Theory and Application of Interaction in Exhibitions

- Take the "Good Things and Stylings" Exhibition of the Hong Kong Museum of Art as an Example

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Abstract: As society develops, people are gradually shifting from necessities to pleasure consumption. More and more people have enough time and money to improve their self-cultivation and aesthetic taste, so the number of art exhibitions has increased significantly. However, many of these exhibitions have problems, such as being unable to guarantee quality and losing the value of the exhibition itself. In typical museums, interaction with exhibits and blending with exhibitions has become a way that can determine the exhibition to stand out, which also represents the indispensable importance of interaction in modern exhibitions. Therefore, this article takes the exhibition "Art Personalized" by the Hong Kong Museum of Art as an example. It uses two analysis methods—theoretical analysis and case analysis—to explain the theory and application of interaction in the exhibition. The interaction makes the exhibition interoperable with the times without missing the classic value, attracting the audience and connecting people with the exhibition. In this way, the artist's emotions can be accurately conveyed to the public, and the effect of two-way communication can be realized.

Keywords: Interaction, Communication, Exhibition, Museum, Art Personalized.

1. Introduction

The role of interaction in exhibitions is very huge. It can enhance the audience's sense of participation and experience so that the audience is no longer just a passive bystander. Through the interactive session, the audience can have a deeper understanding of the stories and meanings behind the exhibits, which also makes the exhibition more attractive and influential. However, in the past research, there were no major cases of interaction applied in exhibitions. Therefore, based on past research, this article uses the theory of human exhibition interaction to fill the research gap with actual exhibitions as cases. This paper first gives an overview of the theories of "human exhibition interaction" and "multi-sensory experience." Secondly, it analyzes the role of interaction in people's search for personal positioning, preserving exhibition memory, and expanding viewing methods in the "Art Personalized" exhibition of the Hong Kong Museum of Art. This article adopts two methods, theory and case analysis, takes the interaction of human exhibition and multi-sensory theory as the theoretical basis, and analyzes the role of interaction in the exhibition "Art Personalized" exhibition

of the Hong Kong Museum of Art as a case. This study will be conducive to the development of the art exhibition industry. The use of adding interaction to the exhibition can improve the audience's participation in the exhibition, which is conducive to the exhibition gaining praise and attracting the audience. It is also conducive to the audience to explore art, trigger thinking about art, and bring more art lovers.

2.   Theoretical background

2.1.   People's Exhibition Interaction

The Human Exhibition Interaction (HEI) framework refers to the communication and interaction that focuses on human beings and exhibitions. This framework is based on the lack of shared knowledge, concepts and vocabulary of exhibition designers, museologists and visiting researchers [1], also caters to the needs of the system framework based on customers, designers and audiences [2].

HEI research focuses on the union and collaboration between customers, designers, customers and the exhibition. In past studies, Miles and Alt and Bitgood discussed the communication and interaction between the exhibition and the audience in the exhibition design, which made an important contribution to understanding how the exhibition affects the audience's response through experience, emotion and behavior[3,4]. In addition, Bitgood believes that the interaction between exhibition factors and the audience's cognition, attention, behavior, exhibition design, etc. should be considered together[5].

HEI has three characteristics. The first feature is the correlation between exhibition factors and audience reactions, which include three elements: experience, emotion and behavior. The second feature of HEI is the technical impact, which enables direct exhibitions and exchanges and interactions between the audience to be realized in a variety of ways. The research combines exhibition construction with new technologies, such as virtual reality, augmented reality, multi-sensory experience and touch system, which can improve a more positive audience experience. And the third feature is narrative. The exhibition uses storytelling to immerse the audience in it, which can achieve a better long-term memory in the audience's mind than the general type of exhibition [6].

2.2.   Multi-sensory experience

On the basis of the interaction of the human exhibition, if the exhibition cannot add non-dominant senses, such as the interaction of smell and hearing, in addition to focusing on visual effects, there will still be problems that the audience cannot deeply experience and understand the exhibits, and cannot achieve the purpose of two-way communication. Although some virtual interaction methods can supplement information graphics or images to the text description, thus providing missing situations or details, it will make the actual exhibits be demeaned in front of technology. The audience will pay more attention to virtual than reality, resulting in neglect of the exhibits [7].

The use of multi-sensory experience in museums will make the museum an inseparable and mutually responsive place to understand the body and feelings in the established environment, and has the characteristics of creating immersion, stimulating emotions, and evoking memories of the times [7].

This sensory interaction connects the audience's senses, which can create an atmosphere exclusive to an exhibition hall or exhibit through smell or hearing, and there is a possibility of defining the exhibition. You can not only feel the author's emotions through watching, but also gain an in-depth understanding of the exhibition through the direct emotions brought by the senses. Multi-sensory interaction can enable the audience to explore personal potential imagination while cherishing real exhibits to build a private virtual appreciation experience.

3. The superiority of "Art Personalized" in terms of interaction

3.1. Memorability in exhibition interaction

In the exhibition "Art Personalized", the curator summarizes the exhibits into four types of temperaments to display. It is divided into four small pavilions inside the separate exhibition hall. Each pavilion is assigned a fragrance that matches its atmosphere. Not only is perfume sprayed in the exhibition hall to shape the atmosphere of immersive experience, but the audience can also get these four The type of perfume sticker, printed with simple strokes of the most famous exhibits in each pavilion, allows the audience to keep it and still enjoy the different moods in different exhibitions after the exhibition. In such an exhibition, there is not only visual interaction, but also olfactory interaction. Through different aromas, the audience has more memories of this exhibition. Whenever they smell the perfume on the sticker, the audience can recall the memory of the museum in a short time. In this regard, "Art Personalized" achieves the integration of narrative and multi-sensory experience in the interaction of the exhibition to strengthen the audience's long-term memory of the museum.

Moreover, at the end of the exhibition, people must go through a relatively narrow corridor to reach the exit. One side of the corridor covers the wall with a mirror to provide a place for the audience to take photos and clock in. There is also a meaning for the audience to examine themselves in the mirror. On the other side, there is a small curtain, and the staff will guide you. People can choose to take selfies in and choose the matching pavilion photo frame measured at the beginning of the exhibition. In this way, the audience can quickly recall the initial test and form a closed loop of the exhibition journey, which also uses physical objects to make the audience remember the exhibition.

Therefore, interaction in the exhibition can make the audience effectively remember the information of that, making the exhibition more communicative and influential.

3.2. Personality positioning in interaction

At the introduction of entering the exhibition hall, "Art Personalized" places a virtual interactive game on the wall. The audience can do a personality test by touch to find their own exclusive collection. The test results will finally be displayed on the screen, and the route to find the exhibit will also be shown. Through the touch system, "Art Personalized" mobilizes the audience's interest in the exhibition at the beginning of the exhibition, and provides them with the concept of "searching", so that the audience can immerse themselves in the exhibition, and the theme of the exhibition is "personality".

And the audience's personality test has only four results, that is, the names of the corresponding four small exhibition halls. While the audience appreciates the personality of art, they also find personal personality in the exhibition. This parallel interaction allows the audience to blend themselves with the exhibition, gain a sense of belonging through viewing and connection in the exhibition, and find personal positioning.

This kind of personalized interaction allows the audience to connect the exhibition with its own characteristics, and also makes the exhibition organically combined with the audience, so that the exhibition content is more vivid.

3.3. Diversified viewing modes in interaction

In the position of introducing Wen Zhenheng, a large table that can be touched and interacted with is placed. Although the brushes, paperweights, etc. placed on the table cannot be picked up directly, there is a touch button next to the item. If you put your finger on it, there will be a corresponding

explanation of the item. This interaction combines touch and visual appreciation, which is interesting and practical.

In and, in the viewing way of Ruan Jiayi's "Where to Land", the last exhibit of the exhibition, there is also a sense of interaction. This exhibit is a miniature landscape made of very small glass products, and it is placed in a position with a certain height. The curator designed a window and telescope in a specific position on the first floor, where you can see the details of the exhibit. And for this purpose, the entire exhibition of the lower basement was designed. In the process of going down the stairs, three specific windows were designed to see the inventive structure of the exhibits under the lights from different angles. When standing in the exhibition hall in the basement, the light city reflected by this work and the water ripples of the Yibaoyi paper-cutting artist placed on the lower floor echoed each other, recreating the external city in the exhibition hall and shaping the immersive installation art.

In addition, by combining the interaction of different media and lighting, the object of "Iron Tree" created by Lin Yousen with waste materials in the exhibition is given in two interpretations. If people look at the building directly, it is a withered corner in the city, but on the whiteboard behind the specially set light, it is closer to an ancient tree.

This multi-modal and multi-sensory interaction allows the audience to input more information about the exhibition.

This kind of interaction with touch, changing the angle or lighting, and expanding the way of viewing, once again places people in the exhibition and enhances the connection between the audience and the exhibits.

4. Conclusion

The exhibition of 'Art Personalized' brings the audience a beautiful experience after combining interaction and exhibition from the perspectives of memory, personalization, and multimodality, respectively. The audience remembers the work with aroma in the way of multi-sensory interaction and can also keep a museum experience with physical things. When the art personalized remains around the audience in the form of memory, it can still arouse the curiosity of the audience to visit again soon after. Besides, using touch interaction to test personality, people find personal positioning in the exhibition, really participate in the exhibition, and integrate into the exhibition. When the exhibition no longer only represents history and culture for people but also represents themselves, the audience's interest in the exhibition can be truly stimulated, and only then can they sincerely attach importance to each exhibit and the meaning behind it. Also, the design of multi-modal diversified viewing methods can help people have the concept of absorbing knowledge, transforming angles, and spending a long time while exploring the meaning. They can use diversified fun to draw people's thoughts on art and explore the relationship between art and individuals.

These three ways use interaction to integrate into the exhibition to turn the exhibition and exhibits into fluid living things, consolidate the stickiness of the original audience, and bring more potential audiences through the memory, personality, and interesting.

However, the case used in this article is only an exhibition in the Hong Kong Museum of Art as an example. The interaction method is not comprehensive enough, the type of art museum cannot be widely applied to other types of museums, and the regional cultural background and the degree of content of the exhibits are limited. Future research will expand the scope of research and involve the role of interaction in other cultural contexts and more types of exhibitions.

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