

The Influence of Bauhaus Design Principles on Contemporary Digital Design

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Abstract: The prosperity and growth of digital design not only changed people's lifestyle to a great extent, but also affected designers and the design industry itself to a great extent. Bauhaus's design principles emphasize the integrity, functionality, rationality and emotional resonance of design, and these principles still have important guiding significance for contemporary digital design. This paper discusses the influence of Bauhaus design principles on digital design. These principles provide digital designers with brand-new design thinking and creative methods, and help them better cope with the challenges and opportunities in the digital age. At the same time, these principles also provide an important guiding ideology and theoretical basis for the future growth of digital design, making digital design more in line with human needs and cultural values. In digital design, designers need to give priority to users' emotional needs and cultural background, and integrate human cultural elements into digital design to arouse users' resonance and emotional resonance.

1. Introduction

With the continuous growth of sci & tech, digital design has become an indispensable part of contemporary society. The prosperity and growth of digital design not only changed people's lifestyle to a great extent, but also affected designers and the design industry itself to a great extent[1]. Digital design has a high degree of freedom and innovation, which enables designers to express their creativity in an unprecedented way[2]. However, while digital design is developing at a high speed, it also faces many challenges, such as the practicality of design, user experience and aesthetic value. How to solve these problems so that digital design can find a balance between innovation and practicality, art and technology is an important task facing the current design community[3]. Bauhaus design principle, as an important theoretical basis of modern design, has always had a far-reaching impact on the design field.

Bauhaus's design principles emphasize the integrity, functionality, rationality and emotional resonance of design, and these principles still have important guiding significance for contemporary digital design[4]. First of all, the Bauhaus design principle emphasizes the integrity and functionality of design, which is in line with the practicality and user experience pursued in digital design[5]. Secondly, Bauhaus's design principle pays attention to rationality and emotional resonance, which is closely related to the aesthetic value and cultural connotation pursued in digital design[6]. This paper aims to explore the influence of Bauhaus's design principles on contemporary

digital design, with a view to providing some theoretical support and practical guidance for the future growth of digital design. By analyzing the internal relationship between Bauhaus's design principles and digital design, this paper will put forward digital design strategies and methods based on Bauhaus's design principles. These strategies and methods will provide designers with certain theoretical guidance and practical reference, and help them better meet the challenges of the digital age.

2. The origin and connotation of Bauhaus design principle

The origin of Bauhaus's design principles can be traced back to the arts and crafts movement in the late 19th century and the modernism movement in the early 20th century. In these two movements, designers emphasize the functionality and integrity of design, and pursue simple, practical and economical design principles. Bauhaus's design principle emphasizes the wholeness of design, and thinks that a good design should be a whole, and the relationship between the various components should be coordinated and unified[7]. This principle of integrity is not only embodied in a single design work, but also runs through the whole design process, requiring designers to consider the problem from a holistic perspective.

Bauhaus's design principle emphasizes the functionalism of design, and thinks that design should serve people's needs and pursue practicality and functionality. Functionalism requires designers to simplify the design form as much as possible, remove redundant decoration and emphasize the practicality and economy of design on the premise of meeting the functional requirements of design. Bauhaus's design principle pursues simple and economical design, and thinks that simplicity and economy of design can not only improve the aesthetic value of design, but also reduce the production cost and meet the needs of the public[8]. This concise and economical design principle requires designers to meet the functional requirements of design while reducing the waste of materials and the consumption of resources as much as possible. Figure 1 shows the interior decoration design combined with Bauhaus design principles.



Figure 1: Interior decoration design combined with Bauhaus design principles.

Bauhaus's design principles emphasize the rationality and emotional resonance of design, and think that rationality and emotional resonance of design complement each other. The principle of rationalism requires designers to use scientific methods to analyze and solve problems, and at the same time, they need to give priority to the influence of human culture, emotion and values. The principle of emotional resonance requires designers to consider people's emotional needs and cultural background in the design process, so that the design works can arouse people's resonance and emotional resonance.

3. Present situation of digital design

3.1. Innovation of digital design

Digital design is highly innovative, which enables designers to make more creative and novel designs with the help of computer software and hardware tools. Digital design uses digital creative tools such as computer-aided design software and 3D modeling software to design efficiently and accurately. The application of these tools breaks the limitation of traditional design methods and provides designers with a broader creative space[9]. With the advent of the era of big data, designers can conduct in-depth research on user needs and market trends with the help of data analysis and mining technology, thus providing a more scientific and objective basis for design and enhancing the innovation and pertinence of design. Digital design shows the trend of cross-border integration, which integrates and innovates knowledge and elements in different fields and forms unique digital design works.

3.2. Usability and user experience of digital design

Digital design needs to meet the basic functional requirements of design, for example, a website needs clear navigation, easy-to-understand page layout and quick user interaction. Digital design needs to be customizable and extensible, so that it can adapt to the needs and usage scenarios of different users. For example, a software needs to provide personalized settings and configuration functions so that users can customize it according to their own habits and needs. Digital design needs to improve the efficiency and productivity of designers, and help designers complete design tasks better. For example, automated design tools and intelligent design software can significantly improve the work efficiency of designers.

Digital design needs to be easy to use and friendly, so that users can get started easily and adapt quickly. With the increasing demand of users, digital design needs to provide personalized and emotional experience, resonate with users emotionally, and improve users' stickiness and loyalty. There are always some contradictions and challenges between the practicality of digital design and user experience. Designers need to meet the functional requirements while taking into account the optimization of user experience. This requires in-depth analysis of user needs, as well as in-depth understanding and application of knowledge such as interaction design and information architecture.

3.3. The aesthetic value and cultural connotation of digital design

Digital design pursues the beauty of form and simplicity, and conveys the beauty of design through simple lines, colors and shapes. This kind of aesthetic feeling meets the aesthetic needs of contemporary people and can arouse the emotional resonance and appreciation of users. The dynamic beauty and interactive beauty of digital design are also important manifestations of its aesthetic value. For example, interactive animation effects can create emotional connection and interactive experience between users and interfaces; The application of dynamic graphics can also enhance the visual impact and artistic appeal of design. As a product of contemporary social culture, digital design reflects the cultural values of contemporary society. For example, the rise of social media platforms has changed the way people communicate; The popularity of mobile payment also reflects people's demand for convenience and security. The continuous innovation and growth of digital technology enable designers to have more means and methods to express their creativity and ideas, and at the same time provide designers with more possibilities.

4. The influence of Bauhaus's design principles

As an important theoretical basis of modern design, Bauhaus design principle has a far-reaching impact on digital design. These principles provide an important guiding ideology and theoretical basis for the innovation, practicability, user experience, aesthetic value and cultural connotation of digital design. Table 1 shows the main influences of bauhaus's design principles.

Table 1: Main impacts of Bauhaus design principles

Design principle category	Main influence
Influence on digital design thinking	1. It provides a scientific and holistic design thinking mode, which enables digital designers to better understand and solve problems.
	2. Inspired the innovative consciousness of digital designers in function and user experience, and improved the usability and practicability of digital products.
Influence on digital design tools	1. It promotes the application and growth of digital design tools and enables designers to design and create more efficiently.
	2. Guide digital designers to use design tools more rationally, and improve the accuracy and overall aesthetic feeling of design works.
Influence on Digital Design Culture	1. Broaden the cultural vision of digital design, and make digital works show the characteristics of diversification and internationalization.
	2. Enhance the cultural value of digital design, so that digital design works can better integrate and lead the growth of contemporary social culture.

4.1. Influence on digital design thinking

Bauhaus design principle has an important enlightening effect on digital design thinking, which provides a brand-new design thinking mode and creative method for digital designers. In digital design, designers need to consider the relationship and function of each element from the overall point of view in order to create digital design works with overall aesthetic feeling. For example, in UI design, designers need to comprehensively consider the layout, color, font and other elements of the website, so that they can coordinate with each other to form a whole and leave a deep impression on users. In digital design, designers need to put user needs and functional requirements in the first place in order to realize the function and practicability of the design. For example, in APP design, designers need to deeply understand the user's needs and usage scenarios, and design an easy-to-use and efficient interface and interactive experience for the APP.

4.2. Influence on digital design tools

Bauhaus design principle also has an important impact on the application of digital design tools. The use of digital creative tools enables designers to design more efficiently and accurately with the help of computer-aided design software, 3D modeling software and other tools. The application of these tools not only improves the work efficiency of designers, but also provides designers with more possibilities to express their creativity and ideas. In UI design, designers can use various digital creative tools to design UI interfaces with different styles and characteristics. These tools can help designers realize design ideas quickly and improve work efficiency; At the same time, designers can also use these tools for experimental creation and explore more possibilities to create more unique and novel digital design works.

4.3. Impact on digital design culture

Bauhaus design principles have also had an important impact on the shaping of digital design culture. These principles give priority to rationality and emotional resonance, and emphasize the cultural connotation and humanistic spirit of design, which makes digital design not only have a sense of sci & tech and modernity, but also incorporate more cultural values and humanistic care. In digital design, designers need to give priority to users' emotional needs and cultural background, and integrate human cultural elements into digital design to arouse users' resonance and emotional resonance. For example, in game design, designers can create a unique game cultural atmosphere and emotional experience through careful design of game characters, game scenes and other elements, thus attracting more users to participate and invest. Digital designers need to consider the cultural value and significance of digital design in order to create digital design works with more cultural connotation and social value.

5. Conclusions

Bauhaus design principle has a profound and diverse influence on digital design. From the origin and connotation, its core concepts-integrity, functionalism, conciseness, economy, rationalism and emotional resonance-not only provide the theoretical basis for modern design, but also provide important guidance for digital design. In digital design, designers need to consider the relationship and function of each element from the overall point of view in order to create digital design works with overall aesthetic feeling. The use of digital creative tools enables designers to design more efficiently and accurately with the help of computer-aided design software, 3D modeling software and other tools. Digital designers need to consider the cultural value and significance of digital design in order to create digital design works with more cultural connotation and social value. Bauhaus design principle has a far-reaching and positive influence on digital design. These principles not only provide important guidance for digital designers in design thinking, design tools and cultural shaping, but also provide important theoretical basis and practical enlightenment for the future growth of digital design. In the face of the ever-changing digital age, Bauhaus design principle will continue to play its important role and lead digital design to a more innovative, practical and meaningful future.

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