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## RESEARCH ON THE APPLICATION DESIGN OF NEW MEDIA IN MODERN MUSEUM INTERIOR DISPLAY

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*This paper introduces the research results of new media application design for indoor display in modern museums. The purpose is to explore a feasible museum interior display design scheme or design concept that utilizes new media technology to better promote human civilization exchange and mutual learning. In the study of the development history and trends in the realization of museum cultural values, it has been determined that cultural exchange and creation are very important social currencies. In the study of museum display design, it has been determined that using new media for game narrative virtual roaming design can attract people who hate passive indoctrination to actively explore. In the comparative study of museum communities, the necessity and feasibility of cross regional resource co construction and sharing were determined.*

**Key words:** Interconnection, Co-construction, Interaction, Socializing, Cultural Exchange, Personal Contribution.

### INTRODUCTION

The application of new media in modern museum interior display design is mostly reflected in two aspects: the creation of a historical atmosphere and the transformation of static exhibits into dynamic interactive models. With the enrichment of museum resources, the progress of information technology and multimedia technology, the close cultural exchange, and the improvement of people's spiritual needs, the display and dissemination of museum cultural information needs to fully integrate regional resources and provide an open platform to meet individual value realization to expand the cultural influence of the museum. Create a rich and comprehensive information library like a spider web, and utilize people's handheld terminal devices to achieve flexible, open, shared, convenient, and real-time cultural dissemination.

### PURPOSE

In today's highly developed information technology, people's demand for information is more likely to achieve input and output through active exploration and expression of personal thoughts, interaction and communication, and common participation in the dissemination and inheritance of culture to achieve personal value contributions. In addition, museum resources are rich and scattered. When entering a museum or online virtual museum, people not only want to see the information conveyed by an independent exhibition, but also want to see relevant exhibition information from all other museums. The purpose of this article is to



explore a feasible indoor display design scheme or concept that utilizes new media technology to achieve the interconnection of museum cultural information and the co construction and sharing of regional resources, and promote the exchange and mutual learning of human civilization.

## **RESULTS AND DISCUSSION**

In the 14th to 16th centuries, cultural relics and treasures were only used for collection and research, and were not open to the public. The concept of display had not yet taken shape. In the 1780s, the first museum in the history of world museums was opened to the public, but there was no classification or explanation. From the 18th to 19th centuries, taxonomic display and restoration display methods were born. In the second half of the 20th century, the theme display method emerged, and the exhibition concept of museums began to emphasize the purpose of education. After the end of the 20th century, advances in technology have achieved a shift in the concept of display from isolation and stillness to relevance and dynamics. Display design has broken the constraints of disciplines, utilizing the intersection and complementarity of multiple disciplines to provide a space for audience participation and stimulate spontaneous thinking by the audience [1]. The trend of museum value expression has thus started towards the use of new media in display design, such as light and shadow, audio, and the internet. The form of display has shifted from static to dynamic, the content of display has also shifted from physical to virtual, and the relationship between exhibits and people has also shifted from one-way communication to interactive experience. At this stage, museums use digital multimedia means and new media equipment to achieve interaction and communication between display subjects and people. A narrative display design that establishes an interactive relationship between the designer and the observation object can lead the audience's attention to the narrative structure and theme created by the designer, helping the audience obtain the information they need from the diverse display content. Immersive display design that emphasizes the full sensory experience of the audience can creatively integrate multiple elements such as art and technology, making cultural relics vivid and interesting, attracting more audience participation, and actively receiving various information conveyed in the exhibition area. The interactive museum is to establish a clue between cultural relics and their background information that can be perceived by the audience, along which people can experience the journey through time and space. Webcast enables real-time Q&A between viewers and anchors. The online visiting platform created through 5G and AR technology allows hundreds of millions of users to experience digital museums without leaving their homes, saving time and cost, not limited by geographical constraints, and allowing personalized choices. However, it only provides a platform that is more convenient to choose from, and there is no real connection between the options.

In addition to enriching display forms to meet the new needs of audiences, museums also need to comprehensively integrate resources to maximize museum value. In 2021, the National Cultural Heritage Administration of China pointed out that we should vigorously develop cloud display and cloud education in museums, adhere to the principle of openness and sharing, and activate museum collection



resources across regions. As of 2022, there are 6183 registered museums in China, of which 91% are open for free. However, the distribution of museum resources is uneven, and the development level of museums in different regions varies greatly. In the context of the Internet economy, the internal logic of museum resource integration is essentially the process of creating a value ecosystem for museums. Through this process, innovation is stimulated, and the efficiency of resource utilization is improved, which helps the museum fully exert its various functions and create social, cultural, and economic benefits [2]. Therefore, in the context of the Internet economy, museums need to integrate and share their own and external resources, thereby breaking resource constraints, maximizing museum value, and promoting exchanges and mutual learning among human civilizations.

In recent years, the concept of social currency has been introduced into the field of media economics. If interpersonal communication is viewed as an intangible market, the intangible things (topics, shared content) that serve as exchange contracts in this market are "social currency". Jonah Berger [3], a professor of marketing at Wharton Business School, said in his book "Contagious": "Just as people can use currency to buy goods or services, using social currency can gain more favorable comments and a more positive impression from family, friends, and colleagues". Therefore, using new media to revitalize and integrate rich museum resources, combining social media for the display and dissemination of cultural information, and establishing close cultural ties between objects, while also establishing close cultural ties between people, will greatly adapt to the higher needs of modern people for spiritual culture. Therefore, in museum display design, it is necessary to use new media to build a complete social platform to attract audiences. As a social currency, museum cultural information exchange participates in the dissemination and inheritance of culture, while completing the creation of personal value. Through research on museum display history and modern audience survey and analysis, it has been found that in the past, audiences were absent during the museum curation process, and the transmission of information in the museum was one-way, lacking consideration of audience learning habits and feedback and interaction from the audience. People even hope that the exhibition design of museums can have the attraction of guiding the audience to actively explore in order to form their own thinking. People also prefer to see the rich information and different perspectives of museums in various regions, so that they can communicate with each other and even have the opportunity to participate in cultural interpretation. Therefore, how to better utilize new media to digitize the internal information resources of museums, and further achieve the integration of external resources that cannot establish resource connections across the country due to geographical or institutional reasons and share resources is the future development direction of museums. In addition, if the museum can provide a dedicated social platform to express personal views and establish connections between viewers, it will help strengthen its attention and recognition of the object and the entire exhibition, attracting a large proportion of visitors with the same preferences to communicate together.



## CONCLUSIONS

Through analyzing the application design cases of new media in museum indoor display at home and abroad, and combining the in-depth needs of the audience, gradually explore the analysis and solution of one-way transmission of museum cultural information and localization of cultural resource allocation. Regarding the issue of people's desire that the display design of museums can avoid one-way transmission and have the attraction of guiding the audience to actively explore, prompting the audience to form their own thinking. Undoubtedly, the embedding of historical characters and the development of a virtual roaming system for game-based narration will greatly improve this situation. Regarding the issue of expanding the communication and mutual learning space between museums that cannot establish resource connections for resource sharing due to geographical or institutional reasons, blockchain technology, as a distributed database, has the characteristics of decentralization, tamperability, and traceability, providing a new solution for the sharing of digital resources of cultural relics between museums. Creating a social museum requires users to use their social currency for digital participation in activities, emotions, thinking, decision-making, and even content on the museum's internet sharing platform, ranging from active communication, positive contributions, to spontaneous creation.

## REFERENCES

1. Mabo. Research on Museum Display Design. *Journal of Jiamusi Institute of Education* (5), 2014, pp. 81-82.
2. Gong Lei, Jin Huana, Wang Jie. Talking about Museum Resource Sharing – Also talking about the "division system" and "alliance system". *Henan museum industry Dossier*, 9 (20), 2019, p. 105.
3. Berger J. Contagious. Simon & Schuster Press, 2013.

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## **ДОСЛІДЖЕННЯ ДИЗАЙНУ ЗАСТОСУВАННЯ НОВИХ МЕДІА В ІНТЕР'ЄРИ СУЧАСНОГО МУЗЕЮ**

*Ця робота представляє результати дослідження дизайну нових медіа-додатків для внутрішньої експозиції в сучасних музеях. Мета полягає в тому, щоб вивчити можливу схему дизайну експозиції інтер'єру музею або концепцію дизайну, яка використовує нові медіа-технології для кращого сприяння обміну між людьми та взаємному навчанню. Вивчаючи історію розвитку та тенденції реалізації музейних культурних цінностей, встановлено, що культурний обмін і творчість є дуже важливими суспільними валютами. Під час дослідження дизайну експозицій музеїв було встановлено, що використання нових медіа для дизайну віртуального роумінеу оповіді гри може залучити людей, які ненавидять пасивне навчання, до активного дослідження. У порівняльному дослідженні музейних спільнот визначено необхідність і доцільність міжрегіонального ресурсного співробітництва та спільного використання.*

**Ключові слова:** взаємозв'язок, співконструкція, взаємодія, спілкування, культурний обмін, особистий внесок.