

Research on the Development Trend of Museum Cultural Creative Industry Chain Based on Big Data Analysis

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Abstract: Under the background of big data, some museums have developed and designed CCP(cultural and creative products) with the support of big data technology, and then sold them in the form of e-commerce, which has brought new opportunities to the development of CCP industry. The museum is the cultural witness of the whole city, and it is also the cultural successor of the city. Therefore, shouldering the mission of cultural inheritance, museums should also constantly spread the history and culture to the outside world, and the design of CCP must be combined with urban cultural history and dig deep into cultural symbols. Firstly, this paper analyzes the media attributes of museum CCP. Secondly, based on big data, it focuses on the development trend of museum cultural and creative industrial chain, analyzes the causes of its problems and puts forward the design strategies of museum CCP in combination with market conditions, aiming at providing theoretical guidance and ideas for building museum cultural and creative ecological industrial chain.

1. Introduction

With the continuous guidance of government policies to the cultural and creative industries, academic circles have also triggered a wave of academic research upsurge on the cultural and creative industries in museums, so the development of CCP(cultural and creative products) in museums has also become a new hot spot in the development of the cultural and creative industries in museums, and even the whole cultural and creative industries[1-2]. Based on big data analysis, the development trend of museum cultural and creative industry chain is reorganized, and various optimization paths are put forward, which provides new ideas for the reconstruction of museum cultural and creative industry under the empowerment of digital technology.

2. Media Attribute of Museum Cultural Creative Products

As a new industry, the creative industry of museum culture develops with the changes of national policies, public aesthetics and social market, thus forming a multi-dimensional value composition system of museum culture IP[3]. The cultural value of the museum cultural IP is the basis of other values, and building the museum cultural IP means that the silent collection culture of the museum can be brought to the public in different ways, and the excellent traditional culture can be better spread and passed down, which plays an important role in realizing the propaganda and education functions of the museum[4].

The soul of cultural creative products is culture, and the integration of the two can be solved through creativity. Therefore, the design of cultural creative products itself is a process of deeply understanding culture and re-processing it to give it new value. As can be seen from Figure 1, CCP are different from artistic derivatives and tourist souvenirs, and the former is the overlapping part of the latter two.

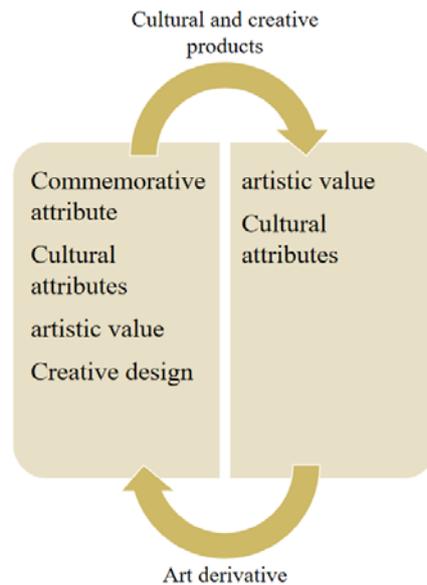


Fig.1 Characteristics of Cultural Creative Products

Communication characteristics are the commonness of something when it conforms to the principles, concepts and laws of communication. The physical form of museum cultural creative products can extract, store and reproduce museum elements, so that the audience can discover museum culture more intuitively, thus forming a good psychological feeling for museum cultural relics, while the virtual form goods break the time and space restrictions and become a new carrier of museum information[5-6]. Therefore, from the product form and nature, museum cultural creative products have the media attribute of time and space communication bias integration, and are available carriers for spreading civilization.

CCP are different from ordinary commodities, which combine design creativity, cultural knowledge and cultural value. When cultural relics come out of the showcase and warehouse of the museum and enter the audience's life scenes such as kitchen, study, desk, bedroom, daily travel and tourism, they exist as articles of use or decorations in the form of CCP for a long time. It is precisely because of the proper use of symbols and the transmission of meaning that the media attributes of museum CCP can play a role.

3. Development Trend of Museum Cultural and Creative Industry Chain

3.1 Data Service

Big data refers to a huge data set with various categories, which cannot be collected, mined and analyzed by ordinary software. It needs a new processing mode to complete a massive information asset with more insight, persuasion and decision-making power. Most of the cultural and creative derivatives of museums come from the collection resources, belonging to the on-site cultural products and bearing unique cultural values[7]. The process of data use is also the process of data consumption. Visitors are both users of data (using online or in-library equipment) and consumers of data (feedback on equipment use). Starting with personalized data with user portrait characteristics, the museum presents the relationship between information resources and core indicators.

In recent years, the state has vigorously promoted the transformation and innovative development of cultural creativity, which objectively laid the foundation for building a super cultural creativity IP with China characteristics. The cultural and creative industries have flourished and the number of cultural and creative related enterprises has increased significantly. In 2015, there were only 1,357 enterprises related to cultural creativity in China, which exceeded 2,000 in 2016, 3,000 in 2018, 5,000 in 2019, and 10,000 enterprises related to cultural creativity in 2021, a year-on-year increase of 65.3% (Figure 2).



Fig.2 Statistics on the Amount of Research and Development of Cultural and Creative Related Enterprises in China

In the context of big data, we see that the cultural and creative industrial chain of museums is constantly changing and expanding into the field of cultural industries, and the CCP of museums are also constantly developing and integrating. Museums apply relevant big data analysis to re-recognize excellent traditional culture, inject corresponding cultural resources into the lives of ordinary people, and turn it into a driving force to support the accelerated development of cultural industries. Therefore, in the context of big data, the integration of the Internet and CCP is a new trend in the development of museum cultural industry.

3.2 Cross-Border Cooperation

With the continuous development of Internet, covering the whole operating environment and providing access, some industries or companies can develop this harmonious, mutually beneficial and sustainable dynamic balance system. Comparatively speaking, cross-border cooperation mode is more often adopted[8-9]. Cooperative product development mode integrates social and talent resources through artistic authorization, cross-border cooperation and strategic alliance to improve development efficiency. Including the copyright, patent right and trademark right of the collection elements and their anthropomorphic image design and display scheme.

Under the background of big data, some museums have developed and designed CCP with the support of big data technology, and then sold them in the form of e-commerce, which has brought new opportunities to the development of CCP industry. Combine cultural creative design with beauty products, or design with clothing, so that products are not limited to a single category and can attract more consumers' attention. With the help of new media, we can get to know the museum information more quickly and conveniently, and we can feel the precious history and culture of the museum more intuitively through the interactive experience of CCP.

3.3 Provide Multi-Dimensional Cultural Experience

According to categories, special exhibitions held in places other than museums and art galleries account for the highest proportion, reaching 55%, leisure and entertainment special exhibitions account for 19%, followed by parent-child popular science and brand promotion special exhibitions. It is worth noting that the proportion of brand customized special exhibitions for the purpose of promoting corporate brands has reached 2%, indicating that more and more enterprises have begun to pay attention to the interactive form of special exhibitions to attract users (Figure 3).

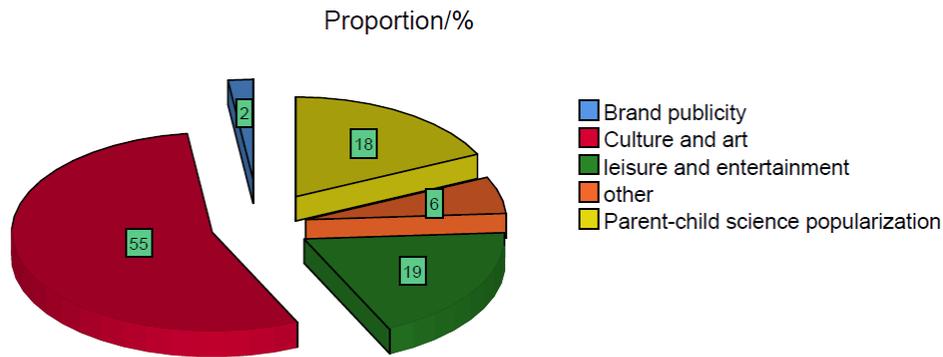


Fig.3 Classification of Special Exhibitions Held in Places Other Than Museums and Galleries

The cultural and creative experience provided by the Internet platform for the audience of museum CCP includes: online appreciation of museum collections, online independent design and purchase of museum CCP, increased media participation and enjoyment of the application results of Internet technology in the field of museum CCP. In the process of design, development and marketing of CCP, the Internet can integrate more scenes with the historical and cultural background of museums, giving users a cultural experience. The audience walks into it and uses images, colors and lines in the space to convey cultural implications and artistic aesthetics. In-store environment makes people interact and associate with products. In addition, they also display their museum's CCP in cultural exchange, spread China's traditional culture and show the image of a big country. Some museums will invite international designers to exchange ideas and culture.

4. Design Strategy of Museum Cultural Creative Products

4.1 Combination of Hierarchy and Systematization

The design of museum cultural creative products should follow the multi-level and systematic design principles. Firstly, through the results of market research, the target group is divided according to the characteristics of consumers, so as to subdivide and locate the products. Then, according to the diversity of market demand and the difference of buyers' behavior, the overall market is arranged hierarchically, so as to finally choose suitable and targeted design strategies for design. When designing, we should extract the typical cultural resources of the museum, and apply them to different kinds of products under the condition of exquisite style, material, technology, color and function, so that they have common artistic characteristics and form a series of CCP, thus promoting the brand IP of the museum.

At present, the media technologies supporting the use of CCP in museums include: 3D printing technology, wearable technology, digital art exhibition technology and equipment, digital protection and inheritance equipment of cultural relics, smart museums and digital processing and integration of cultural and creative content. Intelligent display devices, content production tools, game development, cloud services, information transmission technology and VR technology are all media technologies for museum CCP to enhance users' cultural experience, which can bring users a new feeling of human-computer interaction experience and visual entertainment. Therefore, cross-border cooperation between the Internet industry and museums is also an effective way to promote media technology to participate in the production of CCP.

4.2 Using New Media to Integrate Resources

The arrival of internet plus broadens the development path of CCP in museums and provides more opportunities and challenges for the design of CCP. Nowadays, the mobile Internet has penetrated into various fields, and the mobile phone has become one of the most effective ways to spread the cultural information of museums because of its convenience, rapidity and high efficiency. In the core culture of the museum, the symbols that conform to the soul of the museum are excavated. The CCP produced in this way can reflect the culture of the museum to the greatest

extent, and at the same time, they can also spread the history and culture to the society to the greatest extent. Using advanced technologies such as big data to provide dynamic and diverse cultural relics information resources for the development of CCP, and provide cultural relics management information system, three-dimensional visual display, mobile terminal inspection, file management and other services to solve the problems of lack of professional design talents and inability to capture market demand[10].

4.3 Improve the Connotation of CCP

The museum is the cultural witness of the whole city, and it is also the cultural successor of the city. Therefore, shouldering the mission of cultural inheritance, museums should also constantly spread the history and culture to the outside world, and the design of CCP must be combined with urban cultural history and dig deep into cultural symbols. Rational use of traditional cultural elements to achieve the purpose of promoting the development of design industry. Usually, traditional cultural symbols have obvious national characteristics and artistic value. Only by realizing the value of these elements can we use these cultural and creative product elements reasonably, improve the expressive force of museum cultural and creative product design and enhance the design quality of design schemes.

Through the elements, scenarios and environments of intelligent data distribution and provision, users' enthusiasm for using, purchasing and forwarding products is fully stimulated, and different permissions are given to different users, so that users can participate as both visitors and professional researchers. It is necessary to combine different elements of CCP on the basis of retaining the original connotation, show different visual effects to people and improve the design effect of CCP in museums.

5. Conclusions

As a new industry, the creative industry of museum culture develops with the changes of national policies, public aesthetics and social market, thus forming a multi-dimensional value composition system of museum culture IP. In the context of big data, we see that the cultural and creative industrial chain of museums is constantly changing and expanding into the field of cultural industries, and the CCP of museums are also constantly developing and integrating. Museums apply relevant big data analysis to re-recognize excellent traditional culture, inject corresponding cultural resources into the lives of ordinary people, and turn it into a driving force to support the accelerated development of cultural industries. Combined with the needs of modern people, we should actively explore the cultural connotation contained in the cultural relics in the collection, give full play to the role of CCP, and promote the development and dissemination of museum culture through the implantation of cultural and creative industrial products.

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