

The Countermeasures to Promote the High-Quality Development of Museums in the Era of Digital Economy

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ABSTRACT

The digital economy era is a new form of economic and social development after the agricultural era and the industrial era. The revolution in digital technology is reshaping the way people produce, live and consume. Digital economy plays an important role in the global economic growth in the 21st century, and museums shoulder the important missions of education, preservation and research. With the development of the digital economy era, the economy, material and culture of human society are increasingly prosperous, which has changed the living environment and development space of museums, and also brought many challenges. In view of the digital economy era, the development status of Chinese museum, the digital application of museum and existing problems are studied, and relevant suggestions are put forward to solve these problems.

KEYWORDS: digital economy; museum; high-quality development

INTRODUCTION

In recent years, China's museum system layout has been continuously optimized, since the "13th Five-Year" in China's average every 2 days added 1 museum, the national record museum increased from 4692 to 5788, including which 1,224,5214 free museums, speaking of the total, China has been a museum country. Since the 13th Five-Year Plan, China has added one new museum every two days, with 250,000 people owning one museum. A modern museum system with rich types and diversified subjects has basically taken shape. In 2020, museums nationwide will hold more than 29,000 exhibitions and plan more than 225,000 educational activities. At present, at least 26 regions in the country have proposed the construction of "museum city", and the development of domestic museums has entered the "transition period", which is shifting from emphasizing "quantity construction" to emphasizing "quality improvement".

How to cite this paper: Lin Chen | Zhijuan Zhang "The Countermeasures to Promote the High-Quality Development of Museums in the Era of Digital Economy" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-6 | Issue-6, October 2022, pp.804-810, URL: www.ijtsrd.com/papers/ijtsrd51923.pdf



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The development status of museums in China

A. The development status of state-owned museums and non-state-owned museums

At present, China encourages social capital to enter the field of cultural industry, encourages the development of non-state-owned museums, and further improves the museum system. However, on the whole, state-owned museums still occupy a dominant position in China's museum system. According to the State Administration of Cultural Heritage, in 2019, 3,825 state-owned museums, including cultural relics and other departments, were located in China, accounting for 69.11%, and 1,710 non-state-owned museums, accounting for 30.89%. Among the state-owned museums, there are 2,929 cultural museums, accounting for 52.92% of the total; and 896 museums in other industries. By the end of 2020, China had 3,928 state-owned museums, accounting for 67.86 percent of the total, and 1,860 non-state-owned museums, accounting for 32.14 percent of the total. China has formed a museum system with the primary, secondary and tertiary museums and museums in key industries as the backbone, state-owned museums as the main

body, and non-state-owned museums as the supplement. From the collection of cultural relics to multiple categories of collection and expansion, history, comprehensive, art, nature, mining, science and technology, folk customs and other types of museums are competing, which intensified the increasing competition in the museum industry.

Due to the different level of regional social and economic development, the layout of museums in China is not very reasonable. The number of museum institutions in the western underdeveloped northeast areas is small, and the number of collections is small: while the number of museum institutions and collections in the eastern and central areas are relatively large. Beijing, Hubei, Jiangsu and Shandong have the largest collections, while Shaanxi and Shanxi have the largest collections. Beijing, Hubei, Jiangsu and Guangdong have the largest collections, while Hainan, Xizang, Guizhou and Ningxia have the least. On the other hand, China's current private museums mainly have private individuals, private enterprises, joint-stock enterprises, civil associations, collective to jointly run museums and other main bodies. At present, China's private museums are mostly distributed in the southeast coastal provinces and cities, such as Beijing, Zhejiang, Jiangsu, Guangdong and other places. There are very few private museums in central China, northeast China and western China, and only Sichuan province has a large number of private museums.

B. The development status of museums under the digital economy (in the post-epidemic era)

In recent years, relevant policies issued by the state support and guide the digital construction of museums, which has accelerated the process of museums using the Internet to serve the public. State administration of cultural heritage and other five ministries in 2016 formulated the "Internet + Chinese civilization" three-year plan of action, put forward "the Internet innovation and the inheritance of Chinese traditional culture, innovation and development depth fusion, dig deeper and expand cultural relics contains the history, art, scientific value and time spirit, reveal the unique charm of Chinese civilization, rich cultural supply, promote cultural consumption". The Opinions on Strengthening the Reform of the Protection and Utilization of Cultural Relics, issued by the General Office of the CPC Central Committee and the General Office of the State Council in 2018, further proposed to "develop smart museums and build a network matrix of museums".

On this basis, the State Administration of Cultural Heritage has established a "museum online exhibition Platform" to innovate the communication channels and forms of museum exhibitions. The platform was officially launched on May 18, 2019, gathering the exhibition resources of various museums. Visitors can watch them online without leaving home, effectively promoting the exhibition brand and cultural resources of the museum.

The digital wave of museums in China began in August 1998, when Henan Museum established its own Internet website. Subsequently, with the development of Internet technology, more and more museums began to set up Internet websites. "Museum Internet" allows Internet users to browse museums online. China Internet network information center released the 46th the China Internet development statistics report, as of June 2020, our Internet scale of 940 million, sina weibo, TikTok, fast, B station become an important platform of contemporary entertainment life, various museums have also entered the platform, in order to expand the volume, get more attention in the era of the attention scarcity.

In 2020, due to the COVID-19 epidemic, museums in many places across the country have closed or taken flow control measures. "Cloud exhibition" and "cloud live broadcast" have become a new way for museums to enter the spiritual and the public's cultural life. represented by the "Museum online exhibition platform" built on the government website of the State Administration of Cultural Heritage, major museums have seen a boom of moving cultural relics, exhibitions, exhibition halls and even the whole museum to the "cloud". The "Museum Online Exhibition Platform" of the State Administration of Cultural Heritage has expanded the online exhibition content, and has launched 300 online exhibition projects in six batches, including 188 online virtual exhibition projects, 90 digital panoramic exhibition hall projects, and 22 museum big data platform and digital cultural relics display projects. According to statistics, museums across the country have launched more than 2,000 online exhibitions, with more than 5 billion visits. Cloud exhibitions have greatly enriched the public's cultural life. Since February 2020, TikTok, Taobao, Tencent, Kuaishou and other large Internet platforms have successively held a live broadcast of the "Cloud Tour Museum" activity, with dozens of them across the country

The museum sent gold medal interpreters and cultural relics experts to participate, watching more than 10 million views of the Potala Palace in one

hour. The three live broadcasts of the Palace Museum from April 5 to 6 alone received 34.92 million views. Cloud exhibition and cloud live broadcast greatly reduce the threshold for the audience to contact museums, and are warmly pursued. The "Museum Online Exhibition Platform" has successively pushed six batches of 300 online exhibitions to the public. The "Natural Museum Officer" WeChat mini program integrates the resources of more than 500 online museums, and opens up the concept that 200,000 paintings means that museums should fully understand their mission and responsibilities, and interpret 60,000 fine cultural relics and exhibition exhibits. In addition, museums have digitized museum cultural relics, exhibitions, related knowledge maps and other contents through portal websites, mobile clients, and wechat mini programs.

With the first batch of pilot units of the National Smart Museum in 2014, major museums in China have explored the road of digital construction. In December 2017, Tencent signed a strategic cooperation agreement with the Dunhuang Academy to launch the "Digital Silk Road" plan. In September 2019, the Qin Mausoleum Museum joined forces with Tencent to build the "Digital Qin Mausoleum". In January 2020, Shanghai Museum signed a strategic cooperation framework agreement with Shanghai IFlytek Information Technology Co., Ltd. to jointly carry out business cooperation related to the construction of artificial intelligence and smart cultural venues. In July 2020, the Guangdong Provincial Museum joined hands with Toeic Network to strengthen digital cooperation. Museums' deep collaboration with technology companies, Comprehensively improve the digital process, Help the high-quality development of museums with digitalization, Some representative achievements have emerged in recent years, "Digital Palace City" "cloud tour Dunhuang" mini program once launched will be popular; During the "—— Dong Qichang Painting and Calligraphy Art Exhibition" of Shanghai Museum, Based on the "Dong Qichang Digital Humanities" digital management platform has become the focus of attention in the industry; The special exhibition of Nanjing Museum "Pharaoh · Wang" and "Imperial Prosperity" not only enriched the visiting experience, More combined with information superposition, data identification, hotspot analysis and research questionnaire to further explore the needs of the audience; Chongqing China Three Gorges Museum construction intelligent management platform, Obtaining visit data through face detection and edge computing technology,

Provide a decision-making basis for museum curation.

Problems existing in museums in the digital age

A. Digital construction and application development is not sufficient

Under the background of national museums' efforts to build digital online museums after the epidemic, the problem of lagging online digital construction of museums has become increasingly prominent. It is embodied in the lack of funds and unbalanced development of online digital infrastructure in museums.

The construction of digital infrastructure is a guarantee for promoting high-quality economic development in the future. At present, there are 5,788 registered museums in the country. The construction of digital infrastructure requires a lot of manpower and material resources, which requires a strong and solid financial guarantee. However, many museums have the problem of lack of funds in the digital construction, resulting in a long-term lack of repair and maintenance of digital infrastructure equipment, which is not conducive to the long-term and stable operation of digital infrastructure. Therefore, if the problems of capital guarantee and personnel allocation cannot be effectively solved, it will have a negative impact on the overall process and operation of the museum construction. And many museum exhibition display planning lack of demonstration, positioning, the pursuit of "empty" excessive production, form and content, abuse of multimedia technology, artificial landscape, etc., scene, film and television, virtualization tendency is serious, ignore the connotation of cultural relics and exhibition theme, display, these big production exhibition exhibition mostly only a week or less than a month, both misleading to the audience, also caused a great waste, the cost of cramming digital applications can not really boost museum high quality development.

Inter-library development imbalance problems, the museum of digital infrastructure construction needs to invest huge manpower, material resources, financial resources, inter-library "digital divide" problem is more prominent, on the one hand is the "digital palace" and "digital dunhuang" widely praised, on the other hand is a large number of small and medium-sized museum in more intense "attention" by a few popular museum far behind.

B. The publicity quality of the museum is not high

➤ The publicity strategy of the museum is becoming more and more three-dimensional and diversified, with innovative consciousness

and spirit of exploration worthy of affirmation, but there are still some common problems. For example, limited energy but no time to penetrate multiple platforms. The museum has official website accounts on Weibo, TikTok, Kuaishou and B stations, but different Internet platforms, different positioning, and user portraits are also different, so the focus of publicity is different. At the same time, due to the establishment, funds and other rigid constraints and restrictions, The museum publicity team is relatively weak, It is more common to have a single responsibility or even a part-time responsibility for new media publicity, And making video is much more time-consuming than editing text, In particular, the differentiated content of the platform features needs to be carefully planned, Few museums have made that investment, Therefore, museums that open accounts on several platforms at the same time often update the same content on different platforms respectively, For example, the same video of the Palace Museum posted on TikTok and Kuaishou, With 14,000 likes at TikTok, Fast hand for 449, The transmission effect varies greatly. Spread is too single, is only a single direction output cultural content, rather than the diversity of interaction to attract fans, mining fans' creative potential and imagination, the unidirectional output reduces fans stickiness and activity, as of March 2022, the Palace Museum has 10.28 million fans, weibo 11314, but the average each thumb up is only about 500, it is inconsistent with millions of fans seriously, but the same nature of weibo content, with interactive content in 2022 is about no weibo interactive content 2 times, It can be seen that the interactivity and fans have a great relationship with the activity.

C. The exhibition level of the museum needs to be improved

China has a very long history and culture. In the development process of China's history and development, the sites, relics and cultural relics are often damaged by natural disasters and human factors, so there are a large number of cultural relics, debris or fragments preserved in the museum. Although these cultural relics have strong historical research value, visitors do not have a deep spiritual feeling of debris or debris. For foreign tourists, these places are the most direct way to attack the history and understand a strange city. General Secretary Xi once said that to understand a city, go to the local museum first. This

simple and straightforward display only allows visitors to tour, and can only passively accept the historical events and cultural value transmitted by the museum to visitors. The visiting process of the visitors is only a process of passive acceptance, and they cannot communicate and interact with the museum exhibits scientifically and reasonably, so the visitors' interest in visiting will soon be extinguished, thinking that the museum is boring, and the impression of the museum visit will not be very good. In addition, most museums have already begun to use digital technology to detail the museum exhibits. Although this way of introduction no longer requires the visitors to directly face the cold text, but the visitors are still in a passive visiting system. Some cultural relics cannot be deeply rooted in the hearts of the people with a few numbers, but in order not to compress the text, which leads to the wonderful content of the explanation, so the single model explanation does not make good use of the service of digital explanation. This also makes the level of exhibition is greatly reduced.

D. Insufficient training of digital compound talents in museums

➤ Compared with foreign countries, China started late in the research and construction of digital museums, and there is still a very large space for the development of digital museums. One of the important reasons is the lack of talents. Due to the complexity and diversity of technologies required by the construction of digital museums, digital museums have high requirements for compound professionals. In order to realize the digital construction of museums and ensure the effective protection and inheritance of cultural heritage through digital technology, it requires a large number of compound talents with professional knowledge and skills to participate, and establish a professional work team with reasonable structure and complete system. At present, the number of comprehensive talent reserve in the digital construction of museums in China is relatively small, and the speed of training is far from keeping up with the speed of demand, which is very unfavorable to the construction and development of digital museums. For example, the current digital can realize the 3 d model of cultural relics, but the specific operation personnel basic for computer professional very top talents, these digital talents do not have enough relevant knowledge, lack of museum related professional study and work experience, unable to put the cultural

relics data further knowledge transformation, the museum digital construction help is limited, only they obviously cannot realize the advancement of digital museum construction smoothly. Up to now, the establishment of related majors in China is still relatively backward, and the disciplinary barriers still exist, which hinders the further development of compound talents. This situation is widespread in the digital construction of museums. The promotion of the construction process of the digital museum and the development of the future will rely on who, who to train the talents needed in the digital process of the museum, and how to cultivate them, is what the field of museums and education need to think about and explore together.

Countermeasures to promote the high-quality development of museums under the digital economy

A. Construction of an online digital museum cluster

In 2022, China started to build a modern socialist country in an all-round way. By strengthening digital transformation and integrating innovation support, the layout and construction of new infrastructure such as information infrastructure, integrated infrastructure and innovation infrastructure has become a new direction for China's current development.

Museum can use the Internet of things, big data, cloud computing, mobile Internet and other modern information technology, research and development wisdom museum technology support system, knowledge organization and "five sense" virtual experience technology, the construction of wisdom museum cloud data center, public service support platform and business management support platform, form the wisdom museum standard, security and technical support system. Focus on the construction of museum cloud computing center, museum sharing service basic support platform, museum wisdom collaborative management platform, museum wisdom resource management platform, museum wisdom protection platform, museum wisdom service platform, museum wisdom operation service platform, used in the museum of all aspects of management, service and operation, etc. Can solve the problem of the digital infrastructure imperfect, can also save the construction funds, using digital technology unified control, as a whole, for offline scattered museum group online integration of "app" tour, using "Internet +" thinking, make full use of digital

means rich service way, try more personalized propaganda mode, innovation planning cloud exhibition, cloud, cloud live new media, media exhibition application, build based on high-tech future wisdom museum city. The cultural relics museum industry will be integrated with radio and television, press and publication, culture and art and other related fields to form a brand of "big culture communication media industry" based on digital production, communication and consumption.

B. Using new media platforms to carry out high-quality publicity work

In the digital age, how to make better use of the Internet platform to enhance its influence is a required answer. Museums should actively explore personalized publicity paths and constantly improve the publicity efficiency. The museum should fully adjust its operational strategy. Museums should abandon the development idea of promoting the same content on different Internet platforms. In the early stage, the first step, on the basis of deeply studying the platform users, content characteristics and existing similar account operation with big data, should select a platform to carefully cultivate, make precise efforts, and gradually have a stable activity. Establish the concept of preference, pay attention to publicity and marketing, combine the current hot spots and resources in the museum to create high-quality publicity content supply. In the medium term, the second step is appropriate manpower, material and financial resources within a reasonable range to help the museum popularity rise straight. Late, the third step lead culture and strengthen talent support, let the professional people do professional things, make full use of new media operation talent professional quality improve operation efficiency, gradually fully blossom in multiple Internet platform, using modern technology rich content form, enhance the interactive content, let users in different platforms for the same culture has more diverse understanding, inspire fans praise desire, improve fans viscosity. Finally, with this "three-step" strategy, to enhance the influence and popularity of the museum in the digital age, and to achieve the purpose of high-quality development of the museum.

C. Using digital technology to enrich the traditional exhibition elements

Digital technology is the key influencing factor in the development of new exhibition fields and projects in museums. The continuous integration of digital technology into the museum exhibition, and using modern technology to enrich the content of

the museum exhibition exhibition has become the main trend of the future development of museums. Digital technology generally does not require a lot of space to complete the introduction and supplement of the museum exhibition Chen, so the combination of digital technology and museum exhibits can effectively enrich the content of the museum exhibition Chen on the basis of the original exhibition Chen.

Digital museums can attract young people to enter them. Museum exhibitions are not boring preaching. They can introduce game mechanisms into museums, and more public can fall in love with museums. Game-based museum experience can attract more young audiences to fall in love with museums, and audiences are constantly inspired through real-time interactive experience, gaining immersion and satisfaction. For example, the Metropolitan Museum of Art (The Metropolitan Museum of Art) has launched a smartphone-based game app, with the name full of suspense. — "The Metropolitan Murder — The Mystery of American Art" (Murder at the Met Game). The game is set for the murder of Mrs. Virginie Gautreau (aka "Mrs.X") in 1899. Viewers can download terminals through smart devices, participate in and act as a detective according to digital maps, clues and prompts, search for clues in the museum exhibits and space, investigate crime motives, crime tools, location of crime, etc., all clues are hidden in the museum exhibition hall and exhibits. This kind of game-style experience has a strong attraction for audiences, especially young audiences, who are exactly the audience group that museums need to strive for most. Visitors can enjoy the museum exhibits, while happily participating in the game, to obtain an unprecedented museum experience, and further generate a strong interest in the museum. Our country can also be combined with the popular board game script to kill, on the basis of reasonable cultural relics story creation, the characteristic plate features immersion, through the script to kill the game mechanism, aesthetics and game thinking means to attract the audience, encourage participation, promote learning and problem solving, to game incentive mechanism, the game into the museum situation, through the appropriate transformation and guidance, more can make it become the audience to accept the ladder of knowledge.

D. Take multiple measures to cultivate digital compound talents in museums

In order to make the audience more convenient to watch the cultural relics, deeply understand the

brilliant cultural achievements and cultural process, and realize the effective protection of the collected cultural relics, we must play the joint role of university education and museum training, and cultivate more quantity and higher quality of digital museum compound talents.

Higher education should also pay close attention to the needs of related industries, and set up some majors and courses that have both archaeological knowledge and digital technology. In the opening of relevant majors, designing courses should pay equal attention to theory and practice, so that students can understand and master the relevant theories of museums and modern computer information technology through classroom learning. The related major of digital museum is a highly applied major. We should create as many practical opportunities for students in teaching, so that students' application ability can be improved through practical exercise. We can also carry out some research and practical topics of digital museum for students, so that students can strengthen the understanding of the theoretical knowledge learned in the process of subject research on the one hand, and on the other hand, have a clearer understanding of the future work of digital museum, and more adapt to the needs of future jobs.

Talent training of digital museum is a long-term process, but it is far from enough to rely on university training. In the process of work, we need to constantly hone and practice to improve the quality of talents. Firstly, their knowledge can be expanded through professional training for museum staff to meet the needs of development; Secondly, create necessary academic communication opportunities for relevant staff, and strengthen the awareness of the importance of science and technology; finally, universities and museums should strengthen the sharing and reference of scientific and technological achievements in cultural relics protection. A scientific research team covering the elderly, middle and young ages can also be established according to the existing talent composition, and the mode of mentoring and pairing can be implemented in scientific research projects to strengthen the exchange and cooperation between talents of different ages, so that the innovation vitality of the team can be reactivated.

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