

Research on Light Installation Art Design within the Context of Regional Culture: A Case Study at the Guangzhou International Light Festival

¹Liming Han, ²Sitthidham Rohitasuk, and ³Denpong Wongsarot

Faculty of Fine Arts, Srinakharinwirot University, Thailand

E-mail: ¹han.liming@g.swu.ac.th, ²sittidech@g.swu.ac.th, ³denpong@g.swu.ac.th

Received January 18, 2024; **Revised** February 29, 2024; **Accepted** March 5, 2024

Abstract

This article aimed to conduct a design study on light installation artworks incorporating regional culture at the Guangzhou International Light Festival. The research was to explore the methodology of designing light installations that are rich in regional cultural characteristics and provide guidelines for artists and creators in this context. The sample of artworks comprised three selected installations from the Guangzhou International Light Festival, while interviews were conducted with 12 audience members, 6 creators, and 1 curator who participated in the festival in 2023. The instruments used for data collection included fieldwork, case studies, and in-depth interviews, guided by Theories of Visual Cultural Studies and WJT Mitchell's Theory of the Image. Data analysis employed descriptive statistics and content analysis.

The research findings indicated that the design of light installation artworks rich in regional culture involves a seven-step process. During the creation process, it is essential to consider the social and historical nature of the work, the audience's interpretation, behavior, and feedback. The tangible representation of visual symbols and the abstract expression of cultural elements emerge as effective means to showcase regional culture in light installation artworks.

In conclusion, the study shed light on the intricate process of incorporating regional culture into light installation art and provided valuable insights for artists and creators. The identified steps and considerations contribute to a comprehensive understanding of how to infuse cultural richness into these artworks, enhancing their significance and impact within the context of festivals like the Guangzhou International Light Festival.

Keywords: Light installation art; Design methods; Regional Culture; Guangzhou International Light Festival

Introduction

Light installation art originated at the beginning of the twentieth century, as a new art category under the aesthetic trend of post-modernism, it integrates the characteristics of science, technology, and culture, so it is loved by artists and the public. Light installation art is the art form that has attracted the most attention in the field of public art in recent years, and the current research on light installation art mainly focuses on its creation form, expression method and application field (Liu et al., 2013). With the tendency of consumers to consume on cultural and spiritual levels, light and shadow works have shown a diversified development trend in night entertainment activities (Alves, 2007). However, although artists teams such as Team lab have pioneered successful business models through the fusion of technology and art (Sookkaew et al., 2023). There are still significant gaps in the research of systematic theoretical frameworks and design methodologies, especially in the integration and expression of regional cultures. Therefore, studying light installation art under regional culture is of great significance.

This study focuses on the design methodology of light installation art and explores how this interdisciplinary field integrates technology, culture, and art. The study aims to address the singularity of urban light art in terms of form and cultural characteristics while exploring how light art can enhance the presentation of regional culture and meet the public's growing demand for cultural and spiritual consumption. Past researchers have already contributed to the application of LED technology and the innovation of immersive light and shadow spaces, promoting the deep integration of art and technology. Institutions such as governments, education and museums have set up notable organizations dedicated to the continued development of such technology-art fusion works (Zaeva-Burdonskaya & Nazarov, 2022). The primary audience for this study includes policymakers, art and design practitioners, tourism industry stakeholders, and the public seeking cultural experiences.

The core objective of this study is to conduct in-depth research on the characteristics of light installation art and its design methodology in the context of regional culture and to construct a knowledge framework that provides theoretical and practical guidance for artists and creators to incorporate regional culture within their light art creations. The purpose of the research is not only to promote the combination of art and culture but also to promote urban economic development

and cultural dissemination. The study will be divided into two main parts: firstly, through field research and case study analysis, the light installation art of Guangzhou International Light Festival will be explored to analyze its performance and cultural expression in the regional festival culture; secondly. Secondly, in-depth interviews will be used to study the creators to gain insights into their design methods and steps in the creation process. The results of this study are expected to provide rich resources for the education and learning of light installation art, make up for the shortcomings of the existing theoretical system, and bring enlightenment to the practical world.

This research paper presents the design methodologies of light installation art within the context of regional culture, thoroughly investigating how this interdisciplinary field amalgamates technology, culture, and art. The paper seeks to address the homogeneity in form and cultural characteristics of urban light art, whilst also exploring how light art may amplify the expression of regional culture and fulfil the public's burgeoning demand for cultural and spiritual consumption. The primary audience for this study encompasses policymakers, practitioners in art and design, stakeholders in the tourism sector, and the public in pursuit of cultural experiences. At the heart of this research is the aim to conduct an in-depth examination of light installation art's design methodologies against the backdrop of regional culture, and to construct a knowledge framework that offers theoretical and practical guidance for artists and creators to weave regional culture into their light art endeavors. The outcomes of this study are anticipated to enrich the educational and learning landscape of light installation art, remedy the shortcomings of the existing theoretical system, and provide enlightenment to the practical realm.

Research Objectives

The research aims to study the methodology of light installation art design rich in regional cultural characteristics and to provide guidelines for relevant artists and creators.

Literature Review

The methodology of light installation art design rich in regional cultural is the research conducted by using Visual Cultural Studies theories and W.J.T. Mitchell's Image theories. The researchers studied the related research, and they concluded the following:

As the name suggests, light installation art uses light as a medium and carrier to express the author's intention. Light installation art is from the physical perspective to give the audience a visual experience and sensory stimulation (Liu et al., 2013). The earliest light installation art can be

traced back hundreds of years ago to lantern festivals, such as the Lantern Festival in China or the Loy Krathong Festival in Thailand, where inhabitants make different shapes of lanterns to celebrate the festivals (Bhatia, 2022). During these festivals, people would design lanterns with different shapes and styles to make them more aesthetically pleasing. Such lanterns are also rich in people's prayers for peace, avoiding disasters, driving away evil spirits, praying for love and other wishes, fully demonstrating the local humanistic style. Nowadays, light installation design includes the modelling design of the light source, the visual presentation of light, the selection of reflective materials and so on (Kontogeorgakopoulos & Klissouras, 2021). The reproduction of light or the creation of light art installations can be realized through new technological means. Combined with projection technology and interactive technology, light installation art forms a unique art form, and these technological means can continuously create the appearance of art installations, bringing the audience pleasurable visual enjoyment and artistic experience. At the same time, the content of the artwork is presented culturally. At present, this kind of light installation, complete with visual effects, has gained the favor of artists and audiences, and its technological attributes closely linked with science and technology have made it a trend in contemporary art, which has also shown a linear upward trend in the form and quantity of light installations. Light installation works appear in all corners of busy cities, whether in shopping malls, squares and parks, large building groups or museums, and other confined spaces. Light installation can be seen everywhere and has become a trendy art (Chhikara, 2020).

Regional culture refers to the regional cultures that have developed in different regions over a certain period. This regional culture is always integrated with the local natural environment and influenced by local historical traditions, so the regional culture of each region is unique and recognizable. (Mao et al., 2024) Regional culture is usually a traditional culture handed down from history and still plays a role today. This culture is deeply rooted in the region to which it belongs, has its characteristics and has been passed down to the present day, due to the different geographical structures, environments and climates of different regions have formed different cultures so that these cultures can reflect the ecology, folklore, traditions, and expression of the region's habits (Mo & Chandhasa, 2023). The natural environment, the human environment, and the social environment are the three dimensions of regional culture; the content of these three dimensions contributes to forming a region's regional culture (Mo & Chandhasa, 2023). The regional culture of a place will change over time. The regional culture of a place with different dimensions of environmental change or extinction is deeply embodied in human activities, and

accompanied by human behavior, profoundly affects the political, economic, and cultural society, and becomes synonymous with local culture.

Guangzhou International Light Festival is one of the world's three major light festivals. However, it is "light art" as the main line. Each session of the light festival involves a wide range of comprehensive effects undoubtedly. (Yin et al., 2023) The Guangzhou International Light Festival started in 2011 and continues to this day. The successive Guangzhou International Light Festivals were held to a certain extent to strengthen and improve the construction of the public cultural service system, enhance the cultural taste of Guangzhou city, the overall image and competitiveness, and thus promote economic development, culture, and social progress has laid a solid foundation. (Yin et al., 2023) Light festivals have a positive impact on the spread of regional culture. Yin's study explored the impact of the Guangzhou International Light Festival on regional culture from the audience's perspective and found that most respondents agreed that the festival positively affected urban culture. In addition, the light festival can also enhance the public's sense of identity with the regional culture, and most respondents said that the light festival helps to cultivate the public's cultural identity (Giordano & Ong, 2017).

Relevant Theoretical Studies

Visual culture studies began to gain attention in the 1980s and 1990s as a cross-disciplinary discipline, focusing primarily on the use and value of visual images in cultural, social and political contexts (Mitchell, 1995). This field of study is not only about the foundational analysis of images but also about the creation, delivery, and audience response to images, the interaction between images and their social and cultural contexts, and their interpretation by viewers. The development of technology, particularly the spread of photography, film, and television, has led to the importance of technology in visual culture being widely studied. At the same time, postmodernism has had a profound impact on visual culture, showing us the unclear boundaries between image and reality and the place of image in consumerist culture. In the context of globalization, visual culture studies have explored how images are transmitted and understood across cultural zones (Smith, 2005). In the advent of the digital age, digital tools have opened new paths and possibilities for the production, dissemination, and interaction of images. Taken together, visual culture studies provide a way to understand the multiple functions and values of images in contemporary society.

Michel's "Image Turn" has brought a new perspective and dimension of understanding to contemporary iconography. His "image turn" is about recognising images and how images play a role in culture and society and how they interact with people's daily lives. His concern is not only about the image but also how it survives, spreads and changes in society and culture (Smith, 2005). This theory of the image turn is closer to an "open system" that is not only fixed on the narrow definition of art history but also crosses the boundaries of many disciplines, involving philosophy, linguistics, sociology, etc., and demonstrating the vast influence and value of images in contemporary society. This open, interdisciplinary approach provides new perspectives and methods for the study of images, allowing for a deeper understanding of the role and significance of images in contemporary culture and society (Mitchell, 1995).

The scholarly discourse surrounding light installation art elucidates the discipline as a confluence of aesthetic expression, technological innovation, and cultural narratives. Historical analysis draws a connective thread from contemporary installations back to the venerable traditions of lantern festivals, thereby endowing them with a profound cultural resonance (Bhatia, 2022). The advent of technological advancements has been pivotal in transforming the landscape of light installation art, facilitating the creation of complex designs, and fostering interactive engagements (Chhikara, 2020), as articulated by Kontogeorgakopoulos and Klissouras (2021). Moreover, research into regional culture (Mao et al., 2024; Mo & Chandhasa, 2023) highlights the distinctiveness and recognition of local customs that are intricately woven into the fabric of these installations, further underscoring the symbiotic relationship between light installation art and its cultural milieu. Therefore, the current richness of light installation art in terms of regional cultural expression is still insufficient, and the theoretical exploration of its design methodology based on regional culture is still conspicuously absent. To address this issue and fill the gap, this study will undertake a comprehensive and meticulous analysis of the design methodology of light installation art through research on the Guangzhou International Light Festival, in conjunction with visual image theory and Mitchell's theory of images. Through such analysis, this research aims to provide methodological and theoretical guidance for artists and students involved, potentially facilitating the teaching practices and cultural expression of light installation art.

Conceptual Framework

This study is qualitative. The researcher defines the research conceptual framework based on the theory of W.J.T. Mitchell's Theory of Images and Visual Culture Research Theory. The details are as follows:

When researching the artistic design of light installations in the Guangzhou International Light Festival, based on the above theories, we can first start from the dimension of production and consumption of images, focusing on the process of creating light installations and the acceptance of the audience, and through in-depth interviews with the designers, production staff and the audience, revealing how these installations are conceived, produced, and experienced. Further, the images' social and cultural significance becomes the study's core, revealing the connections between the installations and Guangzhou and broader Chinese culture by analyzing their themes, forms and contents. In addition, Power Relations in Visual Practice examines how the installations interact with the power structures of society, while Mitchell's view of the life of the image emphasizes the interactive nature of the image and the viewer. At the same time, the political and historical nature of the images focuses on how the light installation participates in political and historical discourses in Guangzhou and China. In contrast, the relationship between image and text reminds us of the textual elements of the installation. Together, these dimensions provide a comprehensive and in-depth framework to help us understand the multiple meanings and values of the artistic design of light installations based on regional culture in the Guangzhou International Light Festival.

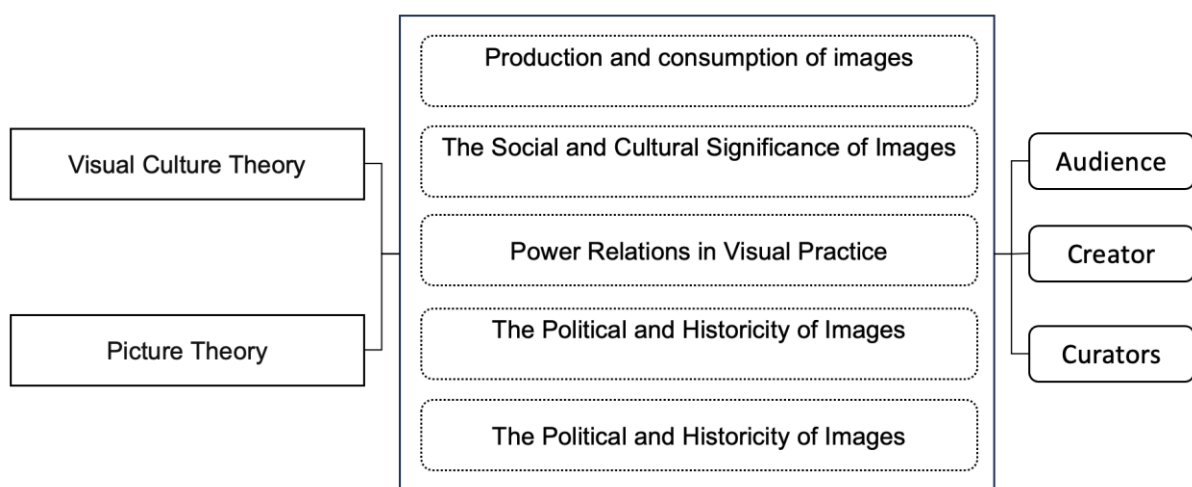


Fig.1 Conceptual Framework

Research Methodology

Study site

The Guangzhou International Light Festival, as one of the world's three major light festivals, represents a significant geographical and cultural advantage for Guangzhou. Since its inception in 2011, the festival has evolved into a large-scale annual event, recognized in 2015 by UNESCO as a key cultural event in the International Year of Light, alongside notable festivals in Lyon and Sydney. It distinguishes itself by attracting the highest visitor numbers globally, exceeding 65 million attendees, underscoring its status as a preeminent international light festival. (Yin et al., 2023) Regionally, the festival showcases Guangzhou's unique cultural and artistic traits, intertwining with the city's urban culture. The light artworks embody the distinctive Lingnan cultural characteristics and resonate with the spirit of Guangzhou, fostering a deep connection and cultural identity among the audience, thus enhancing their sense of belonging and pride in the city. (Giordano & Ong, 2017) Industrially, Guangzhou boasts a robust foundation in the lighting sector, housing nearly 3,000 stage lighting and sound enterprises, accounting for half of China's market and generating over 50 billion yuan annually. Notably, approximately 70% of the world's stage lighting equipment is manufactured in China, with nearly 95% originating from Guangdong, further solidifying Guangzhou's industrial advantage in this sector. (Giordano & Ong, 2017) The 2013 Guangzhou International Light Festival was one of the most culturally rich. Because of the covid-19, it was the first time to do an offline exhibition in the last three years. Then I can have the opportunity to conduct research and do interviews on-site, so I used the festival as the location for my research.

Sample works

This year's festival theme was “Radiant Bay Area, Glowing Yangcheng, Shaping the Future,” featuring 25 groups of light and shadow art installations. A significant highlight of the 2023 Guangzhou International Light Festival was the fusion of Lingnan (Guangzhou's regional culture) with advanced light and shadow technology. The following information pertains to the 3 artworks selected for the case study analysis:

Table 1

Artwork sample for this study

Serial number	Title of work
1	"Dazzling Bay Area" (2023)
2	"Rhythms of Water" (2023)
3	"Guangdong's Light" (2023)

Details of the age range for the interviewed audience samples are as follows (12 individuals in total):

Table 2

The age range for the interviewed audience samples

Age level of participation	Number of samples
<20 years	1
20–30 years	9
30–40 years old	2
>40 years old	0

The sample of creators will be selected based on the sample of works, and the professional background and experience of the creators will be used as a reference, and the sample is expected to be as follows:

Table 3

The sample of creators

Interviewees	Professional background and experience	Assigned amount
Celebrated artists	Artists with wide visibility and experience in the field of light installation art	2
Curator (Organizer)	Specialists with extensive experience and expertise in the field of art curation and light installations	1
University Professors	Scholars with professional background and knowledge in visual culture studies or academic fields with some research on light installation art	1
Emerging Artists	Young artists or students with potential and new ideas in the field of light installation art.	3

Data Collection

Interview Guide: Based on the sample design, as well as Michel's theory of images and visual culture studies, the interview guide will incorporate the following key points:

1. The production and consumption of images
2. The social and cultural significance of images
3. Power relations in visual practices
4. Interactivity between image and viewer
5. The political and historical nature of images
6. The relationship between image and text

Data Analysis Methods

Data analysis is an important part of getting the results of the study, which will be analyzed in several steps in this study:

Organization of data: Firstly, the observation and interview transcripts were organized, the interview transcripts were converted into text format, and then the case texts, as well as the interview texts, were categorized.

Research Results

Objective: The results showed analyses of artistic design methods for lighting installations with regional culture in the 2023 Guangzhou International Light Festival.

Festival of Lights Concept

The biggest highlight of the 2023 Guangzhou International Light Festival is the artistic enhancement of the traditional light interpretation. Cutting from the cultural perspective and creating lighting works with artistic concepts fully reflects the forward-looking and innovative spirit of the city of Guangzhou. Guangzhou contains a thousand years of city, culture, and business, precipitating a rich historical heritage, the design of the work is therefore more focused on the combination of Lingnan culture and light and shadow technology. With the Pearl River as the link and the city as the background, the work integrates rich artistic elements into light and shadow and applies large-scale light and shadow stage installations, 3D imaging, holographic projection and other advanced technologies to draw a picture scroll highlighting "the beauty of art" and "the beauty of light and shadow", offering a creative experience for the public and tourists. The public and tourists dedicated a set of creativity, art, science and technology, and culture in one of the

immersive lighting feasts, a comprehensive display of Guangzhou's gorgeous Chinese-style modern city night scene and the deep Lingnan cultural charm, complete the "Radiant Bay Area, Glowing Yangcheng, Shaping the Future" theme echo.

Creating Mode

In the interview, Artist 1 believes that the thought process of creation is pure, and that the nature of the creative process is complex. "Visual designers or installation artists often extend ourselves through action. The learning process is long, but when you go deeper, you may recall things you learned long ago. These points of recollection and bursts are very important for creators. The creative process is pure, and nothing interferes with the artist's thoughts. But in the means of presentation, it becomes very complex, like a chain, with each link closely connected. This is the nature of the creative process." (2023, Artist 1) However, Curator 1 believes this kind of thinking must be cross-border. "To make a light installation, you must have a concept first. You need to understand and generate imagination because it is different from painting. You need to choose the right materials and technical means according to your specialty, and if you want to make a good installation, you must study many cross-border cultural elements. For example, theatre, poetry, philosophy, aesthetics, etc. Research in many aspects to understand these elements. That way, you can see a work more thoroughly when you look at it. (2023, Curators 1)

"We worked as a team, with me as the main guide. I initially proposed the concept and selected it with the approval of my teacher. I was responsible for determining the graphic design and the overall route, while the other members were responsible for the specific modelling and modelling. After the modelling was completed, I would iterate on the model. We had expected to be involved in the construction, but we only provided the programmed in the end. We created construction drawings, and other students were responsible for on-site measurements and filming small footage to showcase our work on the B-site." (2023, Student 1)

"Our work is a team effort. I was mainly responsible for the refinement of the theme concept. There are two other members in the team, a girl and a guy who can model. He is responsible for determining the dimensions and modelling, while I am responsible for all the ground-up implementation." (2023, Student 2)

Students and artists gave different answers When discussing the steps of the creative process.

"We started on the 4th of July, with only a month and a half to go. First, we decided on the theme, then we designed the shape, the movement, and the form of interaction. Then comes

the modelling and then choosing materials. I was responsible for software programming, communicating with the factory about the hardware part, testing waterproofing and connecting wires, etc., and finally on-site installation and inspection." (2023, Student1) The overall process sequence can be summarized into seven steps: theme determination, visual design, modelling, material selection, testing, fabrication and installation, and checking. (2023, Student 1)

The work starts with defining the theme and selecting its elements. The next step was to look for many references on the Internet, not only for the elements but also for the actual implementation ability. We also need to consider the choice of materials that fit the theme. I prefer to sketch the initial plan by hand and then have my classmates do the modelling. I will intervene to adjust the details or modify the model during the modelling process. Test the model in the computer. Then, determine the specific modelling based on the installation nodes. For example, the thick line in the original model represents the frame, and later, the width, thickness, height of the frame and the specific location of each mounting point need to be determined. Dimensional and construction drawings are produced. Then submit them to the builder for installation and verification" (2023, Student 2).

The Political and Historical

When exploring the political and historical present of the work's images, young students and young artists are mostly concerned with the values of the work, while the artist's ideas go deeper:

"Politics and art are inseparable. Politics is an ideology, and art creation is also based on ideology. We should look critically at society and human nature in our creations, and this critique is not only of the external world but also of the inner world. The dramatists of Eastern Europe mostly allude to political or social criticism in their works. Artists should not avoid these themes because art and society are closely connected. In their creations, artists should look for appropriate ways of expression because art can lead people to a deeper understanding of society. We, as artists, cannot avoid touching the various elements of society because they form part of our lives." (2023, Artist 1)

"If I had the chance, I would create a very interesting work that could spread very strongly, similar to the impact of literature. At that time, people were immersed in suffering, and my work would be like a wake-up call, like a milestone. I want to carve out the pain of that time (during the epidemic), like carving each day in stone of emotions." (2023, Artist 2)

The Role of the Audience

There are three ways in which the audience understands a work: image, sound, and text. Creators should also think about the audience's interpretation when designing their work.

"Every viewer has a different subjective understanding of the work. The most direct/method is to place exhibition boards because they will choose to read the text introduction next to the work if they can't understand it." (2023, Student1)

"Textual descriptions are important, especially for out-of-town visitors who are not familiar with Lingnan culture. We have design descriptions that can help them understand the work more deeply." (2023, Student2)

"The textual element is just a primer, like a throwback. I hope to trigger empathy and imagination through simple text descriptions rather than framing a structure. For example, instead of directly giving a figurative shape to limit the imagination, I let the audience make their associations, which could be a cultural flavor, a spatial carrier, etc. Each person is different; what you want to see is what you see. Because everyone's outlook on life, and values are different, engaged in different industries, the analysis of the material is also different. There is no need to have a concrete and rigid interpretation. For example, Mr. Ji's work Lin Fengmian, although many people may not be able to understand it, thinking that it is just a big tin rolled up into a circle it is an infinite past life, fighting for art, such an artist's work is to sing praises, call out, shout, with a sense of mystery and tension. Many ordinary people may not be able to understand such works, but it doesn't matter. The issue of audience that you mentioned before is not only for the common people but also for professionals and peer audiences. They have the feeling and knowledge, so they will naturally find such works very great" (2023, Professor 1)

"In designing the audience's behavior within the work, I take an approach based on preconceptions and analyses of the audience's responses. This includes careful consideration of the paths they take into and out of the space of the work, as well as their visual perspective when they first encounter the work. I aim to create an environment where the viewer can naturally interact with the work while ensuring that their experience is coherent and meaningful. To gain a deeper understanding of the viewer's experience, I will envision myself as someone who sees the work for the first time and tries to interpret and feel the work from their perspective. This approach helps me anticipate and understand the audience's possible reactions and pushes me to look at my work from different perspectives. In addition, I pay particular attention to feedback from viewers of different ages and backgrounds. By inviting friends and family to experience the work

and collecting their opinions, I can gain valuable first-hand data essential for adjusting and optimizing the design. Their feedback gives me new perspectives and insights and sometimes inspires me to make creative adjustments. Audience input and feedback is an important reference point in my creative process. Especially when creating images or large-scale works, I pay more attention to their reactions. If their feedback indicates that the work is accessible and widely accepted, I will consider and incorporate these suggestions. I aim to create artworks that resonate with the audience and express deep thoughts and emotions." (2023, Student 1) "It turns out that there is also an interactive session with the audience, where the audience can act like a conductor, waving their hands to direct the lighting and music interactions, and letting the audience interpret and decipher the scenario of the Vanguard or the fireworks of the earth in their own minds. Let people feel that in the ten thousand lights, there is always a light is waiting for me to go home." (2023, Artist 3)

Culture Performance

In the audience interviews, when inquiring about the regional cultural elements that left the deepest impression, the responses regarding the frequency of references to regional culture were as follows:

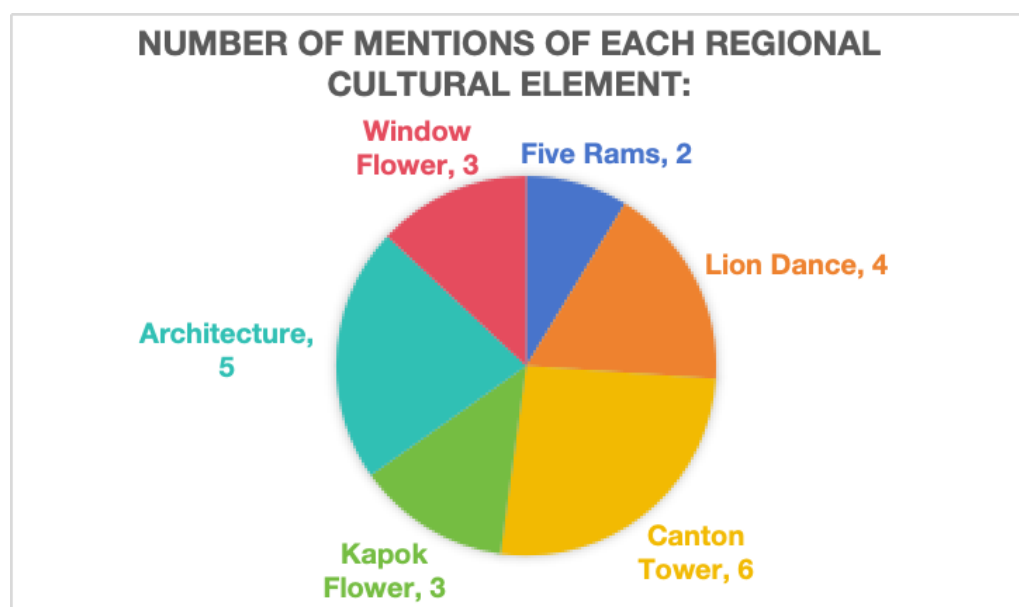


Fig.2 The four guidelines of community participation in cultural tourism management

In discussions about light installations featuring regional culture, the audience had a lasting impression of the "Dazzling Bay Area." "Wandering through the Square, the piece that most strongly resonated with me regarding regional culture was 'Dazzling Bay Area.' Its allure stems from the fusion of multiple elements and images, which are visually stunning and sparked deep connections with the culture of Guangzhou. For example, watching the exquisite Guangfu architecture, the complex and delicate window flowers, and the animated lion dance on the screen, I was virtually transported to a fantastical world blending tradition with modernity. This profound cultural immersion offered me a more vivid and in-depth understanding of Guangzhou's cultural heritage." (2023, audience Interview 9)

"Dazzling Bay Area" is this event's highest rendition of Lingnan culture. The piece is a 12-minute extensive light installation comprising four sections: "Intro: Dragon Rising over the Pearl River," "First Part: A Thousand Miles of Harmonious Winds," "Second Part: Peaceful Universe," and "Third Part: Bay Area of the Times." Grounded in Lingnan's profound historical and cultural roots and legends, it uses mesmerising light and shadow art to tell stories of Guangzhou's dynamic red culture, the ancient Lingnan culture, the internationally connected Maritime Silk Road culture, and a culture of innovation. It also incorporates distinctive Lingnan cultural elements like the Five Rams, architecture, lion dance, Guangcai porcelain, and Guang embroidery, sketching a picturesque panorama of Lingnan's allure.



Fig.3 Dazzling Bay Area

Among the works related to Lingnan culture that captured the audience's attention, "Rhythms of Water" was frequently mentioned:



Fig.4 "Rhythms of Water"

"In this piece, my initial focus was on the theme: the sensation of standing by the riverside. To convey this feeling, I concentrated on two essential elements: wind and river. My goal was to capture the sensation of wind caressing the body and the fluidity of river water. Therefore, I employed dynamic techniques to depict the feel of the wind, resonating with the element of river water. This formed the basis of my creation. Subsequently, I extracted the structural elements of water, crafting a visual effect that mimicked water flowing down from the Canton Tower. Within this illusion, I ingeniously hid performers of traditional instruments like the pipa and guzheng behind the water curtain, creating a picturesque scene of high mountains, flowing rivers, and harmonious strings. This resonated with the theme and added layers of mystery and cultural depth. In portraying regional culture, I extended beyond traditional Guangzhou culture. I incorporated elements from the surroundings, such as the Canton Tower's pristine white and the Pearl River's essence. In the video, I utilized Lingnan cultural motifs, like traditional Chinese landscapes and architecture, for a multifaceted portrayal instead of adhering to a single fixed image. This way, I endeavoured to capture and express a broader, more diverse cultural ambience while maintaining a tight link to the theme." (2023, Professor 1)

Local industries form a part of the regional historical culture, and their integration with modern artistic elements in audio, lighting, and electricity produces a distinct visual experience. "Initially, what drew me in was a machine installation that combined music, sound, light effects, and electricity. This combination's intense impact was overwhelming, providing an uplifting experience." (2023, Audience Interview 2)



Fig.5 The artwork "Guangdong's Light"

"Guangdong's Light," a remarkable large-scale kinetic mechanical installation, exhibits extraordinary creativity in blending art with technology. This work comprises three installation groups, creating a cohesive and harmonious entity housing intricately designed theatrical lighting equipment. Its distinctiveness lies in that it is not merely an art piece but also a manifestation and exploration of lighting technology. The work's core is transforming the festival's main lighting fixtures into the main visual element. This transformation is not a mere replication but an artistic enlargement and representation of the internal structure of the fixtures. Such a design approach highlights the complexity and finesse of the lighting fixtures and elevates the audience's comprehension and appreciation of lighting technology. Structurally, the fixture's design comprises precise mechanical devices dynamically presented through programmed control. The motion of these mechanical elements, synchronized with the lighting and sound effects, offers a dual sensory impact, both visual and auditory, to the audience. Particularly notable is the rotating motion of the installations, enhanced by the sparkling lights, adding a vibrant and dynamic aura to the piece. The installation displays an enlarged version of the exposed structure of lighting fixtures, where the mechanical materials and metal frameworks are clearly visible, demonstrating the allure of industrial aesthetics and showcasing refined craft techniques.

Knowledge from Research

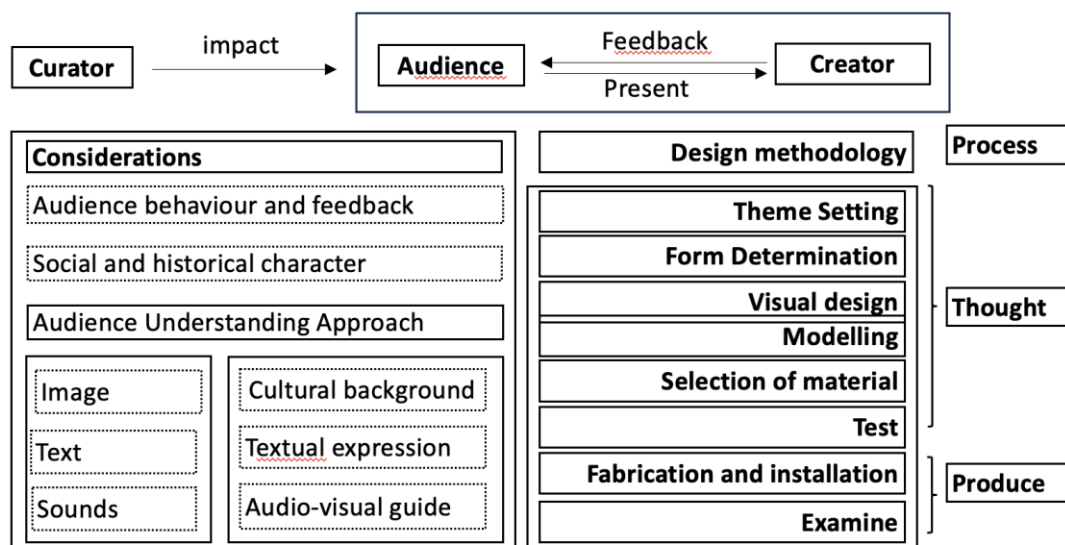


Fig.6 Knowledge from Research

The creative process is clear and specific in the young students' narratives, which contain seven steps: theme determination, material selection, sketching design, modelling, testing, installation, and verification. The steps are consistent with the seven steps, and the only difference in the order is the setting of the selected material. From the previous interview, we can get that "Handshake" is a light interactive installation and "Impressions of Guangzhou" is a light installation; the only difference is the difference in "interaction", so the order of the selected materials may change due to the form of the work. In the interview, the artist focuses on the thinking process of creation, with a relatively weak expression of the implementation procedure. The artist believes that creative inspiration is a kind of accumulation and that the creative thinking process is a long-term state. However, there will be certain steps in the production, and they are strictly regulated.

The artists' understanding of sociality and historicity can be summarized as follows:

The inextricability of art and politics: Artist 1 points out that politics and art are inextricably linked, emphasizing the deep connection between politics as an ideology and art creation. This suggests that artists often consider social and political contexts when creating art and may even use social elements as a source of inspiration for their creations. It argues that artists should not avoid political or social themes, as art is closely linked to society. In their creations, artists should look for appropriate ways of expression to lead the audience to a deeper understanding of social phenomena.

Criticality of art to society: Artistic creation is seen as a critical tool for exploring and reflecting on social phenomena and human nature. The Eastern European dramatists referred to by Tycho often allude to political or social critique through their work, showing the role of the work of art as social commentary.

A record of historical moments: Artist 2 hopes to create works that depict the pain and emotions of a specific historical period, like carving the emotions of each day in stone. This practice is not only a record of historical events but also an expression of the emotions and experiences of that time.

The author's character considerations for the audience can be summarized as follows:

Presuppositional analysis of audience behavior: In creating art, creators often employ an approach based on preconceptions and in-depth analysis of audience behavior. This approach carefully considers the audience's path into the exhibition space, their perspective when they first view the work, and how they interact with it. This presuppositional analysis aims to construct a simulated environment and consider how viewers naturally engage with the work while ensuring their experience meets expectations. The artist needs to focus not only on the artistic expression of the work but also on the audience's experience and overall perception of the work.

The role of audience feedback: Feedback from audiences of different ages and backgrounds plays a crucial role in the design and development of artworks. Creators value this feedback and use it as a key basis for adjusting and optimizing the design of the work. By collecting and analyzing audience feedback, creators can gain diverse perspectives on the work, which are essential for adapting the work better to suit the expectations and understanding of the audience. Audience feedback plays a decisive role in determining the final form and expression of the work, thus ensuring that the work strikes a balance between artistic expression and audience acceptance.

Audience Interpretation Methods: Effectively designing for audience understanding during the creative process includes providing clear text, considering the audience's cultural background, and making full use of light as a guide. By doing so, artists can create an experience that is both inspiring and inclusive, enabling viewers from different backgrounds to appreciate and understand works of art in their way. In addition, from the viewer's perspective, viewers should learn more about cross-border cultures and improve their aesthetics. "Many people can't understand what the exhibition displays mainly because they don't understand cross-border culture and aesthetics. If

you don't research aesthetic psychology and philosophy of art, it's hard to understand the works." (2023, Curator1)

Expressions of regional culture are as follows:

Tangible Representation of Visual Symbols: This involves using concrete and direct visual elements in art to express specific ideas or concepts. These symbols, such as characters, objects, or scenes, communicate information or emotions to the audience vividly and straightforwardly.

Abstract Expression of Cultural Elements: This refers to the abstract presentation of cultural elements in art. Unlike tangible representation, abstract expression relies on colour, shape, lines, or other non-figurative means to convey cultural significance.

Harmonious Blend with Regional Environment: This signifies the art's seamless integration with its geographical and cultural setting. Such integration implies that the artwork is aesthetically and culturally, historically, or socially in sync with its surroundings.

Discussion

The discussion expands upon the research conducted in relation to the Guangzhou International Lighting Festival, beginning with a synthesis of the primary findings. The study establishes that the creation of light installation art is inherently a collective endeavour, emblematic of a contemporary art form that traverses the realms of art, science, and engineering. This interdisciplinary approach necessitates a departure from traditional art-making methods, requiring a collaborative effort from a diverse pool of talents, as the complexity of high-quality light installation art is beyond the scope of solitary endeavour. The prominent collective, Teamlab, exemplifies this approach by integrating multifaceted expertise to achieve visually immersive experiences like those found in the Boundless Art Museum (Sookkaew et al., 2023).

Furthermore, the study delineates a seven-step design methodology for light installation art, encompassing theme determination, material selection, sketching, modelling, testing, installation, and verification. In contrasting the creative approaches for varying types of light installation art, the research references Pepper (2018), who identifies a five-step process that includes inspiration, form decision, pattern choice, image creation, and installation design. Notably, the discussion of Pepper's work highlights the absence of material selection and production due to the nature of video installation art. The study posits that vision—encompassing pattern selection and image creation—is integral and that the design process, involving computer modelling and 3D printing, conforms to the seven-step framework established by this research.

In presenting these findings, the study underscores the significance of a structured process in the production of light installation art and contributes to a broader understanding of the nuanced creative methodologies within this dynamic field.

Conclusion

In exploring the methodological approach to light installation art, artists typically adhere to a seven-step process that includes defining the theme, selecting the form, and choosing materials. During the creative process, it's essential to consider the social and historical aspects of the work, as well as audience interpretation and feedback. In expressing regional culture, artists employ both figurative and abstract techniques to handle cultural symbols, endowing the artwork with a unique formal language. This research not only provides artists with a structured creative framework but also serves as a reference for the teaching and practice of light installation art. Indirectly, it promotes the dissemination of regional culture and the development of the local economy, deepening the dialogue and exchange of art within social and historical contexts.

Suggestions

Art creation is a teamwork that integrates thinking and the production process. Therefore, in the construction of the creative team, team members can be selected according to the theme's form, and the whole team's interdisciplinary ability should be emphasized. In the thinking process, important steps include theme setting, form determination, visual design, simulation modelling, material selection, testing, production installation and verification. Theme setting should be derived from social customs, historical beliefs, natural geography, and character stories. The overall step-by-step focus is derived from the work's form, but the process's integrity needs to be ensured to avoid being affected by uncertainties. The form needs to consider factors such as cost, social power, and the environment. In addition, the choice of materials is based on the expression of the theme, the audience's psychology, visual performance, light and shadow effects, cost, and time constraints. Regarding artworks' social and historical nature, creators should not avoid socio-political issues and use artworks to criticize and reflect on social phenomena. At the same time, the creation of the work also considers the audience's way of interpreting the work, including the cultural background, the use of sound and light, and the interpretation of the text, as well as pre-determining the audience's viewing perspective and course of action, and soliciting direct feedback

from the audience to optimize the expression of the work. During the production of a work, creators need to ensure that construction proceeds as expected to avoid deviations from the expected. In facing challenges such as cost budgets, technical difficulties, temporal and spatial constraints, and connotative expression, creators should remain innovative, experiment, and adapt to constraints, and focus on personal expression while seeking feasibility in practice. Finally, creators can pursue a more perfect work effect around visual aesthetics, environmental integration, interactivity and participation, regional culture, and social epochs.

References

- Alves, T. (2007). Art, Light and Landscape New Agendas for Urban Development. *European Planning Studies*, 15(9), 1247–1260. <https://doi.org/10.1080/09654310701529243>
- Bhatia, M. (2022). Light Festivals: Entertainment or Urban Renewal Tool? *IOP Conference Series: Earth and Environmental Science*, 1099, 012009. <https://doi.org/10.1088/1755-1315/1099/1/012009>
- Chhikara, A. (2020). Rayuela: Delivering Serious Information Through Playful Interactive Installations. TEI 2020: Proceedings of the 14th International Conference on Tangible, Embedded, and Embodied Interaction, 661–667. <https://doi.org/10.1145/3374920.3375288>
- Giordano, E., & Ong, C. E. (2017). Light Festivals, Policy Mobilities and Urban Tourism. *Tourism Geographies*, 19(5), 699–716. <https://doi.org/10.1080/14616688.2017.1300936>
- Kontogeorgakopoulos, A., & Klissouras, O. (2021). *Temporal Transformations and Spatial Explorations in Sound–Light Art*. In ICMC 2021 – Proceedings of the International Computer Music Conference 2021. Michigan: Michigan Publishing Services.
- Liu, H., Liu, Y., & Cao, L. (2013). Study of Light Installation Art in Space Design. *Lecture Notes in Electrical Engineering*, 207, 537–544.
- Mao, L., Lu, C., Sun, G., Zhang, C., & Guo, C. (2024). Regional Culture and Corporate Finance: A Literature Review. *Humanities and Social Sciences Communications*, 11(1), Article 59. <https://doi.org/10.1057/s41599-023-02551-8>
- Mitchell, W. T. (1995). *Interdisciplinarity and Visual Culture*. *Art Bulletin*, 77(4), 540–544.
- Mo, F., & Chandhasa, R. (2023). Research on Elements of Rural Environmental Design in China from the Perspective of Regional Culture. *Kurdish Studies*, 11(2), 3054–3063. <https://doi.org/10.58262/ks.v11i2.223>

- Smith, M. (2005). Visual Studies, Or the Ossification of Thought. *Journal of Visual Culture*, 4(2), 237–256. <https://doi.org/10.1177/1470412905057350>
- Sookkaew, J., Chaikaew, N., & Changjaikla, P. (2023). Interactive Light Art: The Illumination of Art and Technology Merging. *International Journal of Engineering Trends and Technology*, 71(12), 308–323. <https://doi.org/10.14445/22315381/IJETT-V71I12P229>
- Yin, S. H., Fu, C. Z., & Dai, G. Q. (2023). Exploring the Festival Attendees' Experiences on Social Media: A Study on the Guangzhou International Light Festival. *Sage Open*, 13(1). <https://doi.org/10.1177/21582440221145154>
- Zaeva–Burdonskaya, E. A., & Nazarov, Y. V. (2022). Light Design in Russian Universities: What and How to Teach? *Light and Engineering*, 30(1), 91–100. <https://doi.org/10.33383/2021-095>