

The Application Research of Chinese Painting Elements in App Interface Design

Cong Fu

Liaoning Communication University, Shenyang, Liaoning, China

Abstract. This study aims to explore the application of Chinese painting elements in app interface design to enhance user experience and visual aesthetics. To this end, it first introduces the research background and problems that necessitate the search for new design elements, namely the current issues in application interface design such as excessive uniformity and insufficient differentiation. Secondly, it clarifies the purpose and significance of this research by innovating app interface design through the application of Chinese painting elements to enhance user experience and visual aesthetics. Then, it briefly describes the research methods, experimental design, and investigation methods employed. Specifically, it analyzes the visual characteristics, aesthetic significance, and traditional techniques of Chinese painting, and studies the basic principles, common methods, and user experience of app interface design.

Keywords: Chinese Painting Elements; App Interface Design; Application Research.

1. Theoretical Overview

1.1 The Basic Theory of App Interface Design

App interface design refers to the process of constructing user interfaces in mobile applications through visual and interaction design methods. It aims to provide users with a clear, intuitive, and efficient application experience to achieve the functions and goals of the application. Interface design involves considerations of design elements, interaction methods, layout, and other aspects to create a user-friendly and attractive application interface. Interface design should comprehensively consider user needs and psychological feelings, as well as the application's functions, goals, and brand image.[1].

1.2 The Concept of Chinese Painting

Chinese painting, also known as guohua, is an artistic form of traditional Chinese painting and one of the treasures of Chinese culture. It has a long history and a unique artistic style, serving as one of the essence of Chinese culture and carrying the aesthetic tastes and cultural connotations of the Chinese people [2]. The origin of Chinese painting can be traced back to the plastic arts of ancient China, with the earliest examples found in rock paintings and pottery patterns from the Neolithic Age. Over time, Chinese painting has gradually developed into a distinctive painting style. In ancient China, painting was widely applied in various artistic forms such as murals, artifact decoration, and calligraphy. Eventually, Chinese painting emerged as an independent painting art form.

1.3 The Connection between Chinese Painting and App Interface Design

There is actually a connection between Chinese painting and modern mobile applications. Although Chinese painting is traditionally an art form created with traditional tools such as paper, ink, brushes, and ink-wash pigments, with the continuous development of technology, modern artists have also begun to integrate digital technology and mobile applications into Chinese painting.

The application of Chinese painting elements in app interface design has unique visual characteristics. By borrowing the characteristics of Chinese painting's brush and ink expression, flexible ingenuity, and overall harmony, it can bring users a brand-new visual experience and enhance users' brand recognition and emotional resonance with the app [3].

2. Analysis of Chinese Painting Elements in App Interface Design

2.1 The Application of Chinese Painting Techniques

In app icon design, designers can apply the brush and ink techniques of Chinese painting, outlining the icon's contour with concise lines to express a concise yet connotative image [4]. For example, in the icon design of the "Cultural Relics Plus" app, red lines are used to outline the two characters "文物" (cultural relics), and the outer contour is wrapped around the two characters with lines. In addition to the application of traditional Chinese painting elements, designers can also innovatively use the techniques and concepts of Chinese painting. For instance, in app icon design, designers can employ the freehand brushwork in Chinese painting to outline dynamic images with concise lines, expressing the characteristics and dynamism of the app's functions..

2.1.1 The Design of Composition in Icons

Chinese painting also serves as a source of inspiration for app icon design, particularly emphasizing the expression of space and a sense of balance. Designers can draw insights from this and arrange icon elements in a reasonable manner. For example, in the icon design of shopping apps, the layout techniques of Chinese painting can be applied to balance product elements with shopping cart elements, highlighting the joy of shopping, thereby increasing user engagement and attracting more app users.

Overall, by drawing on aspects such as the brush and ink techniques, composition, and layout of Chinese painting, traditional cultural elements can be combined with modern app design to create innovative and appealing icon designs. This not only enriches the artistic quality of app interfaces but also provides users with a unique visual experience and a sense of cultural integration.

2.2 Analysis of Chinese Painting Elements in App Motion Design

Chinese painting, as an ancient and elegant art form, possesses unique visual effects and creative concepts. In modern interface design, drawing on the elements of Chinese painting and applying them to app motion design can not only enhance the aesthetic appeal of the interface but also create a distinctive user experience. This section will analyze the application of Chinese painting elements in app motion design through practical examples, aiming to explore how to achieve a perfect integration of traditional art and modern technology.

The first example is an app named Moyun. During the app loading and page transition processes, the designer utilized the common "shades of ink" characteristic of Chinese painting. By using gradient and blur effects, the screen gradually transitions from black, white, and gray to vivid colors, perfectly interpreting the "ink charm" in Chinese painting. This motion effect not only enhances the smoothness of page transitions but also allows users to experience the unique artistic conception of Chinese painting.

3. Analysis of Chinese Painting Elements in App Color Matching

In app interface design, color matching is one of the most crucial factors. As a unique and rich form of visual expression, the application of Chinese painting elements in app color schemes can present users with a distinctive visual experience [4]. This section will analyze practical examples of Chinese painting elements used in app color matching and explore how they can highlight and complement elements in a series of app interfaces.

When selecting a color theme, designers can draw inspiration from the color characteristics of Chinese painting. Chinese painting is often characterized by light ink and clear colors, emphasizing the expression of artistic conception and an understated elegance. Therefore, in app color matching, designers can use soft and subtle tones, such as light gray, pale green, and light blue, to create a serene and tranquil atmosphere. By combining the ink-wash effects of Chinese painting, they can apply ink-wash gradient color transitions to make the interface colors more soft and harmonious.

The app produced by the Palace Museum adopts a fresh and elegant color scheme, with the interface featuring traditional Chinese colors such as brown-beige and yellow as the main tones. These colors have a warm and classic texture, evoking the hues of traditional Chinese paintings and the wooden materials of ancient architecture. At the same time, they harmonize well with the illustration style in the interface, creating a unified and cohesive visual experience. These colors are not only reflected in the cultural relics display pages but are also consistent throughout all sections of the app, creating a strong atmosphere of traditional Chinese culture

4. Rationalization of Chinese Painting Elements in App Interface Layout Design

Incorporating Chinese painting elements into app interface layout design can provide users with a novel visual experience while showcasing the unique charm of traditional Chinese culture. By rationally applying elements such as lines, shapes, and negative space from Chinese painting, the effect of optimizing interface layout can be achieved.

Chinese painting, characterized by its ethereality and profound artistic conception, can be reflected in interface layout design. Common composition principles in Chinese painting, such as symmetry, negative space, and layering, can be applied.

Meanwhile, by adding elements like transparent layered design, dashed lines, and clouds/fog, an ethereal and deep sense with Chinese painting style can be created.

4.1 Rational Use of Space

The concept of emphasizing negative space in Chinese painting can also be applied in app interface layout design. By rationally using negative space, the interface can be made more concise and refreshing, creating a comfortable user experience.

For example, the homepage of the Forbidden City 365 app can incorporate appropriate negative space. This involves expanding the spaces between city walls and palaces to leave certain "blank areas." If the goal is to allow users to fully understand the overall layout of the Forbidden City, it can be divided into different sections for browsing. This achieves the unity of purpose and visual appeal.

4.2 Distinguish Visual Hierarchy

In app interface layout design, the size and proportion of Chinese elements can be used to highlight main content, making the primary-secondary relationship clearer. Additionally, lines from Chinese painting can be employed—various line shapes such as thickness, curvature, and straightness can distinguish between primary and secondary content. The sense of layering emphasized in Chinese painting is also applicable: main content can be placed in the foreground and secondary content in the background, or layers can be overlapped to achieve primary-secondary differentiation.

Taking the problematic Chang Xiang Si app as an example, the size and proportion of its over ten different dimensional contents can be adjusted. For instance, dimensions represented by more important Chinese painting patterns can be enlarged or reduced. Furthermore, Chinese painting elements representing different dimensions can be classified into foreground and background—for example, theme selection and anthology themes in the foreground, and geography/landscapes in the background. Since users typically prioritize poem collection selection, this allows them to focus on choosing their favorites.

5. Conclusion

In this paper, I have conducted an in-depth study on the application of Chinese painting elements in app interface design. Through a review of relevant literature and an analysis of existing app interface designs, we have found that the unique value and application potential of Chinese painting elements in app interface design are of great importance. This study focuses on the rational application

of Chinese painting elements in app interface design, exploring them from multiple perspectives such as color, lines, and composition, and proposes corresponding design principles and guidelines.

Through the research on the application of Chinese painting elements in app interface design, I have discovered that Chinese painting elements, which can provide new inspiration and creativity for app interface design, possess rich expressive and communicative capabilities. It is suggested that in future research and practice, to enrich users' interface experience, further deepen the research on the use of Chinese painting elements in app interface design, and explore more innovative design methods. At the same time, designers are encouraged to give play to their creativity, combine Chinese painting elements with modern app interface design, and create more personalized and culturally connotative design works in the creative process.

References

- [1] Zhang, L. T., & Huang, W. S. (2021). The Application and Exploration of Chinese Traditional Elements in Mobile Interface Design. *Art Education Research*, (09), 106-107.
- [2] Huang, J. F. (2017). The Application of Chinese Painting Elements in Animation Design. *Art Science and Technology*, 30(08), 119.
- [3] Wang, Y. P. (2020). The Application of Chinese Painting Elements in Food Packaging. *Food Research and Development*, 41(12), 228.
- [4] Ma, Y. Z. (2023). A Brief Analysis of the Application of Artistic Elements in UI Interface Design. *Journal of Liaoning Teachers College (Natural Science Edition)*, 25(03), 71-73.