

Digital Technology Energizes Inter-Museum Cultural Exchange Exhibitions

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Abstract. As an important way to promote global cultural diversity and international understanding, inter-museum cultural exchange exhibitions are of immeasurable value in revitalizing museum resources, deepening public education and promoting international cooperation. Through a combination of literature analysis and case studies, this paper discusses in detail the effects of digital technology in inter-museum cultural exchange exhibitions on deepening public education, leading the dialogue on social issues, alleviating the loss of cultural relics, inheriting national history and culture, realizing data sharing, and promoting cultural exchanges and cultural heritage protection. It aims to give better play to the interpretation and service functions of museum exhibitions, strengthen the long-term preservation and rational utilization of human cultural heritage, and promote the exchanges and sustainable development of civilizations in different countries and regions.

Keywords: digital technology, inter-museum cultural exchange exhibition, historical and cultural inheritance, international cooperation.

1. Introduction

The State Administration of Cultural Heritage of China pointed out in *the Opinions on Strengthening Museum Exhibition Work* issued in 2012, we should promote inter-museum exchanges and cooperation, support museums at all levels to play a leading and radiating role, integrate regional resources, and plan excellent exhibition projects on tour. As an important way to promote cultural diversity and enhance international understanding and cooperation, inter-museum cultural exchange has been increasingly valued by the global museum community. It not only involves the sharing of knowledge, information and resources among museums, but also covers multiple dimensions such as the mutual loan of physical exhibitions, joint curation, academic research cooperation and joint development of educational projects. Inter-museum cultural exchange is an important way to improve the work level of museums, art galleries and other cultural institutions, and will play a positive role in giving full play to the main role of cultural institutions in public cultural services, and strive to promote the construction of public cultural service system and the innovation and development of cultural institutions. Inter-museum cultural exchange exhibition, as one of the core ways of inter-museum cultural exchange, plays a particularly key role. It not only revitalizes the museum's collection resources, but also promotes knowledge dissemination and academic dialogue under different cultural backgrounds, and is a powerful engine to promote global cultural mutual learning and integration.

With the rapid development and update of digital technology, the digital transformation of the museum field is advancing at an unprecedented speed. Under this scenario, exploring the topic of digital technology enabling inter-museum cultural exchange exhibitions complies with the dual trends of globalization and informatization, which can not only reveal how digital technology reshapes museum curatorial practice and audience interaction mode, but also explore how to more effectively promote inter-museum cooperation, resource complementarity and cultural inheritance under the digital environment. It provides new ideas and strategies for the sustainable development of museums.

Based on the intersection of inter-museum cultural exchange exhibitions and digital technology, this paper comprehensively reviews the existing literature and deeply discusses the innovative role of digital technology in inter-museum cultural exchange exhibitions. By analyzing the impact of digital technology on the three core dimensions of education, cultural continuity and international exchange,

this paper concludes that digital technology not only greatly improves the interactivity and educational effectiveness of museum curation, promotes the protection and inheritance of cultural heritage, but also significantly enhances cross-cultural communication and understanding, and builds a bridge for the mutual learning and integration of global cultures. Digital technology enabling inter-museum cultural exchange exhibitions is an inevitable choice for the sustainable development of museums under the dual trends of globalization and informatization, and provides new ideas and strategies for promoting the construction of public cultural service systems and the innovative development of cultural institutions.

2. Literature Review

At present, studies on inter-museum cultural exchange exhibitions mainly focus on specific cases, such as *Wanjiao No. 1 Tour Exhibition of Sunken Cultural Relics* in Fuzhou Museum [1] and *Calligraphy and Painting Exchange Exhibition* in Dongguan Museum [2], etc., to explore their significance, status quo problems and strengthening paths. As the necessary way for the development of museums in the new era, it has become the consensus of the museum community to strengthen inter-museum communication. Mei LIN believes that exhibition exchanges can help activate museum resources, cultivate talents, drive education, and improve the level of scientific research of museums. Exhibition exchanges not only revitalize the cultural connotation of the city, but also improve the overall work level of museums, enrich the image of museums, and promote academic exchanges and social exchanges [1]. Jing SHEN pointed out that exhibition exchanges contribute to museum brand building and international image building, and also reflect the soft power of urban culture. In addition, the exchange exhibition can promote the understanding and respect of different regional cultures, and realize the complementarity and sharing of cultural resources [3]. Nowadays, the challenges facing inter-museum cultural exchange exhibitions mainly include the single mode of cooperation, non-standard management system, lack of communication and coordination mechanism, cultural relic safety and transportation risks, financial constraints and shortage of professional talents [4], which not only lead to asymmetric information and unclear responsibilities, but also affect cooperation efficiency and trust. The lack of supervision in the packaging, transportation and insurance of cultural relics is a direct threat to the safety of cultural relics and the smooth progress of exhibitions. Coupled with the shortage of professional talents and high operating costs [2], these factors jointly limit the innovation of exhibitions, the play of educational functions and the effective sharing of resources among museums, thus hindering the depth and breadth of cultural exchanges and affecting the overall development of museums. To deal with the above challenges, scholars have proposed a variety of strategies. Jianfeng CHEN suggested building an inter-museum information exchange platform to promote resource sharing [5]. Jinsong WANG advocated that the design should be people-oriented and highlight the educational and entertainment functions of the exhibition [6]. Jing SHEN emphasized the strengthening of museum research and the construction of international talents [3]. Ling YANG believes that museums should seize the opportunity, strengthen research efforts, establish national brand awareness, and enhance international competitiveness. At the same time, raising funds through multiple channels, organizing social and educational activities and developing cultural and creative products are also regarded as effective ways to improve the quality and efficiency of exchange exhibitions [7].

In the current academic discussion, the potential and impact of digital technologies to empower museum exhibitions has received much attention. Both Huijuan HE and Zhipeng GAO emphasized the people-oriented design concept, pointing out that through new media technology and the construction of online virtual experience museum, while ensuring the safety of cultural relics, it can provide more rich, real and interactive visiting experience for the audience [8] [9]. This content-centered, audience experience-oriented approach makes full use of digital technology to optimize the publicity effect and expand the exhibition's thinking to mobilize the five senses of the audience, thus deepening the understanding and feeling of the exhibits. The role of digital technology is reflected in

the richness of cultural relics and the time-space breakthrough of exhibitions. On the one hand, it can improve the information of cultural relics and show the connotation of cultural relics more comprehensively through digital means. On the other hand, it breaks the physical limitations of traditional exhibitions, allowing more people who cannot be physically present to enjoy a high-quality visiting experience [9]. In addition, for visitors, digital technology enhances the interactive and immersive nature of the exhibition, meeting their needs for visual and multi-sensory experiences. In terms of application status, three-dimensional digital technology, virtual reality technology, augmented reality technology and interactive display system of modern digital equipment have become important tools for museums to improve the quality of exhibitions [8]. Qin ZHANG further pointed out that through the Internet of Things and 5G Information Technology, museums can better understand the needs of the audience, use sensors and tour mini programs to collect data, rely on virtual reality technology to enrich the exhibition experience, and enhance the interaction with the audience through game-based elements [9]. However, the use of digital technology in museum exhibitions is not without challenges. Manman LIU raised the risk of damage to cultural relics in the digitization process, especially when it is necessary to touch cultural relics during three-dimensional scanning. At the same time, excessive pursuit of the efficiency of technology application and audience experience may lead to neglect of the educational nature of the exhibition and affect the realization of social education goals. In addition, excessive attention to the surface of the interactive and immersive experience, it may be difficult to achieve the deep cultural inheritance and history education purposes [10]. In response to the above problems, specific case studies provide references for practical applications. Examples such as the Zhangshu City Museum [11], the *Riverside Scene at Qingming Festival 3.0* high-tech interactive art exhibition [12], and the Datong Mass Grave Education Hall in Huainan City [13] show how digital technology can be effectively used to improve the quality of exhibitions, while also pointing out the complexity of balancing technology with cultural values and educational purposes in practice. These studies not only highlight the great potential of digital technology in museum exhibitions, but also remind the industry that while pursuing technological innovation, it must carefully manage the relationship between technology and cultural heritage conservation and educational functions, so as to achieve sustainable and meaningful development.

Although the academic circles have conducted in-depth exploration on the inter-museum cultural exchange exhibition and the application of digital technology in museum exhibition, there is relatively little research on the combination of both, especially focusing on the digital technology energizing inter-museum cultural exchange exhibitions. The current literature often analyzes the practice of inter-museum communication and the impact of digital technology alone, but fails to fully examine the unique role and challenge of digital technology in inter-museum communication. At present, the application of digital technology in inter-museum communication is still in its infancy, many museums have not yet made full use of digital platforms for efficient cooperation and resource sharing. This paper hopes to respond to this deficiency by analyzing the innovative role of digital technology in inter-museum cultural exchange exhibitions, and exploring how to use digital technology to improve communication efficiency, expand the scope of audience, deepen inter-museum cooperation, broaden the boundary of cultural exchange, and promote the sustainable development and global sharing of culture in the context of inter-museum cultural exchange.

3. The innovative role of digital technology in inter-museum cultural exchange exhibitions.

The inter-museum cultural exchange exhibition is an important carrier of museum cross-regional communication and cultural communication. Constructive, high-quality and influential exhibitions are important concepts and long-term ideas for museum curatorial planning [14]. The rise of digital technology is gradually reshaping every corner of the global cultural landscape, especially in the field of museums and cultural heritage. It not only brings unprecedented opportunities for museums to play

a more active role in education, cultural inheritance and international cooperation, but also offers innovative solutions to the challenges that have long plagued the preservation of cultural heritage.

3.1. Deepen public education and lead dialogue on social issues

3.1.1. Further exert the educational function of museums

At present, the rapid development of digital technology has opened up new ways of collaboration and innovation in the museum industry, especially in the exhibition of cultural exchange between the museum shows extraordinary potential. Museums have actively embraced digital transformation, not only enhancing horizontal connections, but also achieving efficient integration and cross-regional display of cultural relics resources through advanced information technology means, such as data sharing platforms, virtual reality (VR), augmented reality (AR), three-dimensional modeling and multimedia interactive systems. This integrated digital exhibition mode not only greatly enriches the content and form of the exhibition, but also significantly enhances the innovation of the curation and the interactivity of the exhibition, thus strengthening the mission and effectiveness of the museum as a social educational institution. The Deji Art Museum in Nanjing is based on *An Era in Jinling* by Qing Dynasty painter Ning FENG to create a digital image, vividly restore the city gate in ancient Nanjing, commercial street, Qinhuai River, academy and other prosperous scenes of Nanjing in the Song Dynasty. By wearing a smart bracelet, audiences become the characters in the picture, and then experience an ordinary day of ancient people, and obtain all historical and humanistic information contained in the original painting. In June 2024, *the Sanxingdui · Jinsha Theme Digital Exhibition and Promotion Activity* was successfully held in Cairo, Egypt. In the exhibition, the naked eye 3D video *Ancient Shu Civilization in the Bronze Age: Sanxingdui · Jinsha, Sichuan* used 3D visual effects to create paintings, international particle effects, bone binding and other digital means, audiences can appreciate the bronze masks, bronze sacred trees, as well as the exquisite gold, jade and other cultural relics replicas excavated in the Jinsha site, and feel the unique charm of ancient Shu civilization. At the same time, the exhibition also uses VR, AR, hologram and other digital technologies to create an immersive space, deepening the audiences' in-depth understanding of the history and cultural connotation of ancient Shu civilization. This immersive experience allows the audience to enjoy art while also gaining a deep understanding of history and culture, reflecting the perfect integration of science and technology and culture. These innovative exhibition forms not only enrich the cultural experience of the audience, but also enhance the public's identification of their own cultural identity and national pride. The application of digital technology has made cultural education lively and interesting, provided the public with lifelong learning opportunities, and revitalized traditional culture in modern society, continuously surging with fresh vitality.

Inter-museum exchange is to make ancient collections come alive, give play to its use value and educational role, and then enhance the effectiveness of free museum opening, and constantly enrich the spiritual and cultural life of the people [15]. The rapid development of digital technology is reshaping the way we perceive the world, playing a crucial role in the inter-museum cultural exchange exhibitions in particular. By seamlessly integrating traditional cultural relics with modern technology, digital technology not only brings artworks that have been silent for thousands of years to life, but also greatly stimulates the public's interest and sense of participation. The audience is no longer just a passive spectator, but can actively explore and interpret the deep meaning of cultural heritage through immersive experiences such as virtual reality, augmented reality and interactive installations. This new interactive way makes history and culture present in an unprecedented vivid appearance, prompting the audience to have a strong interest in the history and cultural connotation of civilization, and then promote the popularization of knowledge and the improvement of cultural literacy.

3.1.2. Explore dialogue on social issues in depth: take an example of exchanges and cooperation between cultural institutions

In June 2024, China Artists Association, China Academy of Art and Zhejiang Provincial Federation of Arts co-sponsored the first China Digital Art Exhibition. Through the re-encoding and

digital innovation of the historical landscape, the exhibition showed the deep integration of culture and technology, and inspired new space-time imagination. Tongzhou YU, a teacher at the School of Innovative Design, China Academy of Art, took the Shenzhen skyline city screen as an imagination to explore human reflection on the state of digital algorithms in the development process of artificial intelligence, Internet of Things and smart cities in his digital video work *Will the Data Know the Screen: Data Light*. In the work *Flying Books*, the artist Yaoxian GUO selected the most basic linguistic symbols in Morse code to build a new organizational framework. Through the participation of the audience, he enriched the variable factors of the algorithm system and constructed new words and sentences. At the same time, he constantly eliminated the semantic framework existing in the past, and explored the evolution process of the generation, digestion and reconstruction of concepts with the audience. With the widespread penetration of digital art in social life, it gradually broke the boundaries of traditional art and pushed artistic creation to a more open and inclusive field. By deeply exploring the vast world of social networks, AI communities, and AIGC, researchers gain a more direct and profound contemporary social experience, and then create works that reflect the pulse of the times and touch the heart of the human heart, contributing to profound insights into human emotions, social changes, and cultural inheritance.

The application of digital technology in cultural institution exchange exhibitions has become a force that cannot be ignored. It not only opens up a new path for the education and cultural communication function of museums and cultural institutions, but also plays an increasingly important role in the dialogue on social issues. The encounter between digital technology and history and culture can not only awaken the sleeping history, but also stimulate contemporary society to think deeply about issues such as science and technology ethics, ecological protection, and social evolution. The intervention of digital technology enables researchers to examine social changes from a new height and explore multi-dimensional perspectives of human development, especially in how to use digital means to excavate and create cultural values, showing unlimited possibilities.

3.2. Carry forward the gene of human civilization

3.2.1. Alleviate the loss of cultural relics

According to the statistics of the Chinese Society of Cultural Relics, since the Opium War in 1840, a large number of precious Chinese cultural relics have been lost overseas due to war, unfair trade and other reasons. During this period, more than 10 million Chinese cultural relics were lost to Europe, the United States, Japan and Southeast Asia and other countries and regions, of which more than 1 million nationals first - and second-class cultural relics [16]. Since the founding of the People's Republic of China, China has brought back more than 150,000 Chinese cultural relics lost overseas through law enforcement cooperation, judicial litigation, donation negotiation, rescue and collection. However, in the face of the huge number of lost cultural relics, simply relying on traditional tracing methods is obviously not enough. In recent years, the recovery of lost cultural relics in our country has entered a new stage of all-round development and multi-level improvement. Under the background of cultural revitalization and comprehensive national strength improvement, the enhancement of cultural self-confidence prompts us to seek more efficient and innovative protection and inheritance methods.

The application of digital technology in inter-museum cultural exchange exhibition provides a non-physical path to alleviate the loss of cultural relics. Through high-precision scanning and digital storage, its cultural values and historical information can be preserved and disseminated in digital form, even if the original is difficult to return to the homeland. This not only alleviates the regret caused by the absence of physical objects, but also provides a valuable resource for research, education and cultural exchange. From 2022 to 2023, the Song Painting Special exhibition of *A Comprehensive Collection of Ancient Chinese Paintings* has been exhibited in London, Britain, Brussels, Belgium, Barcelona, Spain and Singapore, and has won the attention and praise of experts and media at home and abroad. Through the most advanced photography and image processing technology, 12,405 pieces (sets) of paintings from 263 cultural and museum institutions in the world

today are collected and organized, and digital protection is used to build a database of Chinese paintings. This means that even if the original is lost or damaged for various reasons, its artistic and historical value is still preserved through digital technology, and digital technology breaks the restrictions of geography and time, so that the paintings in the project can cross borders and be visited and appreciated by audiences around the world. This not only helps to enhance the international visibility of Chinese painting, but also promotes the exchange and cooperation between cultural and museum institutions, reduces the direct demand for physical cultural relics, indirectly alleviates the pressure of cultural relic loss, and provides a platform for dialogue and cooperation to solve the problem of cultural relic loss. Digital preservation is not only a technical means, but also a concept of cultural protection. It goes beyond the limits of physical cultural relics, enabling cultural relics lost overseas to be studied, appreciated and studied by the global public in inter-museum exchanges. This approach makes up for the shortcomings of the traditional way of restitution, especially in the case of unclear retroactivity and binding force of international conventions, and provides a feasible scheme for the spiritual return of cultural relics.

3.2.2. Inherit the national history and culture

Technology promotes openness, openness realizes sharing, and scientific and technological strength has always been an important factor in promoting the change of the cultural industry. The application of digital technology in inter-museum cultural exchange exhibition is no longer just a static display of cultural heritage, but a dynamic reshaping of historical memory and strengthening of national cultural identity. This transformation not only deepens the preservation and dissemination of cultural heritage, but also highlights the continuity of national history and the continuation of cultural context from the vertical dimension, providing a new perspective for global cultural diversity and cross-cultural exchanges. At the same time, digital technologies such as virtual reality, three-dimensional modeling, and big data analysis make static cultural relics come alive. Through interactive experience, the audience can deeply understand the stories behind cultural relics, feel the temperature of history, appreciate the depth of culture, enhance national self-confidence, and help inherit and carry forward the excellent traditional Chinese culture.

Shanxi Museum actively used digital technology, and through special exhibitions such as *The Essence of Jin Cultural Relics*, it not only established deep connections among domestic museums, but also promoted the unique beauty of Shanxi's historical civilization to the world. The digital transformation of Shanxi Museum reflects that digital means have broadened the communication channels of exhibitions, enabled more visitors who could not visit the site to feel the charm of cultural relics, deepened the Chinese people's recognition of their own cultural roots, and provided a strong driving force for the creative transformation and innovative development of Chinese culture. Through the *Wuxian Cultural Relics Digital Exhibition*, Wu Culture Museum in Suzhou used panoramic photography, three-dimensional reconstruction and other technologies to vividly reproduce the historical towns and villages and historical buildings of Wu land, which not only effectively protects the historical towns and villages and historical buildings, but also promotes the living inheritance and innovative development of Chinese culture, making positive contributions to the construction of a cultural power and the promotion of Chinese culture. In 2022, the Dalian Museum, together with a number of maritime museums, launched the digital exhibition *One Museum and One object Illustrate Navigation*, which not only allows precious maritime relics to gather online, but also stimulates the public's interest in Chinese maritime culture through story language and rich multimedia materials, and promotes cultural confidence. This in-museum cooperation model shows the infinite possibilities of digital technology in promoting cultural inheritance and innovation. The application of digital technology not only enriches the museums' means of display, but also strengthens the protection and inheritance of cultural heritage, activates its intrinsic vitality, and makes every cultural heritage a vivid carrier for telling national stories, transmitting cultural values, and promoting international understanding.

3.3. Strengthen International Cooperation

3.3.1. Break down organizational boundaries to enable data sharing

On the basis of the digitization of existing collection resources, the trend of data aggregation increasingly highlights the importance of collaboration between museums and various art and cultural institutions. This process is committed to transcending the limitations of a single institution, building a more comprehensive resource sharing network by deepening the interconnection and integration of data, thus promoting the seamless docking and extensive sharing of information, and opening up a new path for the protection, research and dissemination of cultural heritage.

The Silk Road Digital Museum initiated by the Silk Museum in China has formed a variety of digital exhibition forms through the collection of digital collection resources of museums along the route. The public can curate exhibitions and co-build contents online, realizing the integration and sharing of data, enhancing the collaboration among museums, and promoting the wide dissemination of the Silk Road cultural heritage. Since 2017, the British Museum has been pioneering the use of live media to broadcast exhibitions in real time, including the *American Dream: Pop to the Present* hosted by renowned art historians and curators on the Facebook platform. The live broadcast of the exhibition not only selected specific artworks for in-depth analysis, but also opened interactive links to accept instant questions and feedback from the global audience, which received extensive participation and positive comments from 90 different countries. Then in 2020, in the face of the global pandemic, the British Museum and Kuaishou platform jointly launched the first live event in China, following the previous successful interactive model, and attracted more than 2 million Kuaishou users to watch online in only one and a half hours. It fully embodied the great potential of digital communication in narrowing cultural distance and enhancing public participation. In 2023, the Shanghai Museum took a key step in its digital transformation, presenting an online live broadcast for the first time, titled *From Botticelli to Van Gogh: Masterpieces from the National Gallery, London*. In this live broadcast, the deputy director of the exhibition department of the Shanghai Museum, a professor from the China Academy of Art, and art critics on the Douyin platform gathered together to discuss the evolution of European painting art. The live broadcast lasted for one and a half hours, attracting more than 500,000 viewers to watch online simultaneously, showing the remarkable effect of digital exhibition mode in popularizing art education and broadening audience groups. In order to further consolidate the academic value and social impact of the exhibition, at the end of the exhibition, the Shanghai Museum specially planned a series of art guide videos, inviting eight renowned experts in the field of history, art history and creation to deeply analyze the artistic masterpieces in the exhibition and the background of the history of European painting. These high-quality guided videos are widely disseminated through diversified new media channels, effectively extending the life cycle of the exhibition and enhancing its awareness and influence among the public.

Through digital technology platforms, museums can overcome geographical and organizational barriers, realize the interconnection of resources, and jointly build a borderless digital cultural ecosystem, which is not only conducive to the protection and inheritance of cultural heritage, but also to build a bridge for cultural exchange and understanding on a global scale, and contribute to the construction of a more inclusive and diversified world cultural landscape.

3.3.2. Promote exchanges among civilizations and protect cultural heritage

The introduction of digital technology has given new vitality to inter-museum cultural exchange exhibitions, which not only break through the regional and language barriers, but also become a powerful catalyst to promote international cooperation and human civilization exchanges and mutual learning. Through advanced technologies such as virtual reality, augmented reality, 3D modeling, and big data analysis, museums around the world can share resources and jointly build a digital cultural platform that crosses borders. This platform not only allows precious artifacts to be revived and face to face with global audiences across the boundaries of time and space, but also promotes dialogue and understanding among scholars, artists and the public from different cultural backgrounds. The application of digital technology makes culture no longer a static display, but a dynamic exchange,

which promotes the protection, research and inheritance of cultural heritage worldwide, deepens mankind's understanding of its own history and diverse cultures, and provides a solid cultural foundation for building a community with a shared future for mankind. During the implementation of the 13th Five-Year Plan, Gansu Provincial Cultural Relics and Museum System has significantly enhanced its international academic network, establishing deep cooperative relations with more than 60 countries around the world, including the United States, the United Kingdom, Japan, Afghanistan, India and Austria, focusing on cultural relics and museology exchange and research. This period has witnessed a number of international exhibitions on the cultural heritage of the Silk Road, such as *Religious Art on the Silk Road - Dunhuang Buddhist Grottoes Exhibition*, *Special Exhibition of Tang Dynasty Terracotta Warriors on the Silk Road*, and *Silk Road Cultural Relics Exhibition*, a total of more than 30 overseas exhibitions, highlighting the outstanding achievements and far-reaching influence of culture along the Silk Road. Dunhuang Academy, as a leader in cultural relic conservation technology in China, has over 70 years of accumulation, and its complete cultural relic protection system not only plays a key role in the protection and restoration of key cultural relics in China, but also actively exports professional knowledge and practical experience to countries and regions covered by the Belt and Road Initiative. The institute's strategic partnerships with international institutions such as the Crown Prince Academy of Traditional Arts in the United Kingdom have promoted conservation and research projects on ancient castle sites in Kyrgyzstan, demonstrating the power of international cooperation in the field of cultural heritage protection.

With the continuous progress of science and technology, the application of digital technology in inter-museum exchange exhibitions will become more mature and perfect, providing a broader and profound platform for the exchange and mutual learning of global civilizations. It is not only a bridge between the past and the future, but also a powerful force to promote harmonious coexistence and common prosperity of human civilization.

4. Conclusions and enlightenment

Driven by digital technology, inter-museum cultural exchange exhibitions are undergoing a profound change. From deepening public education, extending the gene of human civilization to strengthening international cooperation, digital technology shows its important role in cultural heritage protection, educational communication, cultural inheritance and international exchanges. In view of the remarkable effectiveness and potential of digital technology in inter-museum cultural exchange exhibitions, museums and cultural heritage institutions should not only continue to deepen the application of digital technology, but also actively embrace emerging technologies such as artificial intelligence, machine learning, blockchain, etc., in order to enhance the interactive, realistic and educational value of exhibitions, while ensuring the long-term preservation and rational use of cultural heritage.

The popularization and application of digital technology should not only stay on the surface of interactive and immersive experience, but also go deep into the academic research, education popularization and social services of cultural heritage. This means that digital platforms should become hubs for academic exchange, public education and community interaction, building a global cultural heritage knowledge network through data sharing, online seminars and distance learning, and promoting dialogue and understanding among different cultural backgrounds. Digital technologies can also facilitate the transmission and education of cultural heritage, especially for younger generations. Through gamified learning, virtual laboratories and online courses, digital platforms can stimulate young people's interest in history and culture, train them to become guardians and disseminators of cultural heritage, and lay a solid foundation for future cultural inheritance.

In terms of international cooperation and resource sharing, digital technologies can get around geographical and political boundaries and facilitate the collaborative work of museums and cultural heritage institutions worldwide. Through the joint construction of digital resource libraries, joint curation and online exchanges, the cultural essence of different countries and regions can learn from

and integrate with each other, promote the prosperity and development of cultural diversity, and provide a more colorful cultural experience for the global audience. Ultimately, digital technologies also play an important role in promoting cultural diplomacy and international friendship. Through digital exhibitions and exchange activities, different countries and people can increase mutual understanding and respect, and promote peace and cooperation. In the digital age, cultural heritage is not only a witness of the past, but also a bridge between the present and the future, and an important link to build a community of shared future for mankind.

To sum up, the application of digital technology in inter-museum cultural exchange exhibitions is not only a technological revolution, but also a cultural renaissance. It enables us to access, understand and appreciate the world's cultural heritage in an unprecedented way, promoting the sustainable development and global sharing of culture. In this process, museums and cultural heritage institutions shoulder an important mission and need to continue to innovate and explore, take digital technology as the foundation, so that the world's cultural heritage can shine more brightly in the digital age, and contribute to the construction of a more open, inclusive and harmonious world.

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