniently store ICH information. Digital information collection methods can achieve the recording and preservation of ICH through various methods [27].

More convenient and fast dissemination methods

While ensuring the protection of cultural heritage, attention should also be paid to the inheritance and promotion of cultural heritage. Using digital means to build databases for better preservation of ICH. A digital museum built on a database can utilize digital media to spread more intangible culture, which is more convenient than visiting and learning locally [28]. In the context of the great development of digitalization, the development speed of new communication media such as digital media is astonishing, and its timeliness and interactivity have rapidly improved the efficiency of disseminating ICH. Independent designers and workers from various sectors of society, whether for personal ideas or commercial purposes, can quickly use digital media to understand the relevant intangible cultural and artistic elements, and carry out artistic creations to enhance the dissemination effect of ICH.

Enhancing the artistic beauty of cultural heritage

In terms of artistic creation and production technology, digital technology has opened up various forms of expression for ICH [29]. Designers can use digital technology and graphic software to condense cultural elements and create artistic works. The combination of diverse functions and operations is of great significance in stimulating creative thinking and stimulating inspiration. Moreover, in the process of continuous innovation, digital and image application technology often presents unexpected visual effects in the processing and creation of images through relatively free

practical forms and the application of new functions [30]. The innovative design with digital technology can meet the needs of both the design subject and the recipient to a certain extent, allowing artists to have a glimmer of inspiration and create traditional artistic works. While liberating the mind, the core values of ICH have been maintained, so that more people can pay attention to and accept it, and better integrate with it.

Conclusion

The effective protection of ICH is of great practical significance to the promotion of cultural values. Digital technology is one of the most developed methods in the world today, which carries the preservation and inheritance of traditional culture. Digital technology can provide impetus for its better inheritance and development. In today's digital age, digital technology, as an open collaborative network technology with a trustworthy mechanism, is of great significance to promote the development of ICH protection. Applying digital technology to the practice of ICH is a topic worth exploring. By using digital technology, the inheritance vitality of ICH will be further developed, and the rich philosophical ideas, humanistic spirit, and moral concepts contained in ICH can be further integrated into the modern life of the masses with more authentic and rich characteristics. The use of digital means can bring new vitality to traditional culture and open up new avenues for its inheritance. Digital technology enables ICH to no longer exist solely in past memories, but to be extended in digital form, allowing more people to participate and jointly protect and inherit it. At the same time, digital technology can also preserve and utilize ICH more conveniently and sustainably, so that it can be spread for a long time. In short, the development of digitalization has played an important role in promoting the protection and inheritance of ICH. It not only greatly enriches the new carriers of traditional cultural inheritance and protection, but also through interactive and three-dimensional protection, digitalization of traditional cultural resources, and promotion of cultural inheritance and innovation from multiple perspectives, makes ICH live in contemporary society with a more active and sustainable attitude. Of course, digital technology is not flawless at present, and there are still many areas that need further improvement. The standards and norms for application still need to be further strengthened. In the future, with the development of technology, more technological means can be used for the protection and inheritance of ICH, thereby enabling more effective maintenance and development of human civilization.

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