



УДК 7.012: 004.51

## SPECIFIC FEATURES OF VISUALIZATION OF REGIONAL CULTURES IN THE DESIGN OF MUSEUM APPLICATION INTERFACES IN CHINA

YUAN Boya<sup>1,2</sup>, SKLIARENKO Nataliia<sup>1,3</sup>

<sup>1</sup> Kyiv National University of Technologies and Design, Kyiv, Ukraine

<sup>2</sup> Shaanxi University of Science & Technology, Xi'an, People's Republic of China

<sup>3</sup> Lutsk National Technical University, Lutsk, Ukraine

1176712370@qq.com, nata\_skliarenko@ukr.net

*This paper focuses on the visual expression characteristics of regional culture in their application interface design, and explores the important role and artistic value of regional culture in the design of application interfaces. It was found that the specific features of the visualization of regional culture are uniqueness, aesthetics and personalization. The study analyses the ways of transforming regional cultural elements into recognizable symbols through visual design language to improve the user experience and promote innovative development of the museum's digital structure.*

**Key words:** Museum Interface Design; Regional Culture; Visualization; User Experience, Chinese Culture.

### INTRODUCTION

Museums carry a history of cultural development. Provincial museums in China are important places for carrying and disseminating traditional culture. In the digital era, China's museums are experiencing an extension from physical space to digital space. As an important part of the digital construction of museums, the interface design of mobile applications not only affects the user experience, but also undertakes the important mission of cultural dissemination. Each region of China is distinguished by its own unique cultural characteristics. Regional culture covers elements such as historical background, social customs, humanities, arts and spiritual beliefs, and is influenced by geographical environment and historical evolution. In the interface design of museums, the visual expression of regional culture attracts the audience's cultural attention and sense of participation, and enhance the cultural dissemination effect and cultural popularity of museums. By integrating regional cultural elements into the interface design, the museum can better display its unique cultural charm and attract the audience to deeply understand the local culture.

### PURPOSE

This study aims to explore the visual expression characteristics of regional culture in the interface design of museum applications in China. The study adopts the case study method, selects representative museum applications for analysis,



deconstructs the visual characteristics and semantic connotations of traditional cultural symbols with the four core dimensions of graphics, texts, characters, and colours, and summarizes the visual expression system of regional culture in the interface design of museum applications.

## **RESULTS AND DISCUSSION**

Regional culture is the material and spiritual carrier precipitated by a region in the process of long-term development, and it is the core of the museum to create a unique visual image. Through visual design, the symbols of regional culture are transformed into intuitive visual images, thus making the museum's display more vivid and helping the audience better understand and perceive the uniqueness and connotation of regional culture. Graphic elements play an important role in shaping the visual identity of a regional culture, as do texts, characters, and colours.

The specific characteristics of regional cultural visualization are reflected in the following aspects: uniqueness, aesthetics and personalization.

First, the uniqueness of the interface design is reflected in the unique elements embedded in the regional culture, so that the interface distinguishes itself from other similar applications in terms of visual image and cultural experience, and creates a distinctive cultural recognition. Each region has its unique graphic elements and text elements, incorporating these regional cultures into the interface design, designing a distinctive visual image and enhancing the user's point of memory. Graphic elements are reflected in the extraction and reconstruction of cultural symbols. Sichuan Sanxingdui Museum (Table 1:a) is famous for its unique Sanxingdui culture. In the interface design, the designer extracts the graphic elements of the iconic cultural relics, such as bronze masks and bronze sacred trees, as the main visual symbols of the interface design, and reconstructs them by using the design method of prototype direct reference, so as to make them more modern and culturally recognizable [1]. Each region has its own unique text art, with differences in text style, calligraphy tradition, language expression, etc. Text elements are reflected in the reproduction and innovation of text expressions. The National Museum of Chinese Writing (Table 1:b) in Henan Province is the first script-themed museum in China.






Secondly, the aesthetics of the interface design is reflected in the extraction of visual elements of regional culture and the fine presentation of details, so that the interface not only conforms to the modern design aesthetics, but also creates the cultural atmosphere and emotional tone of a specific historical period, and enhances the overall quality and cultural infectivity of the application. The character element is embodied as a figurative expression of cultural spirit, and linking the character images of various historical periods with the cultural background helps users better understand the historical connotation and aesthetic value of the exhibits, and also makes the cultural heritage more vivid and concrete. The Shaanxi History Museum (Table 1:c) displays a rich historical and cultural heritage. In the interface design, the designers extracted the characteristics of female characters in the Tang Dynasty and utilized prototype feature innovation design methods to reproduce their details of clothing, posture, and expression, vividly recreating the prosperity of Tang Dynasty art and an open and tolerant society. The color



elements are reflected in the color restoration and expression of traditional art. Dunhuang murals (from The Dunhuang Museum (Table 1:d)) are famous for their grand scale, rich content and exquisite skills. In the interface design, the designer uses the classic colors of the murals as the main colors, such as earth yellow, ochre, lime green, etc., and adopts the design method of colour direct reference to create a strong local cultural atmosphere and extremely high aesthetic value [2].

**Table 1**

Examples of museum applications interface design in China

 <p>Sanxingdui Museum</p> <p>a</p>	 <p>National Museum of Chinese Writing</p> <p>b</p>	 <p>Shaanxi History Museum</p> <p>c</p>	 <p>Dunhuang Museum</p> <p>d</p>	 <p>Qin Shi Huang Imperial Mausoleum Museum</p> <p>e</p>
<b>Specific elements of regional culture</b>				
Bronze figure of a large standing man	Oracle	Tang Dynasty Costume	Mural	Terracotta Warriors
<b>Visualization of design methods</b>				
Prototype Direct Reference	Direct Application of Text	Prototype Feature Innovation	Colour Direct Reference	Prototype Feature Innovation
<b>Specific features of regional cultural visualization</b>				
<i>Uniqueness</i>		<i>Aesthetics</i>		<i>Personalization</i>

Finally, the personalization of interface design is reflected in the integration of regional culture into the design by combining users' interests, needs and current design trends. Increasing user interest in culture occurs through customized interface elements, interaction methods, and content presentation to promote the living heritage of regional culture. The Qin Shi Huang Mausoleum Museum is located in Shaanxi Province (Table 1:e). In the interface design, the designer extracted the image of the Terracotta Warriors and used the design method of prototype feature innovation. The design not only meets the needs of traditional culture lovers for historical authenticity, but also caters to the modern personalized aesthetic trend, especially attracting the attention and participation of young groups. In this way, the museum not only inherits the rich historical culture, but also stimulates the new vitality of traditional culture in innovation, promotes the organic integration of cultural heritage and modern design, and realizes the dialogue and resonance between tradition and modernity [3].



## CONCLUSIONS

This study highlights the importance of regional culture in museum application interface design. Regional cultures, as the core of creating a unique visual image of the museum, are transformed into an intuitive visual image through visual design to enhance the user's sense of cultural identity and experience. Research has found that the visual expression of regional culture is mainly achieved through the four aspects of graphics, texts, characters, and colours. At the same time, with the help of modern design means and styles, it is crucial to carry out innovative translation and reconstruction of traditional cultural symbols. In this way, modern design methods and personalized styles breathe new life into traditional culture and attract more young users. In addition, the study concludes that the characteristics of regional culture visualisation focus on uniqueness, aesthetics and personalisation. The effective use of these characteristics by designers creates a unique visual image, which significantly improves the recognition and attractiveness of the museum application, helps the museum to build a digital cultural platform that integrates cultural connotation and user experience, and vigorously promotes cultural inheritance and innovation.

## REFERENCES

1. Lijuan Z. A Study of Sanxingdui Museum's Building of International Communication Capacity. *Contemporary Social Sciences*, 2022 7(5), 104. <https://doi.org/10.19873/j.cnki.2096-0212.2022.05.007>
2. Ma J., Han, X., & Hu, M. Research on the development and promotion of museum's cultural and creative products: a case study of Dunhuang museum cultural and creative products. *In SHS Web of Conferences*, 2022 (Vol. 148, p. 01005). EDP Sciences. <https://doi.org/10.1051/shsconf/202214801005>
3. Zilin W. The museum of Qin Shi Huang terracotta warriors and horses. *Museum International*, 1985, 37(3), 140-147. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000067822>

**ЮАНЬ Боя, СКЛЯРЕНКО Н.**

## **СПЕЦИФІЧНІ ОСОБЛИВОСТІ ВІЗУАЛІЗАЦІЇ РЕГІОНАЛЬНИХ КУЛЬТУР У ДИЗАЙНІ ІНТЕРФЕЙСІВ МУЗЕЙНИХ ДОДАТКІВ У КИТАЇ**

Робота присвячена аналізу особливостей візуалізації регіональної культури в дизайні інтерфейсів додатків для музеїв, підкреслено важливу роль та художню цінність регіональної культури. Виявлено, що специфічними рисами візуалізації регіональної культури є унікальність, естетичність та персоналізація. У дослідженні проаналізовано способи перетворення регіональних культурних елементів на впізнавані символи за допомогою мови візуального дизайну для покращення користувацького досвіду та сприяння інноваційному розвитку цифрової структури музею.

**Ключові слова:** дизайн музейного інтерфейсу; регіональна культура; візуалізація; користувацький досвід, китайська культура.