

Interaction Design and User Experience in Digital Media Visual Art

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Abstract: With the rapid development of technology, digital media design is gradually emerging. The field of digital media visual arts is experiencing a deep integration of interaction design and user experience. Interaction design follows the principle of user centeredness, emphasizing the efficiency of information communication and the convenience of user operations. Through continuous optimization and iteration, the quality of the work is improved. User experience emphasizes precise understanding of user needs, meticulous refinement of work details, and full utilization of interactivity to bring users a pleasant user experience. The combination of the two not only enriches the expression forms of digital media visual art, but also enhances the emotional connection between works and users. With the rapid development of technology, interaction design and user experience will continue to drive innovation in this field, bringing people a more exciting and convenient artistic experience. In the future, with the continuous progress of technology and the continuous expansion of the market, the application of interaction design and user experience in digital media visual art will be more extensive and in-depth, bringing more innovation and surprises to our lives.

1. Introduction

Digital media design has become an indispensable part of the national economy, and its development prospects are extremely broad[1]. Digital media visual art, as an important branch, is changing the traditional pattern of art and design due to its unique interactivity and integration characteristics[2].

Interaction design is one of the core elements in digital media visual art. It provides users with a rich and diverse interactive experience through clever interface design, dynamic effects, and multimedia integration. This interactivity not only enhances the interaction between users and digital media works, but also brings new vitality to the works themselves. Designers design interactive methods that are in line with the psychological and physiological characteristics of users by conducting in-depth research on their needs and behavioral habits, allowing users to enjoy their works while also experiencing pleasure and satisfaction[3].

User experience is an important measure of interaction design[4]. In digital media visual art, the quality of user experience is directly related to the quality of the work and the acceptance of the audience. Excellent user experience design can fully consider the perception, cognition, and emotional needs of users, providing them with a smooth, convenient, and comfortable operating experience. Designers continuously enhance the user experience by optimizing interface layout, improving operational efficiency, and enhancing visual impact, so that users can feel pleasure and satisfaction when using digital media works[5].

The close integration of interaction design and user experience has led to continuous innovation and progress in the development of digital media visual art[6]. Designers constantly explore new ways of interaction and expression, making digital media works more in line with user aesthetic needs and usage habits. With the continuous progress of technology and the continuous expansion of the market, the development prospects of digital media visual art will be even broader, injecting new vitality into the prosperity and development of the national economy[7].

The interaction design and user experience in digital media visual art complement each other.

They jointly drive the development of the digital media design industry, bringing people a richer and more diverse artistic experience.

2. Basic concepts of digital media visual art and basic principles of interaction design

2.1. Basic Concepts of Digital Media Visual Art

Digital media visual art, as an emerging force in the field of contemporary art and design, is changing our understanding and experience of art with its unique charm and infinite possibilities[8]. It combines various technologies such as art and design, interactive technology, computer drawing technology, and information and communication technology, and presents us with a creative and imaginative visual world through the use of various media forms.

The core of digital media visual art lies in its digital characteristics. It utilizes computer technology to digitize traditional art forms, presenting a new way of artistic expression. Traditional art forms such as painting, sculpture, and photography, with the support of digital media, can radiate unprecedented vitality and charm[9].

Digital media visual art has virtuality. Through the application of digital technology, artists can create completely virtual artworks that can transcend the limitations of reality and showcase a surreal beauty. At the same time, audiences can also experience the virtual world created by these works firsthand through virtual reality technology.

Interactivity is also an important feature of digital media visual art. It is not only a one-way art display, but also a two-way communication and interaction. Viewers can interact with works through various means, such as touch, sound recognition, motion sensing, etc., in order to gain a richer artistic experience.

Digital media visual art also has fusion. It breaks the boundaries of traditional art forms, organically integrating various art forms and technological means to create a brand new artistic style. This fusion not only enriches the expression forms of art, but also expands the creative space of art.

Digital media visual art is an art form that integrates multiple technologies and media forms. It presents a visual world full of creativity and imagination with its unique digital characteristics, virtuality, interactivity, and integration, and injects new vitality and vitality into the field of contemporary art and design.

2.2. The basic principles of interaction design

Interaction design, as a special technology that integrates art and design, is increasingly becoming an indispensable part of modern product design. It is user centered and based on user experience, aiming to create an experience that allows users to interact with the product more smoothly and naturally. Its basic principles cover multiple aspects and together constitute the core of interaction design.

Interaction design emphasizes a human centered design philosophy. This means that in the design process, we need to have a deep understanding of user needs, habits, and expectations, and take the user's real experience as the starting point and foothold of the design. Designers need to stand from the perspective of users, think about how to optimize operational processes, improve operational efficiency, and how to make users feel happy and satisfied while using the product.

Interaction design emphasizes effective communication of information. In the design process, designers need to use various visual elements, interaction methods, and feedback mechanisms to ensure that users can clearly and accurately understand the functionality and operation of the product. At the same time, designers also need to consider the hierarchy and priority of information to avoid situations of information overload or insufficient, in order to ensure that users can efficiently complete tasks.

Interaction design also emphasizes a balance between usability and ease of use. Usability refers to the ability of a product to meet the basic needs of users, while usability refers to the convenience and comfort that a product brings to users during use. Designers need to improve the usability of the

product as much as possible while ensuring its usability, reducing the cognitive burden and operational difficulty of users.

Interaction design requires continuous iteration and optimization. With the development of technology and changes in user needs, the interaction design of products also needs to be constantly adjusted and improved. Designers need to continuously monitor user feedback and market trends, promptly identify issues and make improvements to ensure that products remain competitive.

The basic principles of interaction design cover multiple aspects such as human centeredness, effective information dissemination, balance between usability and ease of use, and continuous iterative optimization. These principles together constitute the core idea and methodology of interaction design, providing strong guidance and support for designers.

3. Interactive design practice in digital media visual art

In the digital age, the flourishing development of interactive digital media technology is gradually changing our lives. It is not only a technological innovation, but also a change in lifestyle. In this context, the interaction design practice in digital media visual art is particularly important, as it plays a crucial role in improving the user experience of products, enhancing user interaction interest, and achieving product practicality.

In the interactive design practice of digital media visual art, designers need to comprehensively consider the service design and visual design of the product. Service design focuses on providing users with a complete, convenient, and efficient service experience, while visual design aims to enhance the attractiveness and usability of products through visual elements such as color, shape, and animation. The organic combination of these two enables digital media products to better meet the needs and expectations of users.

In the practice of interaction design, the importance of interest and practicality in interaction is particularly important. A good interaction design should be able to arouse user curiosity and curiosity, while ensuring that users can easily and efficiently complete operations. This requires designers to pay attention to both the psychological needs of users and their behavioral habits during the design process, in order to design interaction methods that are in line with user cognition and operational habits.

Innovation is equally indispensable in interactive design practice. With the continuous development of technology, the speed of software product updates is getting faster and faster. Software products that lack innovation will soon be eliminated by the market. Software companies are actively seeking new technological innovations in order to stand out in fierce market competition. In this process, interaction design practice played a crucial role. It can help enterprises better understand user needs, grasp market trends, and launch more innovative and competitive products.

Table 1 Interactive Design Practice in Digital Media Visual Art

Category	Describe	Importance	Illustrate
Interaction design	Integrated service design and visual design to enhance product appeal and usability.	Critical	Social application interaction process
Interactive interests	Stimulate user curiosity and ensure easy and efficient operation.	Remarkable	Game guidance tasks
Innovate	Respond to technological development and market changes, and enhance product competitiveness.	Indispensable	New interactive technology APP
Visual interface	The bridge between users and products, enhancing the user experience.	Critical	Intuitive APP interface
Designer	Having a strong foundation and insight, continuously learning new technologies.	Basic Requirements	Designers who learn new design concepts

It is worth mentioning that in interaction design practice, the design of visual interfaces is also a crucial part. It is not only a bridge between users and products, but also the key to improving user experience. An excellent visual interface should be able to visually display the product's functions and operating methods, allowing users to easily get started and enjoy a pleasant user experience.

The practice of interactive design in digital media visual art is a field full of challenges and opportunities. It requires designers to have a profound design foundation and keen insight, while also requiring them to constantly learn and explore new technologies and methods to cope with the constantly changing market and the constantly upgrading needs of users. Table 1 clearly presents relevant information on interactive design practices in digital media visual arts.

4. The application of user experience in digital media visual arts

In the vast field of digital media visual art, user experience plays a crucial role. It is not only an important criterion for measuring the success of a work, but also a key factor in whether the work can penetrate people's hearts and resonate. The application of user experience in digital media visual arts is reflected not only in the thoughtful design process, but also in the deep interaction between works and users.

The application of user experience in digital media visual arts is reflected in the precise grasp of user needs. Designers need to have a deep understanding of the preferences, habits, and needs of their target users in order to create works that better meet their psychological expectations. This requires designers not only to have keen insight, but also to use various research tools and methods, such as user research, data analysis, etc., to ensure the precise positioning of the work.

The application of user experience in digital media visual art is also reflected in the careful polishing of work details. An excellent digital media visual art work often showcases the designer's ingenuity in the details. For example, in interface design, reasonable layout, clear navigation, and beautiful icons can all enhance the user's operating experience; In dynamic effects, smooth animation and realistic lighting effects can also enhance user immersion. The careful handling of these details not only enhances the overall quality of the work, but also allows users to feel pleasure and satisfaction during use.

The application of user experience in digital media visual arts is also reflected in the full utilization of interactivity. Digital media visual art works often have rich interactivity, and users can interact with the works through touch, click, slide, and other operations. Designers need to fully utilize these interactivities to create more vivid and interesting work experiences.

The application of user experience in digital media visual arts still needs to focus on continuous optimization and iteration. With the development of technology and changes in the market, the needs and expectations of users are also constantly changing. Designers need to continuously monitor user feedback and market trends, continuously optimize and iterate their works to ensure that they remain competitive.

Table 2 Application of User Experience in Digital Media Visual Arts

Application aspect	Describe	Illustrate
Understanding user needs	Gain a deep understanding of the preferences, habits, and needs of the target users to ensure that the work meets their psychological expectations.	User research and data analysis
Polishing the details of the work	Carefully handle interface design, dynamic effects, and other aspects to enhance the quality of the work and user experience.	Reasonable layout and smooth animation
Interactive utilization	Create vivid and interesting work experiences through interactivity such as touch, click, and swipe.	Touch feedback, interactive gaming
Optimization and iteration	Continuously monitor user feedback and market trends, optimize and iterate works, and maintain competitiveness.	User feedback collection and version updates
Designer requirements	Having profound professional competence and keen insight, constantly learning and exploring new technologies and methods.	Continuous learning and technological updates

The application of user experience in digital media visual arts is a complex and meticulous process. It requires designers to possess profound professional competence and keen insight, while also requiring them to constantly learn and explore new technologies and methods to continuously improve the user experience of their works. Table 2 clearly presents information on the application of user experience in digital media visual arts.

5. Conclusions

In the field of digital media visual arts, the close integration of interaction design and user experience not only drives innovation and development in the industry, but also changes the way people interact with digital media works. By conducting in-depth research on user needs and behavioral habits, designers can create works that better meet user psychological expectations, providing a smooth, convenient, and comfortable operating experience.

The basic principles of interaction design have been widely applied in the practice of digital media visual art. The human centered design philosophy, emphasizing effective communication of information, pursuing a balance between usability and ease of use, and continuous iterative optimization methods all provide strong guidance and support for designers. The application of these principles enables digital media works to better meet the needs of users, enhance their satisfaction and loyalty.

The application of user experience in digital media visual arts is reflected in the precise grasp of user needs, careful polishing of work details, full utilization of interactivity, and continuous optimization and iteration. Designers create works that better meet the psychological expectations of users by gaining a deeper understanding of them; By carefully handling details, enhance the overall quality of the work; By fully utilizing interactivity, create a more vivid and interesting work experience; By continuous optimization and iteration, ensure that the work remains competitive at all times.

Interaction design and user experience play a crucial role in digital media visual art. They jointly promote the development of digital media visual art, bringing people a richer and more diverse artistic experience. In the future, with the continuous progress of technology and the continuous expansion of the market, the application of interaction design and user experience in digital media visual art will be more extensive and in-depth, bringing more innovation and surprises to our lives.

References

- [1] Arda B. Ephemeral Social Media Visuals and Their Picturesque Design: Interaction and User Experience in Instagram Stories[J]. *Acta Universitatis Sapientiae, Film and Media Studies*, 2021, 19(1):165-184.
- [2] Cruz A, Karatzas S . Book highlight—Developing an effective digital presence[J]. *Global Business and Organizational Excellence*, 2019, 38(2):64-74.
- [3] Lu C, Gao S . Research Progress and Trends in Technology Affordances Research: A Knowledge Graph Analysis Based on CiteSpace[J]. *Computer and Communication (English)*, 2023, 11(7):174-190.
- [4] Reinig L . Book review: Trudy Milburn (ed.), *Communicating User Experience: Applying Local Strategies Research to Digital Media Design*: [J]. *Discourse Studies*, 2018, 20(1):196-198.
- [5] Chuang K J . Design Principles of Experience Design and Navigation Design for Digital Media Environment[J]. *Communications of the ICISA*, 2018, 19(1):19-40.
- [6] Mason M. The elements of visitor experience in post-digital museum design[J]. *Design Principles and Practices*, 2020, 14(1): 1-14.
- [7] Qiu G, Zhang J. Application of digital technology in painting using new media and big data[J]. *Soft Computing*, 2023, 27(17): 12691-12709.
- [8] Wu S. RETRACTED ARTICLE: Design of interactive digital media course teaching information query system[J]. *Information Systems and e-Business Management*, 2020, 18(4): 793-807.
- [9] Bowden H M, Aarsand P . Designing and assessing digital games in a classroom: an emerging culture of critique[J]. *Learning Media and Technology*, 2020, 45(3):1-19.