

On the “Teaching through Lively Activities” in the Museum of the Digital Technology Age

Weng Lifen

Xiamen University of Technology, School of Design Art and Fashion Engineering, 361024

Keywords: digital technology age; a museum; teaching through lively activities

Abstract: With the rapid development of digital technology, the information communication and the learning media have been changed accordingly. The museum bears the responsibility of social education, whose educational form has also been influenced by the changes of the times. The museum should achieve the purpose of "teaching through lively activities" by means of rational use of digital technology to improve the efficiency of its social education.

1. Introduction

In 1984, the American Museum Association released the Museums for a New Century report, which identified "education" as the primary goal of the museum and pointed out: "If the classic collection is the heart of a museum, the education is a museum soul" [1]. In 1906, when the American Museum Association was founded, it declared that "the museum should become a popular university." In 1990, when interpreting the definition of museum, the association considered "education" and "serving the public" as the core of the museum [2]. Museum of social education is one of its indispensable functions, and the rapid development of digital technology, the museum how to better through the "edutainment" concept of cultural and educational functions to play to enhance social the efficiency of education is of particular importance.

2. "Entertaining" Concept

The "edutainment" was first put forward by the ancient Roman poet and literary theorist Horace in "Poetic Arts" as an important point about the role of poetry, that poetry should bring fun and benefit to readers as well as to readers Advise, helpful. Literally understanding is to put education in the fun. Popularly, education is an education that is to be carried out in the form of art and beauty. In my opinion, "edutainment" in the museum education should change the museum's passive status of "being studied" and take the initiative to provide education services. The single cultural communication is transformed into an interactive, integrated and bilateral relationship. Through its own display design changes, enhance the attractiveness of the museum, so that visitors enjoy the state of mind and body to obtain knowledge.

3. The Current U.S. Museum's "Entertaining" Initiatives

As noted earlier, as early as 1984, the American Museum Association defined "education" as the primary goal of all museums. Most of the United States National Museums are free of charge. Apart from actively cooperating with the school to build a school, the museum also guides parents to take advantage of holidays to lead children to visit the museum. The museum also strives to improve the quality of interactive activities in the museum and focus on the pleasant physical and mental experience of different categories of visitors. Today, with the development of digital technology, the exhibition design of various museums in the United States pays more attention to using the new technology to enhance its attractiveness and focuses on the design of "entertaining".

3.1 Interactivity

Interaction is reflected in the interactive design of the museum, through interactive design to

attract visitors to take part in them actively, change passive visit to take the initiative to participate, more intuitive for visitors to showcase the charm of the collection. US National Aeronautics and Astronautics Museum, through the 1: 1 restore small real aircraft, the audience can board the flight inside the cabin, a deeper understanding of the cockpit charm. The exhibit of the U.S. Air and Space Museum encourages the audience to start their own activities. Many exhibits can be pushed, raised, lowered, rotated, and the audience can experience the flying principle through personal experience. Even the imitation of high-altitude airflow device allows visitors to experience the upper air parachute altitude air flow conditions. The NASA interactive device meets the needs of different audiences and truly embodies a people-centered design, "edutainment" education. Cooper Design Museum in New York, USA also designed interactive smart desktops for adults and children respectively, with different desktop heights for adults and children respectively. Visitors can use the smart stroke on the desktop two-dimensional image, and then easily click on the desktop conversion program into a three-dimensional images, and then save your own design to your personal online account, for future free download.

3.2 Entertainment

The highlight of Franklin Museum of Science in the United States is the design of the huge heart in the museum, where people can walk in the direction of blood flow. Franklin Museum of Science, visitors are free to manipulate the display, the children feel hands-on operation of the fun of science. Through the wonderful experience of all kinds of physics, chemistry and astronomy phenomena, it has greatly stimulated children's curiosity and interest in science. Many of them have learned unknowingly. Franklin's education adheres to the "wake the public learning science and technology" concept, so that the brilliant shine of science can throughout the society [3]. The Space Command at the Franklin Museum of Science allows visitors to enter the game space and participate in the game by designing games such as space exploration. When people enter the space exploration area, they rumble through the restricted-access "remote command" area, accept missions and recover lost space inhuman detectors and maneuver them. If visitors get the accumulation of knowledge in the game, they will find the fun of science.

3.3 Realistic Sense

In the age of digital information, the use of digital technology made it possible to reproduce museum scenes. The National Museum of Natural History's entrance to the human origins of the exhibition hall entrance tunnel through the wall projection technology on both left and right, showing the human evolution process images, people like to pass through the time tunnel back to the illusion of ancient times. In the mining area, the structure of the mined hole is simulated in a ratio of 1: 1. There is also a section showing the mined hole in the mined hole where visitors can touch the experience. Even mined mining tools are also displayed inside the cave, realistic scene reproduction with sound, lighting effects, allowing visitors to immersive, feel the mining scene. The National Aeronautics and Astronautics Museum modeled on the former home of the Wright brothers, designed the Wright Brothers Show and restored the environment at that time. In addition, the museum can use VR and other virtual reality technology to restore the story behind the collection, so that visitors more intuitive feel the charm of the collection. At the same time, it is also possible to realize the trans-geographical spread of museums through the remote virtual museums and enhance the scope of cultural transmission of museums.

Digital information age, computer and other digital technology to join, make the museum more diverse display, from the traditional static display to the combination of static and dynamic way, from a single item display to comprehensive audiences visual, auditory, tactile multiple senses, so that the audience Immersive experience of the art of the exhibits and the story behind them. There are two types of digital technology applications in the museum display: static technology and dynamic technology. Among them, static technology is divided into three-dimensional plane and three-dimensional modeling and three-dimensional scanning. Dynamic technology is divided into digital 2D animation, digital plane interaction, digital visual media, Dynamic Spatial Digital Technology, Virtual Reality Technology, 3D Animation and more. [4] At present, most of our

museums also introduce digital technology to introduce some interactive touch screens into museum exhibition halls. However, achieving the museum's "edutainment" effect, not only need in the introduction of technology, but also need to demonstrate the concept of conversion.

4. Use Digital Technology Museum to Achieve the Era of "Edutainment" New Concept

In order to realize the edutainment, museums need to change the focus of attention from the transformation of "subject-oriented" to people-oriented so that the audience can receive information in a relaxed and pleasant atmosphere and participate in the activities of the museum with joy and happiness Gain knowledge.

4.1 Display design is reasonable and diverse.

The layout of the exhibits is further advanced. The display height of the exhibits should take into account the needs of different age groups. For example, some museums have high showcases and overlook the needs of young children. Footpresses can be properly placed in front of the showcase for use by children. Exhibits display density, channel width also needs to consider. At the same time in the exhibits through the lighting, the surrounding environment creates a design atmosphere. For example, the Butterfly Museum at the National Museum of Natural History uses a large number of flowers plants and dancing butterflies to provide visitors with an intuitive observation of the relationship between butterflies' life and plants. The combination of butterfly specimens greatly enhances the participation of visitors. In addition, reasonable arrangement of the route to guide the visitors in an orderly and reasonable manner is also crucial.

4.2 Interactive project is reasonable arrangement

Interactive project design should take into account the psychological needs of different groups of people, to enhance the museum's popularity. For example, children's interactive projects, children need to consider the level of awareness in the content design as simple as possible. Creating atmosphere with light and shadow, sound and special effects provides some simple and fun interactive sessions. In the interactive device to set up a different age group of viewers link, the interface design for children should also be simple and concise, easy to operate. In the introduction of the exhibition entrance design can be designed by the title of the question triggered by visitors thinking, stimulate the desire to explore. It is also possible to stimulate visitors' interest in learning by creating a realistic environment. There should be plenty of rest time and space for the interactive project arrangement. The display design is rich and diverse through the static display, animation images and the interactive presentation of interactive projects. Create a comfortable visit space, multi-level content display, to provide visitors with a pleasant visit experience.

4.3 Concerned about the audience experience

American Museum organizes research and evaluation during the exhibition planning, planning, design and production with a view to improving the quality and effectiveness of exhibitions and exhibits. The American Association of Museums has a dedicated committee of more than one hundred members to study the science of learning to promote non-formal museums, improve the quality of exhibitions, and enhance the audience experience and service levels. Large museums often have special staff to carry out investigation and assessment, small and medium-sized venues are commissioned by the project under the third-party agencies to assess. Assessment includes pre-assessment, process assessment and post-assessment throughout the entire project. [5] (P303) Museums want to enhance the visitors' experience. It is especially important for visitors to experience the feedback from the visitors' experience. Evaluation of the participants' participation is an indispensable part of "entertaining". To understand the needs of visitors in order to better serve them.

4.4 Organize a wealth of education and promotion activities

Museums can promote their own attractiveness through a number of educational promotional

activities. For example, the Taipei Historical Museum organizes Winter Swim Meetings for pupils every year by hosting "Winter Swimmer" winter camps so that participating pupils become commissioners of history museums in primary schools. From the perspective of children introduce the history museum to children, in order to narrow the distance between children and history museum [6]. The theme exhibition held regularly by the museum is also a major measure to enhance the attractiveness of the museum.

5. Conclusions

Digital technology era, a variety of new technologies in the museum display design, but also allow the museum to experience more challenges. The museum should reduce its attitude of being worshiped by the audience and turn "being studied" into an initiative to attract the audience to participate in the educational activities of the museum. Therefore, it is necessary for museums to use "entertaining" measures to enhance their attractiveness and attract more audiences through the rational design of museum exhibits, the rational arrangement of interactive projects, paying attention to the experience of the audience and rich educational activities Museum education project to enhance the museum's cultural transmission effect.

Acknowledgements

This work was supported by research results of 2017 Fujian provincial undergraduate education and teaching reform research project " University Design Art Curriculum extension teaching supported by WeChat platform " (item number: FBJG20170329).

References

- [1] Yang Ling, Pan Shouyong Contemporary Western Museum Exhibition Situation [M], Academic Press, 2005: 162-165.
- [2] Zheng Qin Yan toward the real public nature, how far is China's museum? ----- American Museum of Public Education Enlightenment, [EB / OL] Sichuan Fine Arts Network, 2009 (02): 6-9.
- [3] Zhang Hui. American Museum of Art [M], Liaoning Science and Technology Press, 2015: 354-360.
- [4] Huang Qiuye. The influence of digital technology on the development of the museum's exhibition mode [J]. China Science and Technology Exposition, 2008 (22): 80-86.
- [5] Gu Jieyan. Why excellence? Reflections behind the American Museum Education [J]. Science Education and Museum, 2015 (1): 303-305.
- [6] Shanghai Museum. Chinese Museum Association Museum Management Committee. Chi-made exhibition --- Museum Museum 2 [M], Peking University Press, 2014: 158-162.