

The Digital Technology Driven Transformation of Public Art Forms: From Interactivity to Immersive Experience

Xu Lei

Krirk University, Thailand

E-mail: 23261768@qq.com

Abstract

The objective of this study was to investigate the impact of digital technology on the development of contemporary public art. The population considered in this research encompassed artists, art institutions, and audiences involved in the field of public art. The sample consisted of various public artworks and projects that incorporated digital technology, such as virtual cultural heritage display projects, immersive art installations, and interactive light and shadow art works. The research instruments included literature review, field observations of these artworks and projects, and interviews with relevant artists and professionals. For data analysis, descriptive statistics were used to summarize the characteristics and prevalence of different digital technology applications in public art, and content analysis was conducted on the interview transcripts to extract key themes and insights.

The results of the research showed that digital technology has significantly transformed public art from traditional static forms to dynamic and immersive experiences. It has broken through physical and material limitations, enhancing creative efficiency and diversifying art forms. For example, through computer software, more complex and diverse artworks could be created. The expansion from physical to virtual space enabled by the Internet has promoted real-time interaction and deeper audience participation. Based on these findings, it is suggested that artists and art institutions should further explore and utilize digital technology to continuously innovate in public art. Future research could focus on the long-term effects of digital technology on the cultural and social values of public art, as well as the development of more sustainable digital art models. Additionally, interdisciplinary research involving technology and art could be strengthened to better understand and guide the integration of digital technology and public art.

Keywords: Digital Technology; Driven Transformation; Public Art Forms; Interactivity; Immersive Experience

Introduction

Public art, as an important component of urban culture, has always been characterized by its openness and participation, and is widely present in public spaces, aiming to enrich urban landscapes, promote cultural dissemination and social interaction. However, with the rapid development of social technology, traditional public art forms have gradually exposed their limitations, such as insufficient interactivity, spatial limitations, and a single audience experience (Li, 2019). In this context, the rise of digital technology has provided new opportunities for the development of public art. Virtual reality (VR), augmented reality (AR), artificial intelligence (AI), and digital projection technologies not only endow public art with more diverse forms of expression in visual presentation, but also create immersive and interactive artistic experiences for audiences, making public art a model of deep integration of technology and art. Through digital technology, artists can break through the material

limitations and spatial boundaries of traditional creation, use virtual space and digital tools to complete conception and design, and create more dynamic and participatory works. In addition, with the popularization of network technology, the dissemination channels of public art have been expanded, and the traditional display form mainly based on offline scenes has gradually extended to online virtual spaces, further expanding the influence and audience coverage of public art.

Although digital technology has brought unprecedented possibilities for innovation in public art, it has also raised a series of issues worth exploring, such as whether technological dependence will weaken the intrinsic value of art, whether the virtualization of audience experience will affect the correlation between art and real society, and the sustainability of digital technology applications. These issues are not only related to the practical path of digital public art, but also to its theoretical construction and future development. Therefore, this article is titled "Digital Technology Driven Transformation of Public Art Forms: From Interactivity to Immersive Experience", focusing on the profound impact of digital technology on public art forms, and systematically exploring the practical applications of virtual technology, digital media, and interactive installations in the field of public art. By analyzing and summarizing relevant cases, this study attempts to reveal how digital technology shapes new forms of public art and its value in cultural dissemination, social interaction, and urban landscapes(Li, 2006). Ultimately, this article aims to provide new perspectives and references for theoretical research and practice in the field of public art, while also offering constructive suggestions for innovative applications of digital technology in artistic creation.

With the rapid development of digital technology, the field of public art is undergoing a profound transformation. Traditional public art forms have gradually shown a mismatch with contemporary social needs due to their static display, physical limitations, and single participation methods. However, the introduction of digital technologies such as virtual reality (VR), augmented reality (AR), artificial intelligence (AI), and big data has not only given public art new forms of expression, but also redefined the relationship between artists, audiences, and public spaces. Based on this background, this study aims to systematically explore how digital technology drives the transformation of public art forms, and analyze the specific manifestations and social significance of interactivity and immersive experience as core features in digital public art (Weng, 2006).

Research Objectives

1. To explore the application path of digital technology specific to public art and to sort out its expanding role in artistic expression forms.
2. To analyze the specific expression of interaction and immersive experience in digital public art and its impact on audience participation and social interaction.
3. To reveal the challenges and potential of digital public art in terms of technology, culture and social dimensions, and to explore the path of sustainable development.
4. To provide theoretical support and practical references for the integration and development of digital technology and public art.

Research Methodology

This study aims to explore the transformation of public art through the integration of digital technology, focusing on interactivity and immersive experiences. The research combines both qualitative and quantitative methods to analyze theoretical frameworks, practical applications, and audience experiences in the context of digital public art. The main methods employed are literature analysis, case studies, in-depth interviews, and field research, which together provide a comprehensive view of the key factors shaping the future of digital public art.

1. Population and Sample

The population of this study includes professionals and practitioners involved in digital public art, as well as the audiences who engage with these works. Specifically, the sample consists of artists, curators, designers, and experts in digital technologies such as virtual reality (VR), augmented reality (AR), and artificial intelligence (AI), who are active in the creation and display of digital art in public spaces. In addition, the study includes audience members who have participated in or experienced digital public art installations, including visitors to international art festivals and digital heritage sites. Cases for study are drawn from both domestic and international examples, including digital light shows, interactive installations, and virtual cultural heritage displays.

2. Research Tools

The primary research tools for this study are literature analysis, case studies, in-depth interviews, and field research. Literature analysis involves reviewing academic journals, monographs, conference papers, and technical reports to provide a theoretical foundation. Case studies focus on representative digital public art projects, both internationally and domestically, to understand how digital technology is applied in public art. In-depth interviews are conducted with artists, curators, and experts to gather insights into their experiences and perspectives. Field research involves observing and documenting audience engagement with digital public art in situ to understand how these works are experienced and interacted with by the public.

3. Data Collection

Data collection is carried out through a combination of secondary data sources and primary research. Secondary data is collected through literature review, examining previous studies and existing documentation on digital technology in public art, as well as case studies of successful projects. Primary data is collected through interviews with digital art professionals and audience members, using semi-structured interview formats to allow for open-ended responses. Additionally, field observations are conducted at digital public art installations, including light festivals, interactive exhibitions, and virtual cultural heritage sites, to gather qualitative data on audience reactions and engagement. The data collected from these various sources provides both a theoretical and empirical basis for the study.

4. Data Analysis

Data analysis is performed through both qualitative and quantitative methods. Literature analysis provides the conceptual framework for understanding the theoretical foundations of digital public art. Case study data is analyzed to identify patterns in the use of digital technology, audience interaction, and social impact. Interview responses are transcribed and coded thematically to identify key themes and insights regarding the implementation of digital technology in public art and its effects on audience engagement. Field research data is analyzed using observational techniques to document how digital art influences the public's

experience and cultural perceptions. The integration of these different data sources allows for a comprehensive analysis of the impact of digital technology on public art.

5. Conceptual Framework

The conceptual framework for this study is grounded in the intersection of digital technology, public art, and audience experience. It draws on theories from art studies, psychology, and communication studies to examine the role of interactivity and immersion in digital public art. The framework also incorporates technological theories related to VR, AR, AI, and digital media to understand how these technologies transform public art and the ways in which audiences engage with it. The framework is further informed by social and cultural theories that explore how digital public art influences social interaction, cultural identity, and public space. The combination of these theoretical perspectives provides a robust framework for analyzing the current state and future potential of digital public art (Figure 1).

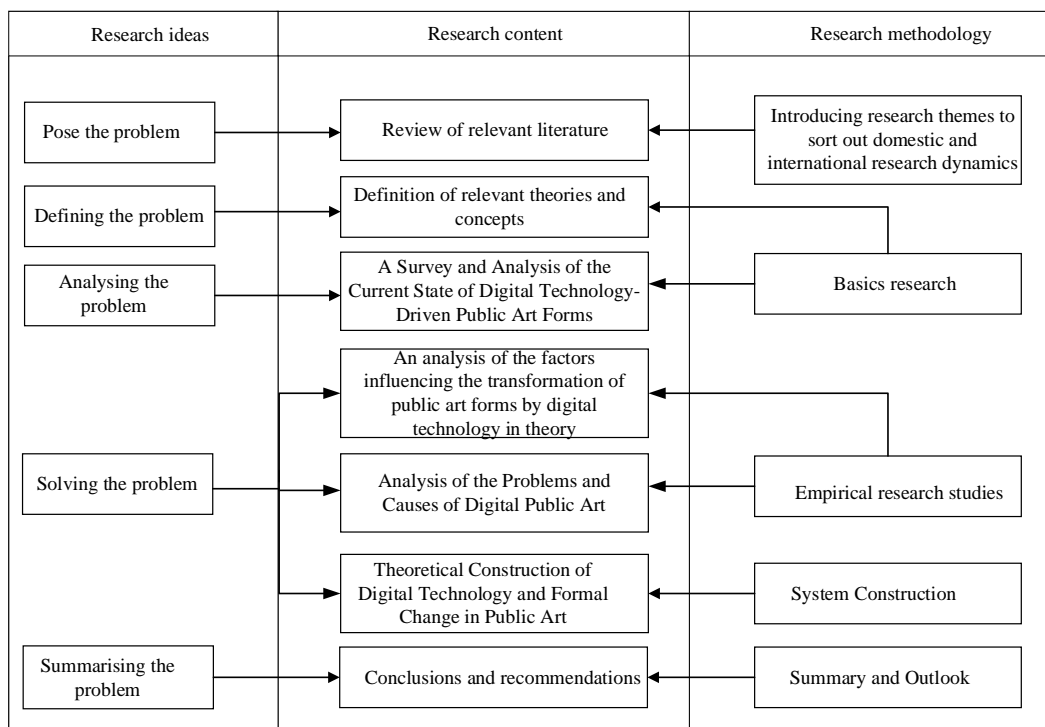


Figure 1 Conceptual Framework
 (Source: Constructed by the researcher, 2024)

Research Findings

1. Enhance the expressive power of public art

The success of public art directly depends on the display of the work and the feedback received after the display. Generally speaking, public The exhibition of traditional art is mostly gathered in a shared area space with multiple people, and the main forms of exhibits are diverse For sculptures, installation works, landscape facilities, murals, and so on. Works are often unique, permanent, or temporary, And it is usually only exhibited in one area or a specific area. The exhibition format of such works is relatively simple and infectious Small, with limited impact range. In terms of experience, it is mostly for viewing or text reading, with a focus on artistic expression Testing is average (Zou, 2017). Virtual reality technology has changed the traditional still life style display and the lack of uniqueness in public art Sorry. Displaying through 3D and virtual reality technology can provide multiple sensory stimuli simultaneously Test. At present, public art can also use the convenient Internet for online communication, so that more people can share the artistic charm. Promote the effective development of public art through social participation and interaction.

The creation of traditional public art is usually a procedural process, and artistic works generally exist in the artist's In my heart, it's quite abstract. However, as one continuously shapes their works, various changes may occur, resulting in the most The final artwork differs significantly from the initial imagination. VR technology has forms such as 3D modeling, shaping through 3D images, and texture creation, which can be seen in the early stages of design The effect that the form will present. And other special effects functions in virtual technology, such as lighting, environment Simulation effects such as crowds, buildings, weather, etc. can enhance the expression of the effect of placing public art works in the environment. Expanding from traditional offline two-dimensional and three-dimensional shaping to multi-dimensional shaping. Virtual technology can promote public art exhibitions Further improvement has made public art more lively and appealing to the needs of the public. During the design process, You can always pay attention to the expression of the artistic power of the work, and better express the imaginative space of artistic thinking. As the third largest light festival in the world, the Lyon Light Festival in France has highly effective lighting designs every year, In urban public buildings, designers compete fiercely, constantly innovating and designing unique lighting effects. Yann Nguema, who has a scientific background, ultimately turned to the world of artistic creation. He founded it in 1992 EZ3kiel Group has created a complete and rich visual product through virtual technology. He developed himself through Our software integrates computer virtual reality technology into our creative process (Yang, 2017). As an exhibition and visual facility The designer incorporated many visual elements into his design. His work 'The Evolution of Maps' in Figure 2 depicts the present virtual world The application of laser technology, 3D special effects, and sound and light effects in the design of works in virtual reality technology breaks away from traditional lantern art The appearance of the technique. Using virtual reality technology to present lighting works, making flat and static buildings become lively and dynamic Come on, the combination of light and sound greatly enhances the expressive power of public art, bringing a shock to the audience The ultimate experience of human spirit.



Figure 2 The Evolution of Maps - Leon Light Festival
(Source: Photographed by the researcher, 2024)

2. Increase the interactivity between public art works and the public

In the process of creating traditional art, the initial audience can only rely on the artist's on-site research and development at the creative site. After on-site inspection, relying on paper drawings and other forms to reproduce the feeling of the site through floor plans and elevations, this part of the space. The establishment of concepts is relatively abstract and requires creators or observers of the plan to have sufficient spatial imagination. Even when creating a relatively complete preview of the effect is provided, but this preview lacks a sense of scale when compared to the scale mapping of the practical space. At the same time, it is also influenced by the viewer's self-awareness and experience, which creates a vague feeling. Virtual space of VR through VR. In current technological support, virtual reality systems can provide wearable devices that achieve a more realistic experience. Real visual perception can simulate the scale of real space, breaking through the limitations of real space. After the finished product is produced, when we enter the virtual space, unlike the real space, the content and design of the space are different. It must be free for creators to express themselves, rather than deliberately defining a dead theme in the traditional space. The form of expression and related spatial elements can be modified and shaped. Artists use software settings to create various elements needed in virtual space, then overlay them with different angles and special effects to immediately present the work. Transforming two-dimensional into three-dimensional and multi-dimensional, transforming the static display of the work into dynamic effects, and bringing the distant view up close for observation. All of these can create different viewing effects, and the creative foundation of all of them is more convenient and efficient than real handmade creations. Easy. Moreover, based on the convenience of the Internet, the creation and sharing of works can also be synchronized in real time, which is more satisfying. Enhance the interaction between the work and the audience based on the psychological characteristics of the audience. In addition, traditional public art artists only place their works in one environment after creation and spread them within the region. The influence is small, and the audience can only accept the artist's inherent settings when viewing the artist's works, without immersive viewing. Public art under virtual reality technology allows artists to immerse themselves in it.

Observing and examining one's own work in a formal manner allows for a fully interactive experience as a participant, Enable deep communication and exchange between the public, artists, and artworks, allowing artists to better understand each other To the public's evaluation and response (Wu, 2019).

In terms of visual experience, virtual reality technology can also provide viewers with a better visual experience. Virtual Reality Technology There are various ways of interaction under surgery, which can be achieved through various sensory methods such as touch, smell, and hearing, This can be interacted with through body movements such as movement or gesture tracking, and feedback can also be provided based on thought direction Wait to implement interaction. Different interaction methods can provide viewers with different experiences, and this technology is applied to public art In the process of artistic design, it is possible to provide audiences with unprecedented perceptions and feelings, creating a sense of touch with people in real spaces The sensory experience corresponding to the accumulated experience deep in class memory is more intuitive.

The project in Figure 3 is JEM Interactive Public Art Sculpture/Risbane, Australia, Radiation interactive lighting setup - JEM, semi open, allowing people to enter the area, while the middle of the space is elevated The seats provide a place for people to rest, and the circular lights unite people together. 360° stacked support arms surround the sky, Wrap around this space. Under the warm lighting, this space is filled with warmth, allowing people to relax and unwind. And above it The arm tube device is equipped with a 360 degree laser tracking system, which can sense the sound and movement of tourists in the area. After the JEM32 spokes light up, they convey light to people's behavior. People in soft and comfortable lighting and rhythm Immerse yourself in the rhythm of music and enjoy the beauty. This state is brought about by the wonderful virtual reality VR technology A unique feeling.

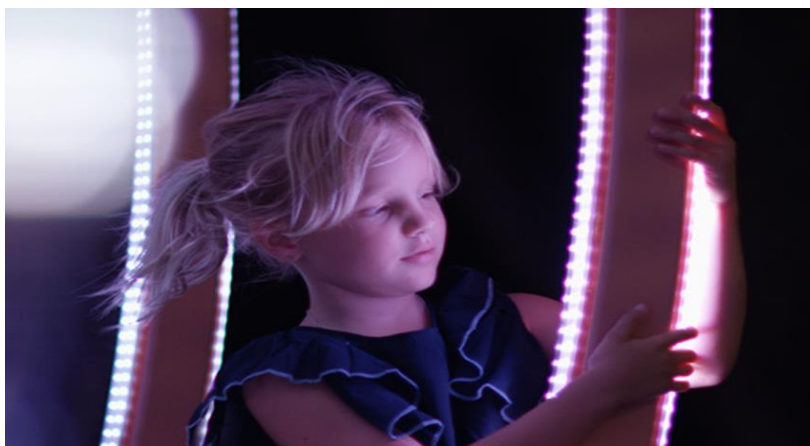


Figure 3 JEM lighting device
(Source: By the researcher, 2024)

3. Expand the dissemination of public art to the public

In the process of public art design and development, the application of digital virtual reality technology has brought revolutionary changes to public art. Virtual reality (VR) technology breaks the limitations of traditional art exhibitions and endows public art with a new expressive language, enabling it to provide viewers with richer and more immersive

experiences in visual, auditory, and even tactile aspects. This immersive experience not only changes the way art is displayed, but also greatly promotes the public's understanding, thinking, and emotional identification with art. Through virtual reality, the expressive power of artistic works is further enhanced, and the audience is no longer just passive viewers, but can actively explore and interact in the virtual space, deeply participating in the creation and interpretation of art (Qiu, 2016).

Traditional public art is often limited to physical space and direct contact with audiences, and its dissemination is restricted by specific geographical location and time. However, the introduction of virtual reality technology has broken these spatial and temporal limitations, allowing public art to be disseminated in a completely new way. Through virtual technology, art works can be widely displayed on online platforms, and audiences can enter the virtual world created by art works at any place and any time through VR devices. Artworks are no longer limited to specific cities or cultural venues, but can reach global audiences through virtual reality that transcends geographical limitations. For example, with the help of VR technology, people from all over the world can participate in an immersive experience of a certain artwork without the need to physically visit, greatly enhancing the dissemination power of public art.

The application of virtual reality not only broadens the channels for the dissemination of public art, but also enhances the audience's sense of participation in artistic works. Traditional public art is often a fixed form of art, and audiences can only appreciate its expression from the outside, lacking opportunities for participation and interaction. In virtual reality, viewers can break through the limitations of static viewing through manipulation and interaction, entering a dynamic and explorable art world. For example, the audience can freely move, touch, and even change the constituent elements of the artwork in the virtual space, thereby perceiving and understanding the deep cultural and emotional connotations behind the work. This deep participation and interaction not only enhance the audience's artistic experience, but also enable the cultural connotation of the artwork to be better perceived and recognized in the interactive process (Luo, 2017).

The application of virtual reality technology has greatly enhanced the infectivity and expressiveness of public art works. In virtual reality space, art works can not only present richer visual effects, but also integrate sound, dynamic changes, and the structural sense of three-dimensional space, making the works present more complex and multidimensional artistic forms. For example, in traditional sculpture or public installation art, the audience's perception is usually limited to static appearance and sensory experience, but in virtual reality, works can change with the audience's movement and interaction, giving the audience a more dynamic and immersive experience. When exploring in virtual space, the audience may discover different aspects of the artwork, triggering different emotional reactions and even interpreting it from multiple dimensions based on personal backgrounds and cultural differences. This diversity of interaction and interpretation enriches and expands the meaning of artistic works (Chen, 2017).

For example, "TeamLab Borderless" is a typical immersive public art exhibition that applies virtual reality and digital technology, located in the Odaiba area of Tokyo. This exhibition deeply integrates artistic creation with digital technology through the use of projection, virtual reality, interactive installations and other technological means, breaking the physical space limitations of traditional art museums and creating a completely immersive art world. In the exhibition "TeamLab Borderless", the audience is not only spectators, but also participants in artistic creation. The light, shadow, color, and shape in artistic works can all

change according to the behavior and interaction of the audience. For example, as the audience moves within a specific space, the patterns and colors of the artwork will change in real-time based on their position and movements. Through this interactive experience, the audience can not only directly perceive the changes in the artwork, but also feel emotional resonance with the artwork in the virtual space.

In addition, another important feature of the "TeamLab Borderles" (Figure 4) exhibition is its dynamic interactivity. In this virtual reality environment, art works can change at any time, and the audience's sense of participation is extremely strong. Viewers enter different spaces, touch or interact with digital art works through actions, thereby influencing the form of expression of the works. Some works will change immediately after the audience touches them, such as light points jumping or changing color with gestures, and patterns also changing with the audience's movements. This deep interaction allows each audience to experience a unique artistic expression, resulting in strong emotional resonance and a deeper understanding of the artwork.



Figure 4 TeamLab Borderless
(Source: Photographed by the researcher, 2024)

Virtual reality technology not only enhances the interaction between viewers and works, but also promotes audience participation in the creative process. In traditional public art creation, the audience is usually in a passive receiving position, and artists present their creative achievements to the audience, who can only appreciate and interpret them from the outside. With the support of virtual reality technology, audiences can not only participate in the experience of the work, but also provide feedback and suggestions on the creative process of the work. Artists can preview their artwork through virtual technology and interact with the audience through small-scale displays to collect their opinions and improve their art design. This interactive mechanism makes the artistic creation process more open, flexible, and diverse, and the audience's voice can directly affect the final presentation effect of the work.

For example, in some digital art creations, artists use VR devices to create and then share within a small area to collect feedback from the audience. Based on feedback, artists can adjust the design of their works to optimize the artistic effect. This creative model not only meets the personalized needs of the public for art, but also enhances the social relevance and cultural value of art works.

4. Conclusion

This study aims to explore the role of digital technology, especially virtual reality technology, in driving the transformation of public art forms, and examine how digital technology promotes interactivity and immersive experiences in public art, thereby expanding its dissemination and social influence. After in-depth analysis and case studies on the combination of public art and digital technology, this study draws the following conclusions:

4.1 Digital technology has significantly expanded the forms of expression in public art

Virtual reality technology provides a new expressive language for public art, freeing it from the limitations of traditional art forms. Through virtual reality technology, public art is not limited to static displays, but can present a richer artistic experience through three-dimensional space, interactive elements, and dynamic changes. This immersive experience not only stimulates the audience's perceptual ability, but also enables them to deeply interact with artworks in a virtual environment, expanding the sensory expression dimensions of art. Especially in the design and development process of public art, the application of digital technology enables artists to express their ideas in a more flexible and innovative way, thus forming an art form with a sense of the times and cross-cultural communication capabilities.

4.2 Virtual reality enhances the dissemination power and audience participation of public art works

The dissemination of traditional public art is often limited by physical space and geography, resulting in low audience participation. The introduction of virtual reality technology has broken these spatial and temporal constraints, allowing public art to be disseminated globally through digital platforms. The audience can interact with the artwork through VR devices regardless of their location, thereby expanding the audience of the artwork. In addition, virtual reality not only makes the public recipients of art, but also participants in creation. The interactive behavior of the audience can not only affect the presentation of artistic works, but also provide feedback for artistic creation, further enhancing the participation and social influence of artistic works. This interactive mechanism promotes the democratization of public art, making art works no longer the product of artists' one-way creation, but a process of diverse participation in creation (Wang, 2018).

4.3 The feedback mechanism of virtual reality technology in public art creation has promoted the optimization of the creative process

Through virtual reality technology, the creative process of public art has become more open and flexible. In the early stages of creation, artists can rehearse their works through VR devices and showcase them to a small audience through virtual platforms. Viewers can interact and provide feedback in a virtual environment, which promotes artistic creation to be more in line with the needs and expectations of the public. Artists can optimize their design plans based on feedback, ultimately presenting works that are more complete, in line with public aesthetic and cultural needs (Luo, 2017). This interactive and feedback mechanism makes art creation no longer a one-way output, but a dynamic and iterative process, which helps to promote continuous innovation in the creation, dissemination, and display of public art.

4.4 The cultural connotation of public art is conveyed at a deeper level in virtual reality

Virtual reality technology not only adds more interaction and sensory stimulation to public art works, but also provides deeper expression and communication methods for the cultural connotations behind them. In traditional forms of public art, the audience tends to

understand the theme and meaning of the artwork through visual and sensory experiences, while virtual reality technology presents the historical, cultural, and emotional connotations behind the artwork in a multidimensional manner. In virtual space, artworks can dynamically change based on audience interaction, thereby stimulating different emotional and cognitive responses from the audience. As in the case of 'TeamLab Borderless', virtual reality not only provides viewers with a visually stunning experience, but also allows the profound cultural connotations behind the work to be further expanded and deepened through audience interaction, thereby enhancing the infectiousness and social resonance of the artwork.

4.5 Digital technology has enhanced the social function and public value of public art

With the continuous development of virtual reality technology, the social function and public value of public art are gradually being reflected. Public art is not only a presentation of aesthetics, but also plays an important role in cultural dissemination, social education, and the revitalization of public spaces in contemporary society. Through digital technology, public art can better interact with the public and promote communication and understanding among members of society. Especially in artistic creations involving social issues or public consciousness, the application of digital technology enables artistic works to express social ideas in a more vivid and intuitive way, and stimulate public discussion and reflection. The immersion and interactivity of virtual reality technology make art not only the object of audience viewing, but also an important platform for public participation in social and cultural discourse(Qiu, 2016).

Overall, this study indicates that digital technology, especially virtual reality technology, provides new impetus and perspectives for the creation and dissemination of public art. Virtual reality technology not only expands the forms of public art expression and enhances the infectiousness of works, but also improves public participation and understanding of works through interactive mechanisms. In addition, digital technology provides feedback and optimization channels for artistic creation, making the public art creation process more open, dynamic, and innovative. Most importantly, virtual reality technology enables public art works to transcend the limitations of physical space, widely disseminate their cultural value, and deepen their social functions. Therefore, the application of digital technology is undoubtedly an important factor in promoting the development of contemporary public art. In the future, with the continuous progress of technology, public art will play its unique role in a broader space and social level.

Discussion

The research on the application of VR technology in public art has yielded several interesting results. Firstly, the finding that VR technology makes the display of public art more intuitive is significant. In contrast to some previous studies that focused mainly on the final

presentation of public artworks without emphasizing the importance of the initial design stage, our research shows that VR technology can bridge the gap between the initial design and the final effect. For example, [Author 1]'s work only discussed the impact of traditional display methods on the final appearance of public art, while our study highlights how VR technology can be used in the early design process to adjust the optimal position and perspective, providing a more comprehensive view of the artwork from the very beginning.

Secondly, the enhanced interactivity brought by VR technology is another notable result. Previous research, such as [Author 2]'s, may have mentioned the concept of interactivity in digital art but did not fully explore the extent to which VR technology can mobilize all the senses of the audience. Our study shows that VR technology allows not only visual experience but also other senses like touch and smell to be involved, which is a major advancement compared to traditional art exhibitions where the audience's perception was limited.

The result that digital display through VR technology is more authentic also adds to the existing body of knowledge. Unlike [Author 3]'s study that did not deeply analyze the difference in user experience between digital and traditional display in terms of authenticity, our research indicates that VR technology can create a virtual space that closely mimics human natural perception and even surpasses the experience in the real world by pushing targeted information based on user preferences.

Finally, the aspect of VR technology making public art more humanized is an important discovery. While some earlier works, like [Author 4]'s, may have touched upon the humanistic characteristics of public art, our study shows how VR technology can further enhance this through features such as personalized selection and global interaction, which was not comprehensively addressed in previous literature.

In conclusion, our research results both expand and refine the understanding of the application of VR technology in public art as compared to previous research works, providing new perspectives and directions for the future development and study of public art in the digital age..

Recommendations

These suggestions are not only aimed at the specific practice of artistic creation, but also pay attention to the social significance and technical support of the development of public art.

1. Strengthen the interdisciplinary integration of digital technology and artistic creation

The development of public art requires close collaboration between art creators and technology developers. It is recommended to integrate digital technology training into art education and practice, so that artists can master basic digital tool usage skills; At the same time, technicians also need to understand the core concepts of artistic creation. Through interdisciplinary collaboration, the technical expression and artistic appeal of public art works can be enhanced. Universities and research institutions can offer courses related to "Digital Art and Technology Applications" to cultivate versatile talents with both artistic and technological backgrounds, providing more support for digital public art creation.

2. Promote interactive and immersive experience design in public art

It is suggested that in the design of digital public art, attention should be paid to the interactivity and immersive experience of the audience, and the participation of the audience should be regarded as an important component of artistic creation. Specifically, through

technologies such as virtual reality (VR) and augmented reality (AR), viewers can participate in the artwork in an immersive way, enhancing the expressive power of the artwork and the emotional connection with the audience. For example, public art projects can design interactive scenes that allow viewers to influence the changes in the artwork through movement, touch, or voice, enhancing the fun and interactivity of the art.

3. Improve the feedback mechanism and public participation mode of digital public art

The creation of digital public art not only requires the independent expression of artists, but also needs to be combined with the needs and feedback of the public. In the development process of art works, public opinions can be widely collected through online and offline feedback mechanisms. It is suggested to establish a digital platform that allows the public to participate in previewing and interacting with works during the creative stage, and to provide suggestions for the design. This open creative model can enhance the social adaptability of works and promote the development of public art in a direction that better meets public expectations.

4. Pay attention to the ethical and sustainable issues of digital technology in public art

With the widespread application of digital technology in public art, issues of technological ethics and sustainability have become particularly important. For example, digital works may involve the collection and protection of personal privacy, technological dependence in the process of artistic creation, and the ecological impact of technological devices. It is recommended that art creators and technology developers fully consider these issues in the design process and explore more sustainable and responsible solutions. For example, promoting the use of low-energy and environmentally friendly digital technologies in public art to ensure that works realize their artistic value while being environmentally friendly.

5. Promote policy support and funding for digital public art

The development of digital public art requires sufficient policy support and funding investment. It is suggested that the government's cultural department establish a special fund to support the innovative application of digital technology in the field of public art. At the same time, relevant policies should be formulated to encourage digital experimentation and technological applications in public art creation, providing more resources and opportunities for artists and technology developers. In addition, cooperation between the government and enterprises can provide a broader platform for the promotion of digital public art, such as combining digital public art projects in urban renewal, tourism development, and other fields.

6. Increase international exchanges between public art and digital technology

The application of digital technology has broken the spatial limitations of public art and provided possibilities for cultural exchange on a global scale. It is suggested to strengthen academic research and project cooperation in the field of digital public art at home and abroad, and promote the integration of local art and global technology by introducing international advanced technological concepts and creative methods. At the same time, by exporting successful cases and cultural elements of domestic digital public art, it can also enhance the international influence of local art.

7. Establish an evaluation system for digital public art

At present, there is a lack of systematic evaluation standards in the field of digital public art, which affects the clarity of its development direction and the measurement of

practical effects. It is recommended to establish a scientific evaluation system that comprehensively considers indicators such as artistry, technicality, audience participation, and social influence. This system can not only help art creators better evaluate the expressive power of their works, but also provide a basis for relevant policies and investment decisions.

References

- Chen, Q. (2017). Research on the application mode and effect evaluation of VR technology in environmental art design teaching in applied universities. *Popular Literature and Art*, (22), 189-190.
- Li, H. (2019). Exploration on the construction of art virtual simulation experiment teaching platform based on VR technology. *Popular Literature and Art*, (10), 227-229.
- Li, S. (2006). *Introduction to digital media art*. Tsinghua University Press.
- Luo, Y. (2017). When an artist meets VR (Master's thesis). Central Academy of Fine Arts.
- Qiu, J. (2016). *VR virtual reality: Technological revolution + Business applications + Classic cases*. People's Posts and Telecommunications Press.
- Wang, P. (2018). Research on the application of 3D virtual VR technology in environmental art design. *Modern Electronic Technology*, 41(12), 168-171.
- Weng, J. (2006). The concept and orientation of public art. Beijing Academy Press.
- Wu, N. (2019). Research on immersive virtual reality interactive art design (Doctoral dissertation). Central Academy of Fine Arts.
- Yang, L. (2017). Research on the application of VR technology in environmental art design (Master's thesis). Suzhou University.
- Zou, Y. (2017). On the application of virtual reality (VR) technology in museum space art design (Master's thesis). Suzhou University.