Research on Visualization Design Based on Jiangxi Red Culture

Lingling Qiu[(✉)]

Information Visualization Research Institute, Nanchang Institute of Technology,
Nanchang 333000, China
`QiuLingLing2023@163.com`

Abstract. Red culture is one of the important cultures formed in the development of Chinese civilization, which has provided a strong boost for the unity and rejuvenation of the Chinese nation. Under the background of the new era, based on Jiangxi red culture, relying on the devisable elements in the meme, the method utilized in this paper is visual design in the form of visual expression to maximize the excavation of Jiangxi red culture materials, implement the red culture inheritance, explore the possibility between visualization design and interactive design, and provide new ideas for the design and research of red culture.

Keywords: Jiangxi red culture · visualization design · visual design

1 Introduction

"Culture" is the soul of a country and a nation, while "red culture" is an important spiritual wealth of the Chinese nation, and it is also the foundation of the country. Red culture has recorded the spiritual outlook, fighting deeds, revolutionary history and other brilliant cultural forms of revolutionary ancestors in various forms. It is precisely because of the existence of these cultural contents that red culture has become a huge spiritual force to unite people, guide the society and achieve great rejuvenation. In today's era of swarming thoughts, we should pay more attention to the promotion and inheritance of "red culture" among the younger generation. Psychological research shows that more than 80% of human learning and memory are completed through vision, while ordinary people can only remember 20% of pure text content [1]. In the era of information explosion, the way in which words convey information is no longer effective, but the simple and clear graphical symbols are more easily attracted. Therefore, it is of profound practical and theoretical significance to explore the effective combination of red culture and the visualization of design.

2 Overview of Jiangxi Red Culture Connotation

Jiangxi has a large number of well preserved red resources. The former sites of the red revolution are dotted with beautiful landscapes, just like a revolutionary history museum without perimeter walls. There are 2344 revolutionary remains, old sites and monuments,

2960 immovable revolutionary cultural relics and 43650 movable revolutionary cultural relics in the province; 87 counties (cities and districts) in the province were displayed in the list of revolutionary relics protection and utilization areas and counties in two batches [2]. On the land of the Ganjiang River and Poyang Lake in Jiangxi Province, there are many revolutionary sites, red cultural relics and heroic stories. The echo of history reverberates here for a long time and we are overwhelmed by the attachment. Jiangxi's red culture has both rich material resources and rich spiritual connotation. In terms of extracting the content of red culture genes, we should closely focus on the four main lines of spiritual civilization, namely, the spirit of Bayi, the spirit of Jinggangshan, the spirit of the Soviet Area and the spirit of Fang Zhimin. We are expected to make good use of resources, carry forward traditions, and inherit genes characterized by red culture, highlighting the features of Jiangxi's red culture.

3 The Function of Visualization Design Based on Jiangxi Red Culture

Vision has become one of the channels for people to understand all kinds of information. Information is transformed into information symbols through the visual nervous system. Visualization design is the way and method to realize the transformation of information symbols. The original abstract information can achieve "intuitive" visual communication, so as to achieve the purpose of optimizing, receiving and understanding information. It is a dynamic expressive way that transcends language barriers. Visualizing the contents (artifacts, narratives, themes, spirits) of the gene construction of Jiangxi red culture can transform complex abstract information into concise visual language, shorten the distance between people and information, and provide more intuitive ways to analyze and understand information. The specific functions are mainly reflected in the following four aspects.

3.1 Transform the Existing Form of Red Culture Information

The existence of information is usually an abstract form, which will bring difficulties to the public in obtaining and understanding. Because red culture is far away from modern society, most of its information exists in an abstract form. Transforming abstract forms into recognizable visual forms can be achieved through symbolic design. In the process of decoding information into symbols, the difficulty of understanding can be reduced, and the "invisible" can be transformed into "tangible".

3.2 It is Possible to Establish a More Systematic Basis for the Identification of Elements of Red Culture Information

Sorting out and standardizing the visual elements of red culture information can form a complete psychological impression of red culture and establish a clear information reading process. The scope and direction of later information expression shall be specified to ensure that the information is controllable, complete and organized. This systematic information framework is also the key part of visualization design.

3.3 Visualization Design Can Enrich the Expressive Means of Red Culture Information

Visualization design can make information look more vivid, interesting and easier to understand. Diversified visual elements and design methods can enrich the information expression "vocabulary" of red culture with the language of design, and broaden the transmission channels of red culture. At present, the traditional static flat visual is starting to develop towards the dynamic visual of digital information technology. That is to say, when dealing with visual language, its expression form can be integrated into the dynamic communication on the basis of static, and the dynamic involvement has enriched the expression means and forms of information processing.

3.4 Realizing Multi-dimensional Analysis of Red Culture Information

Visualization of diverse design expressions for information makes it no longer a one-way analysis in the past, but enters the era of multi-dimensional analysis [3]. The visual presentation of red culture involves three dimensions. First, from the perspective of information presentation, accuracy, completeness and credibility of information should be ensured, which is also the basis of visualization. Second, from the dimension of public appeal, relevance, narrative, conciseness and sense of the times are the key to demonstrating and interpreting information. Thirdly, from the dimension of function and purpose, red culture not only has tourism usage, but also has education, popular science and other functions. Easy-to-read and efficient transmission of information is the core of visual design.

4 Visualization Design Method Based on Jiangxi Red Culture

Visualization design process can not come out without foundation, it is a science based on design, research, users observation, cognitive psychology and human-computer interaction [4]. The visualization design presentation of Jiangxi red culture is optimized through theme research and resource sorting; 5 s rule of visual attractiveness; Using the visual psychology of characters to strengthen recognition; To show the relevance among things with graphics, colors, symbols and other elements; The design methods such as means of expression and technology selection can make the public better enjoy the charm of national and regional red culture, so as to achieve the purpose of publicity and education.

4.1 Theme Research and Resource Arrangement and Optimization

The research of theme and the optimization of resources are very important in the visualization design of red culture. Ideally, to choose a good theme, the focus should be on clarifying its development context, which can have a clear and accurate logic. If these themes can surprise the public, they may gain more. When studying the theme, a clear main line is needed, around which all icons, illustrations and text related to visual design should be developed. The central task of this method is to eliminate the rough and extract the essence, grasp the key points and simplify the content. For example, Jiangxi's

red resources are most representative of the "four cradles" (Jinggang Mountains, Nanchang, Ruijin, Anyuan), "four resorts" (Tonggu, Yudu, Xiaoping Path, Fuhua Mountain of Gongqing City), "one camp and one person" (Shangrao concentration camp, Fang Zhimin), etc. These topics will make information fresh and interesting, and make people willing to share these knowledge with friends. However, if the design contains too much information or there is no clear main line, it will confuse the public, thus contributing to easily surrender or reluctance to clarify these contents.

4.2 Five Seconds Rule of Visual Attractiveness

According to the network analysis of millions of page views on the website, Randy Krum found that most readers only have 5 s to read the information, and then decide whether to continue browsing or leave [5]. In the era of information explosion, when people browse mobile phones or other information, it is similar to searching for targets on the dazzling and crowded shelves. If the information cannot stand out in time, it will commonly be submerged in massive information. Therefore, simple and clear, beautiful and distinctive visual effects are the most effective way to catch the public. The research points out that most of the page viewing time will be kept between 5–10 s, and the most critical information must be clearly conveyed to the audience in this golden 5 s to attract and catch the eye and guide the continued reading. For example, in the transmission of Jiangxi red culture, the outstanding information of years is the visual center to show the historical context in red culture. The Northern Expedition in 1926, the Nanchang Uprising in August 1927, the Autumn Harvest Uprising in September 1927, the Jinggang Mountains Revolutionary Base in October 1927, the joining forces in Jinggangshan in April 1928, the establishment of the Chinese Soviet Provisional Central Government in 1931, and the Red Army's Long March departing from Ruijin in October 1934, etc. The emergence of numbers will make people more sensitive, so as to achieve the purpose of attraction.

4.3 Using the Visual Psychology of Words to Enhance Recognition

Text is an indispensable part of visualization design. Words can accurately express the information structure by relying on their own content to help the public read and understand. The composition of Chinese characters consists of strokes. As a mother tongue, people do not need to recognize strokes to understand Chinese characters, but recognize Chinese characters as a whole pattern, even words and sentences are also the whole recognition pattern. Therefore, in visualization design, it is not necessary to have too many words, but to establish feature driven and context driven, extract the main expression of feature words and context conditions and clues to understand the text content. Attention should be paid to reducing excessive text information in visualization text arrangement; Rigorous handling of image text relationship; Correct use of font, font spacing, font size, etc. Generally speaking, font spacing, font size, etc. mainly depend on the selection of font. For example, boldface characters have thicker strokes and take up more space, so the font spacing should be larger accordingly; The font itself of regular script is slender and flexible, and the strokes are slight, taking up less space, so the font spacing can also be correspondingly smaller. If the spacing between boldface and

regular script is not distinguished, the result is that regular script characters will appear scattered, resulting in visual center fragments, and ultimately affecting reading.

4.4 Show the Relevance Among Things with Graphics, Colors, Symbols and Other Elements

Graphics are all symbols that can produce visual information. They are illustrative picture images and visual language to express information. In the visualization design process of Jiangxi red culture, the differentiated visual display of complex information content through color, graphics, symbols, etc. can help the public distinguish information, find essential information, and also be more conducive to memory. The use of fonts, images, illustrations, maps and data visualization in information chart design varies from content to content. For example, the common design works of red culture mostly are featured "red" as the main color. In order to distinguish the relevance between information and stories, artifacts, old sites of red culture and other things, narratives, themes, spiritual connotations and other contents can be exploited in the visualization design process, which can be conducive to the public to distinguish the content with supplementation of colors and graphics based on unified form.

5   Techniques of Visualization Presentation and Technological Choice

Lev Manovich pointed out that "culture" in the 19th century is defined by novels, and "culture" in the 20th century is defined by films, while "culture" in the 21st century will be defined by interactive interfaces [6]. In the informative and digital era, interaction becomes ubiquitous. When you see a picture or chart that is not too clear on your mobile phone, your thumb and index finger will automatically enlarge the screen. Therefore, the display, dissemination and promotion of visualization works also need to follow the pace of the times, and use this more interactive way to present close to the times. High definition pictures and touchable screens can better show the details of the information conveyed, and eye-catching magnified icons and subject search boxes can achieve better interaction with the public.

6   Conclusions

Jiangxi, as one of the cradles of red culture, has rich red resources. The main purpose of the research on visualization design based on Jiangxi red culture is to explore the visual way to promote red culture, find a visual expression way that is more in line with the development of contemporary society, and create visual works with more contemporary aesthetics and profound connotation. The main significance of visual design is to retain the unique style and concept of Jiangxi red culture to the greatest extent, and to integrate with the culture in contemporary society.

References

1. Li, S.D. (2021). Introduction to information visualization design. Tsinghua University Press. Beijing, China.
2. Ma, C.L. (2022). Research on Information Visualization Design Method based on ISOTYPE. Liaoning Normal University. https://kns.cnki.net/kns8/defaultresult/index
3. ZAKER News. (2021). Red Jiangxi Brilliant and brilliant. https://www.myzaker.com/article/617765421bc8e0dc72000035.
4. Zhang, Y., Wang, L.F., Shun, L. (2017). Design of Information Visualization. Chongqing University Press. Chongqing, China.
5. RandyKrum. (2014). Visual communication: Use infographic design to let the data speak. Publishing house of electronics Industry. Beijing, China.
6. Yan, D. (2020). Discussion on the Application and Development of Interaction Design in Museum Exhibition Space in the Digital Age. Public art projects. 08:117–118. https://kns.cnki.net/kns8/defaultresult/index