

Research on the Design of Bengbu Museum Guide based on Information Visualization

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Abstract

Today is an era of rapid technological development and the rapid growth of new technologies and ideas. People's daily lives are filled with all kinds of intelligent digital products, and the improvement of quality of life makes the public's cultural tastes gradually improve, and people's cultural life is getting richer and richer. In the process of development, museums have also started to pay attention to the visitor's experience and gradually apply new technologies. Bengbu as the pearl of Huaihe River, its Dayu culture and Shuangdun cultural heritage is the characteristic culture of Anhui region, Bengbu Museum as the collector of these historical relics, should provide visitors with a comfortable viewing experience, a good visiting atmosphere, leaving a good viewing experience for visitors. The emergence of information visualization technology has brought new development ideas to the design of the Bengbu Museum's guidance system, and how to use new technologies to enhance the cultural and user experience of the guidance system is one of the issues that the Bengbu Museum needs to pay attention to.

Keywords

Museum's Guidance System; Bengbu Museum; Information Visualization.

1. Basics of Information Visualization

1.1. Concept Interpretation of Information Visualization

Literally, information visualization is the expression of conveyed information in a visual language, so it is easy to see that information visualization is a cross-cutting discipline, which includes information graphics, knowledge visualization, visual design, etc. Through the technical processing of information visualization, any text and information can be transformed into visual and intuitive image information. These image information may be pictures, colors, graphs, tables, etc. Information visualization makes abstract information figurative and intuitive, so that people can understand the information quickly.

With the development of the current era, people are in the whirlpool of information explosion, and every day we have to browse countless information, and the current fast food era makes the public tired of reading, short video has become the main way to obtain information, so when facing the large volume of information and boring text, the public will often lose patience. In this environment, information visualization has emerged with the development of science and technology. With the support of information visualization technology, not only can abstract and complex information be conveyed clearly and effectively, but also can enhance the fun of reading and meet the reading needs of contemporary users. Enhance the efficiency of information dissemination.

1.2. Functions of Information Visualization

In the process of information transmission, our eyes and ears are the first to receive the information, and then the brain processes the information. For example, in "Dream of the Red Chamber", a description of Lin Daiyu's appearance "two bends seemingly knitted non-frowning

rain smoke eyebrows, a pair of seemingly weeping non-weeping nimble eyes. The state of the two bridges of sorrow, delicate attack a disease. Tears, panting faintly. Quiet like a delicate flower in the water, action such as a weak willow. The heart is more than the dry one, sick as the western son is better than three points." Through the description of this passage, the textual content enters the brain through the reader's eyes, and then the reader constructs an image of Lin Daiyu in his brain according to the information received. Since everyone's experience is different and has their own subjective understanding of the text, the image of Lin Daiyu in everyone's mind has certain deviations. Therefore, as a carrier of information transmission, words will have certain deviations in the result, while images, because of their intuitive nature, do not need to be converted and processed by the brain after the audience receives them, and have advantages that language and words cannot match in the process of information transmission.

Compared with textual information, pictures have vivid image and strong emotional impact, because the graphics and colors in pictures can stimulate human emotions. In most cases, emotions that are difficult to express in words can be expressed clearly and vividly through images, making readers feel emotional resonance and leaving a deep impression. The development of modern science and technology has made the research of various disciplines more specialized, and the depth and breadth of research has been further enhanced, and various disciplines have influenced each other and crossed each other's development. The emergence of this development trend has led to more disciplinary terms and professional vocabulary being proposed, as these professional terms are rigorous and professional, and generally more obscure and difficult to understand, making it more difficult for other non-professional public to understand. The information visualization can effectively solve this problem by transmitting the subject knowledge visually through pictures, making the obscure terminology easier to understand and facilitating the exchange of information and dissemination of professional knowledge among various disciplines.

In short, the meaning of information visualization is to communicate information more effectively by using visual and intuitive images. The essence of information visualization is to transform abstract data and text into quickly recognizable image information, which can be accessed by audiences without logical analysis and reasoning. To a certain extent, information visualization lowers the threshold of receiving knowledge and makes knowledge communication easier.

2. Features of the Museum Guide System

2.1. Functionality of the Museum Guide System

As an indicative sign of a space place, the functionality of the guide system is the most basic and most important attribute, functionality is to guide the view system in the form of graphics, text, etc., the effective information accurately conveyed to the audience, which is an important criterion to measure whether a space guide system is qualified. The information in the guidance system is the value of the existence of museum guidance system, the ultimate purpose of the establishment of the guidance system is to accurately convey information to visitors to the exhibition hall. In the process of establishing the guide system to maintain a certain sense of order, but also in accordance with certain standards for the design of the guide system, if the guide system in the establishment of the process without a certain degree of order, then in the process of information transfer, it will cause information confusion, the functionality of the guide system will no longer exist.

2.2. Harmony of the Museum Guide System

Museums, because of their specificity, do not need "dazzling" signs like other public spaces, such as stations and highways, where everything is in a hurry, making it necessary for their signage to be eye-catching so that people can distinguish them from each other and quickly capture the information they need. Museums, on the other hand, are "gentle" places where the signage can become part of the museum's culture, built for people who have time to search and find the signs. Therefore, the museum's guide system should be closely integrated with the museum in terms of visual effects and spatial layout, and should have the conspicuousness of the signage, but not be too eye-catching and become the visual center. Due to the special nature of the guide system, most museums have a small volume of guide systems and do not have eye-catching colors. And the style of the guide system is the same as the overall style of the museum.

2.3. Harmony of the Museum Guide System

In the museum space, the audience can accurately locate and identify the direction through individual signs because of the completeness of the guidance system. The guidance system does not guide the audience through a single sign, but through a series of signs combined to form a whole. In the process of guidance, the guide signs should not only meet the complete, independent and unified information system of individual signs, but also play a guiding role in the overall guidance system. If a certain information link in the guidance system has information errors or information interruptions, then the guidance system will not work and will not have the integrity of the system.

2.4. Cultural Aspects of Museum Guidance Systems

Museums are the unity of historical and modern sense. Each museum has its own unique development context, through years of precipitation, has its own sense of history, while in the process of time development, but also reflect the cultural context of each period, so the museum both modern sense. Museum guide system as part of the museum, also need to reflect the characteristics of the museum culture, so in order to ensure that the basic functionality of the guide system at the same time, perhaps to promote the cultural characteristics of the museum. This not only enhances the cultural characteristics of the museum, but also promotes the value of identification with the museum's own culture.

3. Principles of Bengbu Museum Guide Design based on Information Visualization

3.1. Humanity Principle

Designers should extract the cultural characteristics of the Bengbu Museum from the cultural symbols belonging to the Bengbu Museum, and apply them to the design of the guide system, so that they can design a more cultural taste of the museum's own guide system. Tapping into the museum's own cultural elements will allow the public to have a more immersive experience when visiting the exhibition hall, while the museum will not destroy its own aesthetics due to the guide signs that can be seen everywhere.

Bengbu Museum's double-dun pottery sphinxes, sheep-shaped bronze lamp holders and other cultural relics have distinctive patterns and cultural characteristics of Bengbu Museum. Discovering graphic symbols from these relics, redesigning them, and using them in the Bengbu Museum's guidance system can display the museum's cultural image more intuitively, bring visual enjoyment to visitors, and let visitors be inspired by the culture of the Bengbu Museum. With the support of information visualization technology, visitors can use the guidance system more intuitively and immersively, and the addition of the Bengbu Museum's own cultural symbols can bring a better visiting experience, while also invisibly promoting Bengbu culture.

3.2. Systematic Principle

There are more categories of museum guide compared to other public spaces, and so is the guide system of Bengbu Museum. Broadly speaking, it can be divided into facility logos, information logos, road logos, these various kinds of logos to be properly integrated into the Bengbu Museum requires systematic visual elements to be linked, first of all, the use of color to be harmonious, need to fit the cultural connotation of the museum, and the Bengbu Museum's own temperament, again, the appearance of the logo size should also be divided and standardized according to the different levels.

Museum guidance system is a three-dimensional space into a flat layout, using a unified design approach to form a complete guidance system. From the visual elements to divide the museum space area: images, colors, text, the use of images, colors can allow visitors to quickly distinguish the space area, text allows visitors to more accurately capture the spatial information. From the shape appearance to divide the museum space area: guide system in the shape, texture of the change can also be divided into areas. In the actual design process, each guide sign is an independent and unified information system, and each sign is embedded in the entire guide system, forming a complete visual system. Therefore, the design of the Bengbu Museum's guidance system should not only maintain the integrity and independence of the individual guide, but also "take into account the overall situation" and "carry on" in the complete guidance system to achieve the coherence of information. The integrity of the guidance system for the overall visual effect of the Bengbu Museum also has a certain degree of enhancement.

3.3. Innovative Principle

With the rapid development of society, information visualization design has emerged and continues to infiltrate all aspects of our lives. People's quality of life has also been greatly improved, and they have a certain pursuit of cultural life, and their demand for art and culture has gradually increased, which in turn has promoted the development of cultural undertakings. As a public place with cultural and educational significance, museums are becoming more and more popular with the public. Therefore, it is necessary for museums to enhance the visitor experience. Museum guidance system throughout the whole process of visitors, should be in line with the trend of development of the times, to improve and reform it, and promote its development to a more humane direction. Traditional guide signs generally use acrylic, metal, glass, wood materials, etc., the development of digital, so that the application of the guide system scene has more possibilities. Some museums have started to use online guide system, visitors can simply scan the QR code with their cell phones to appear in the exhibition guide map, VR real-life display of the visitor's surroundings, compared to the traditional guide signs to use more simple, convenient, and a stronger sense of experience. Bengbu Museum can make its own online guide system, and add exhibits in different languages to the online guide system to facilitate visitors from all over the world, in addition to the establishment of the online guide system can also facilitate remote visitors to the museum, promote and spread Bengbu culture, enhance the audience's interest in Bengbu, and drive the development of tourism in Bengbu.

4. The Significance of the Application of Information Visualization in the Design of Bengbu Museum Guide

The application of information visualization in the museum guide system is the embodiment of modern technology, and its unique sense of information experience is the advantage that distinguishes it from the traditional guide system. The introduction of digital guidance system in Bengbu Museum is an inevitable trend of social development, the use of visualization guidance system not only to meet the visual experience of visitors but also to save social

resources. The concept of environmental protection has been put on the agenda of every country, and the visual guide system should also respond to the call for environmental protection, so as to use the least amount of resources to convey the most information.

The development of today's society requires the coexistence of design content and style, as the public aesthetic improvement, taste has also improved, Bengbu Museum to tap their own cultural elements, design inspiration, applied to the guide system, through its guide system to spread the local culture, the guide system has become one of the Bengbu Museum's "collection". The combination of Bengbu Museum's guidance system and information visualization is an upgrade and improvement of its guidance system, which meets the needs of the times, breaks the boundaries of space and time under the premise of ensuring functionality, expands the scope of information dissemination, becomes the unique language of Bengbu Museum's guidance design, and enhances the visibility and reputation of Bengbu Museum.

5. Conclusion

The guidance system is an important facility for museums to show the level of service, accompanying the visitors throughout the visit, and is an important rating standard for the visitors' satisfaction, and the visitors mainly visit the museum to obtain sensory and spiritual and cultural satisfaction, so the guidance system of the museum also has a pivotal role in the museum. The introduction of information visualization technology into the Bengbu Museum's guidance system will result in a richer form of information interaction, more diverse content, and a greater sense of visitor experience; once again, the introduction of information visualization technology in the Bengbu Museum's guidance system can also bring new ideas to the Bengbu Museum's exhibitions and further promote the development of the Bengbu Museum.

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