

## **Regional Cultural Integration and Innovation in Environmental Design: Exploring Strategies to Maintain and Inherit Regional Cultural Values in the Context of Globalization**

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**Abstract:** Globalization has become a central concept in contemporary social science, encompassing a wide range of interconnected processes. The relationship between environmental art design and regional culture is one of mutual influence. Our study explored strategies for maintaining and inheriting regional cultural values in environmental design within China. We employed a mixed-methods approach, utilizing document analysis of historical texts and design plans, interviews with design professionals and cultural experts, surveys with environmental design practitioners, and case studies of successful cultural integration projects. The survey (n=30) indicated a strong emphasis on regional cultural integration. Participants valued its role in creating a sense of place and enhancing project attractiveness. Interview analysis identified three key challenges for integrating regional culture: balancing tradition with modern aesthetics, limited designer knowledge about regional heritage, and ensuring meaningful community participation. The case study of the Dazhu Ancient Rock Carvings' restoration showcased the use of traditional carving techniques, Buddhist iconography, and contemporary design for a visitor centre. Document analysis revealed how historical design treatises like the *Yuán yě* emphasized harmony with nature and symbolic elements, evident in Suzhou Gardens. In conclusion, our study demonstrates the importance of regional cultural integration in environmental design within China.

**Keywords:** Globalisation; Regional Cultural Integration; Environmental Design; Strategies and Cultural Values

### **1. INTRODUCTION**

Globalization has become a central concept in contemporary social science, encompassing a wide range of interconnected processes (Castañeda & Shemesh, 2020). Analysing relevant theories of globalization suggests these trends converged into a period of synchronized social change beginning in the early to mid-20th century, characterized by a significant social and cultural shift (Steger & James, 2019). Regional cultures have a profound impact on environmental art design. Distinct cultural backgrounds lead to diverse design styles, and incorporating local cultural elements allows environmental artwork to comprehensively reflect

and celebrate a place's unique character. Furthermore, these regional expressions can interact and influence each other in a dynamic exchange. Fully integrating regional culture into contemporary environmental art design fosters not only the sustainability of the design industry itself, but also the overall well-being of future development. In today's globalized market, where regional cultures increasingly blend and influence each other, designers are turning their focus towards these local expressions as the primary subject matter for environmental art projects (Kūlnieks, 2023).

Globalization is characterized by the accelerated integration of nations through modern transportation and economic links, fosters the expansion of cultural ties and human migration. However, concerns remain about the potential loss of cultural identity, particularly among younger generations who readily adopt fashions and habits from diverse cultures (Pieterse, 2019). Lebedeva argues that globalization, as an integrative force and the dominant trend in world development, is an objective process (Lebedeva, 2023).

The rapid advancements in science, technology, and social economy have undoubtedly diversified environmental art design, offering a wider range of technologies and tools to create high-quality and efficient projects (Chen & Sharma, 2021; Wang, 2023; Yang & Zhu, 2020). However, this progress has also intensified cultural clashes between regions, posing a challenge to the field. Some environmental art designers, lured by the allure of novelty and foreign influences, neglect local cultural heritage. In the era of economic globalization, environmental art design reflects a trend towards integration (Salman, 2018). However, the strong influence of Western culture can overshadow traditional aesthetics. Local values, artistic concepts, and customs risk fading as modern symbols proliferate. While new elements undoubtedly contribute to contemporary design sensibilities, regional culture remains a vital consideration. The resurgence of retro-aesthetics underscores the enduring value of traditional cultural symbols, which are increasingly reclaiming their place in mainstream design.

The globalization of art is believed to have emerged from growing interest in the artistic expressions of ethnic minorities within the United States and Western Europe (Joselit, 2020). Globalization fosters increased interaction between artists from diverse regions, enabling them to showcase their work on a global platform. This phenomenon was exemplified at the exhibition "Final Destination - Asia: not strict compliance," where Pakistani artist Quddus Mirza highlighted the power of art to bridge cultural divides. The exhibition aimed to introduce Kazakh audiences to contemporary Indian and Pakistani art, fostering reciprocal

artistic exchange. This initiative underscores a crucial aspect of globalization in the arts: despite geographic proximity, knowledge exchange between neighbouring regions can be surprisingly limited. The Contemporary Art Centre, by organizing the exhibition, sought to address this gap and promote artistic dialogue across borders.

Regional cultures evolve over extended periods, shaping the thoughts and behaviours of those residing within them. As times change, traditional regional cultures and modern influences exhibit a trend of mutual integration and diversification, impacting environmental art design. However, cultural inheritance is not about indiscriminate absorption; it requires discerning the essence from the superfluous (Hu, 2023). Therefore, environmental art design necessitates a balanced and rational approach towards regional culture. For instance, Beijing's classical architectural style, exemplified by "quadrangle dwellings," presents a case study. Rapid urbanization necessitates the demolition of some traditional structures. In such situations, maintaining a balance between preserving regional culture and fostering modern development is essential. This can be achieved through continuous innovation that builds upon a foundation of effective cultural inheritance.

In the field of environmental art design, the focus lies on achieving seamless integration between design elements and the surrounding environment (Yang & Kim, 2023). This necessitates continuous innovation at the design stage, while prioritizing the harmony and stability of both the natural world and local communities. Recent years have witnessed a growing emphasis on respecting the natural environment within environmental art design. A real-world example is the reconstruction of Dongziguan Village in Fuyang, which drew inspiration from Wu Guanzhong's "Painting of Jiangnan Resident" to establish its thematic image. The design incorporates the rhythmic roof lines depicted in the painting, translating them into a curved roof with a strong sense of rhythm. Furthermore, the architecture utilizes a brick-concrete structure, while the colour scheme maintains a traditional feel through the use of grey tones and imitation wood grain metal lattice. This design approach successfully balances the preservation of local architectural characteristics with the incorporation of modern design elements that add a touch of contemporary flair.

The economic potential of culture has gained significant attention in recent years, particularly at the regional level. Culture is increasingly recognized as a key factor in fostering regional diversity, a crucial competitive advantage in a globalized world increasingly characterized by

cultural homogeneity. Consequently, culture's inherent economic potential has been acknowledged, transforming it into a valuable economic resource (Graff, 2018). Walker et al. identifies three key reasons why culture serves as a significant economic asset: first, active cultural participation fosters strong communities and community spirit, a unifying force that holds particular importance in the face of globalization (Walker et al., 2003). Second, the strengthening of cultural communities directly creates economic value. Finally, the value generated by cultural production can be channelled towards regional growth through the export of unique traditional products, a strategy often described as "making locally and distributing globally." Urban development can benefit from various cultural influences (Bille, 2022; Coate & Hoffmann, 2022; Throsby, 2001). First, a singular cultural landmark, like the Leaning Tower of Pisa, can act as a powerful economic driver for the surrounding area. Second, concentrated cultural districts, exemplified by Dublin's cultural hub, can serve as focal points for local development. Third, cultural production, particularly within the performing arts, can be a vital economic component, especially in regional centers beyond major cities like London. Finally, culture can play a more overarching role in regional development by fostering a sense of community identity, creativity, cohesion, and vitality. This is achieved by leveraging the cultural characteristics and practices that define a city or region and its inhabitants (Throsby et al., 2021).

### 1.1 Rationale and Objective

Globalization presents a challenge to preserving regional cultural identity within environmental art design. This study investigates strategies for integrating and innovating upon regional cultural elements to ensure their effective inheritance. By analysing how cultural values can be maintained within a globalized context, the research aims to establish best practices for environmental art design that fosters a sense of place and celebrates local heritage.

## 2. METHODS

### 2.1 Research Design and Participants

Our study adopted a multi-method approach involving document analysis of existing research papers, historical documents, and design plans through document analysis. We further conducted targeted interviews with environmental art designers, cultural experts, and local residents. Finally,

case studies of specific environmental art design projects in China were analysed.

## 2.2 Document Analysis

Our study employed document analysis to analyse the historical underpinnings of regional cultural integration in environmental design within China. This analysis examined a variety of primary sources, including, Historical architectural manuals and design treatises such as the "Treatise on Garden Design" (Yuán yě), (Yingzao Fashi) or local building codes. Also, we examined regional and local gazetteers (difangzhi) containing detailed descriptions of local building practices, materials used, and cultural influences on the built environment.

## 2.3 Case Studies

Our case study analysis examined a selection of successful environmental art design projects in China that exemplify regional cultural integration. These projects included 1) the reconstruction of the Dazu Ancient Rock Carvings in Chongqing, which incorporated traditional carving techniques and Buddhist iconography into a contemporary tourist destination, and 2) the West Lake Bordwalk Rehabilitation Project in Hangzhou, which restored historical gardens and integrated them with modern pedestrian walkways, preserving the cultural significance of the West Lake landscape.

## 2.4 Interviews and Surveys

We conducted an online survey targeting environmental design professionals and stakeholders in China. The survey, administered through a secure online platform, included 30 participants and employed a combination of multiple-choice and Likert scale questions (15 questions total). Prior to participation, all individuals received an information sheet detailing the study's objectives and a consent form ensuring anonymity and adherence to ethical research protocols. This survey aimed to gather broader quantitative data on participants' perspectives regarding the importance of regional cultural integration in environmental design and their preferred methods for achieving this objective. In the second phase, we employed a series of semi-structured interviews to gain in-depth qualitative data from key stakeholders. These interviews, conducted in focus groups of 8-10 participants each, utilized open-ended questions (approximately 15 questions) to explore topics such as the challenges and opportunities associated with regional cultural integration in environmental

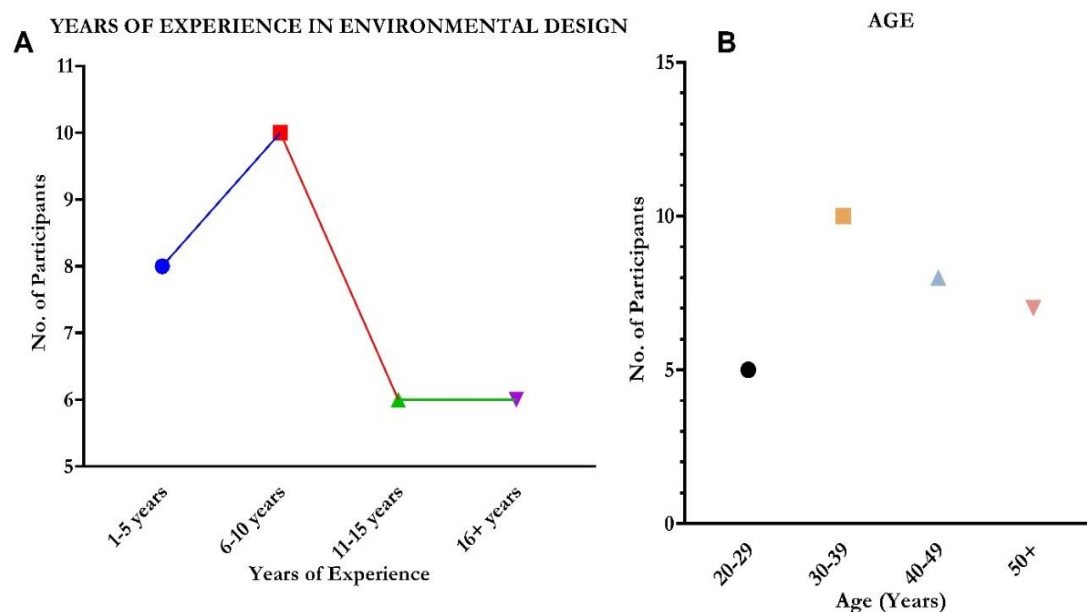
design, preferred strategies for achieving successful integration, and the perceived impact on cultural heritage. The interviews lasted between 25-30 minutes and were conducted in a safe and confidential environment.

## 2.5 Data Analysis

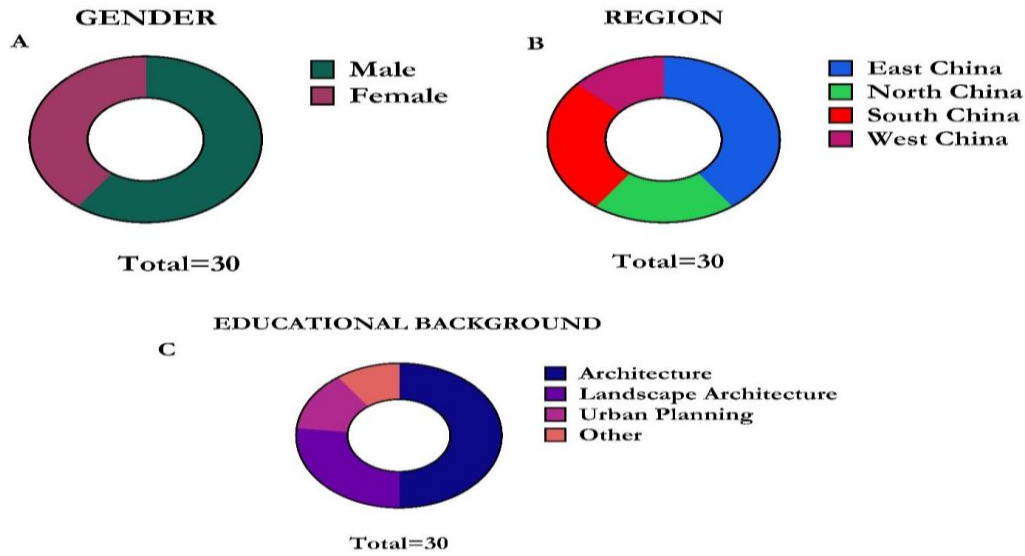
Our research employed a mixed-methods approach to data analysis. Quantitative survey data underwent statistical analysis using GraphPad Prism, set at a significance level of 5%. Qualitative data from interviews (n=8-10 focus groups) and case studies was analysed thematically, identifying recurring patterns and insights across the data sets.

## 3. RESULTS

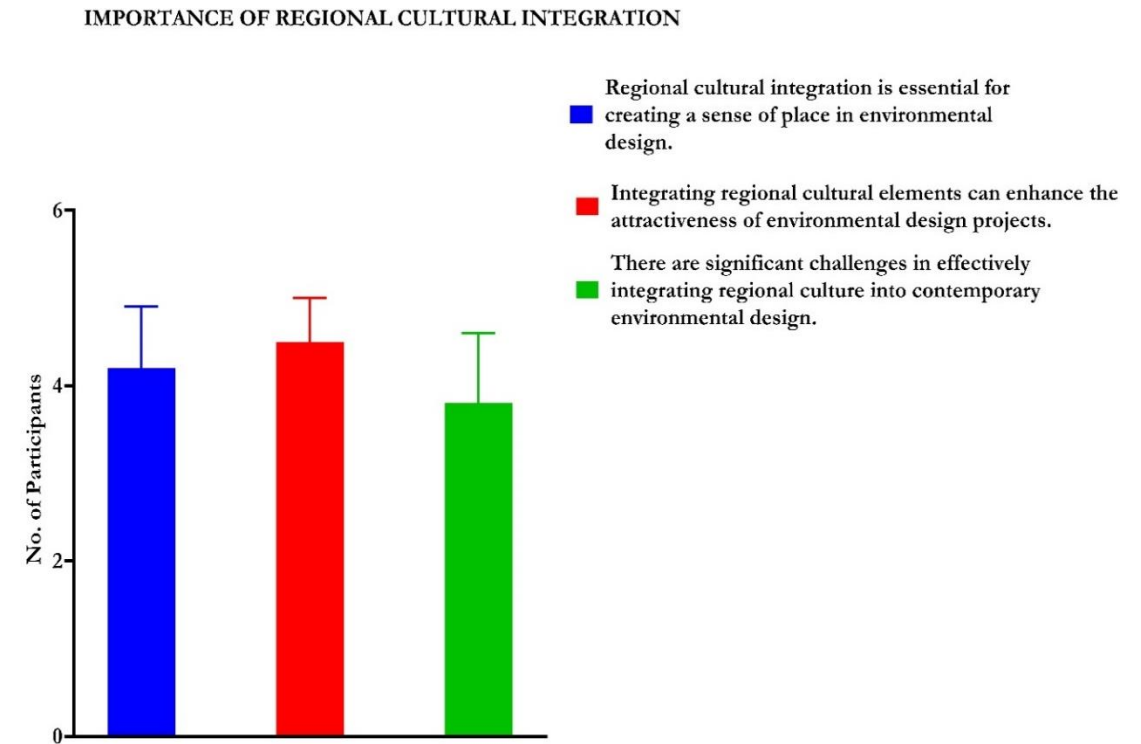
The survey included data from 30 participants. Age demographics were spread out, with 20–29-year-olds representing 16.7%, 30–39-year-olds at 33.3%, 40–49-year-olds at 26.7%, and those over 50 years old at 23.3%. In terms of gender, 60% of participants were male and 40% were female. Regionally, 40% were from East China, 20% from North China, 26.7% from South China, and 13.3% from West China. Years of experience varied, with 26.7% having 1-5 years, 33.3% having 6-10 years, 20.0% having 11-15 years, and another 20.0% with over 16 years of experience. The educational backgrounds of the participants leaned towards architecture (50%), with landscape architecture (26.7%), urban planning (13.3%), and other fields (10.0%) also represented (see Figure 1 and 2).



**Figure 1:** A Scatterplot Showing the demographic profile of participants based on years of experience in environmental design (A), and Age categories (B).

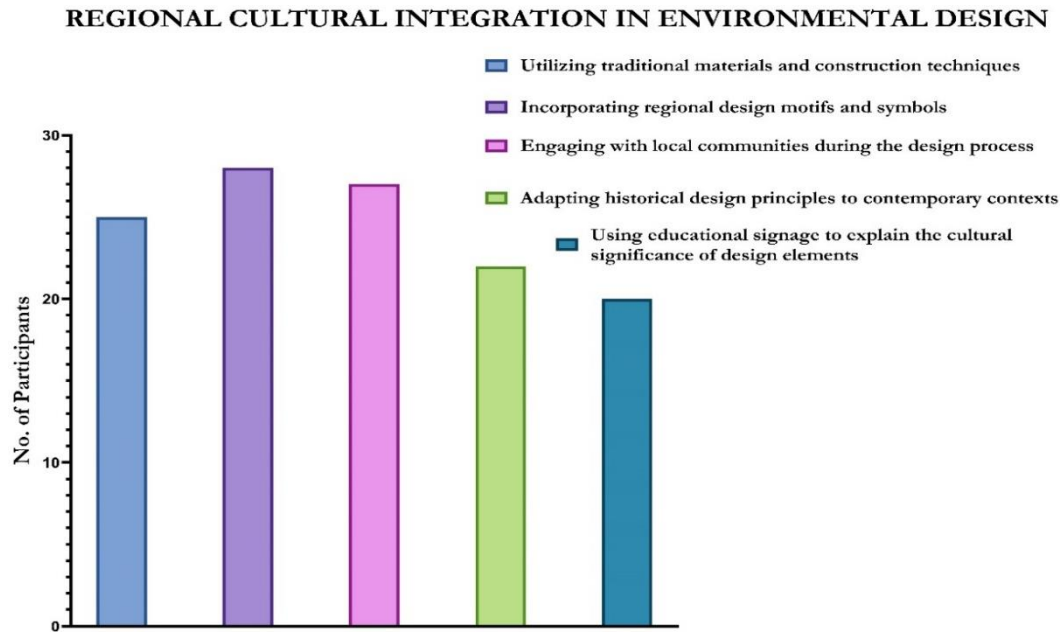


**Figure 2:** Pie chart distribution of the demographic profile of participants based on Gender (A), Region (B) and Educational Background (C).



**Figure 3:** Survey Responses on importance of regional cultural integration (n=30)

In Figure 3, the survey (n=30) revealed a strong emphasis on regional cultural integration in environmental design. Participants rated statements on its importance for creating a sense of place (Mean = 4.2, SD = 0.7) and enhancing project attractiveness (Mean = 4.5, SD = 0.5) highly, with "Very Important" frequencies of 70% and 83% respectively. However, there was also recognition of challenges, with a mean rating of 3.8 (SD = 0.8) and nearly half (47%) acknowledging significant difficulties in effective integration.



**Figure 4:** Preferred Methods for Regional Cultural Integration in Environmental Design

In Figure 4, the survey (n=30) indicated strong preference for various methods of regional cultural integration in environmental design. Over 80% of participants favoured utilizing traditional materials and construction techniques (83.3%) and incorporating regional design motifs and symbols (93.3%). Engaging with local communities during the design process (90.0%) was also highly favoured. Adapting historical design principles to contemporary contexts (73.3%) and using educational signage (66.7%) received positive endorsement as well.

**Table 1:** Challenges of Regional Cultural Integration in Environmental Design

Theme	Description	Supporting Quotes
Balancing Tradition and Modernity	Difficulty in incorporating traditional elements into contemporary designs without appearing outdated or forced.	"Preserving the essence of local architecture while meeting modern functional needs can be a challenge."
Lack of Awareness and Expertise	Limited knowledge among some designers about regional cultural heritage and best practices for integration.	"There's a need for more education and training for designers on how to integrate cultural elements effectively."
Community Engagement and Participation	Difficulty in ensuring meaningful participation from local communities throughout the design process.	"Finding ways to involve local residents without tokenism is crucial for successful integration."

In Table 1, three key challenges emerged for integrating regional culture into environmental design: balancing tradition with modern aesthetics (e.g., "preserving local architecture while meeting modern needs"), limited



designer knowledge (e.g., "need for education on integrating cultural elements"), and ensuring meaningful community participation (e.g., "finding ways to involve local residents").

Table 2: Preferred Strategies for Successful Integration

Theme	Description	Supporting Quotes
Understanding the Context	Importance of in-depth research on the specific regional culture and its design traditions.	"We need to understand the stories behind the traditional elements we want to integrate."
Adapting and Reinterpreting Traditions	Finding creative ways to adapt traditional design principles and materials for contemporary use.	"Modern technology can be used to reinterpret traditional elements in a fresh and innovative way."
Collaboration and Community Engagement	Building partnerships with local communities, artisans, and cultural experts.	"Collaboration with local stakeholders ensures the integrated design resonates with the community."

In Table 2, three themes emerged for successful regional cultural integration in design: in-depth research on the local context (e.g., "understanding the stories behind traditions"), creatively adapting traditions (e.g., "reinterpreting elements with modern technology"), and fostering collaboration with local communities and experts (e.g., "ensuring the design resonates with the community").

Table 3: Perceived Impact on Cultural Heritage

Theme	Description	Supporting Quotes
Preserving Cultural Identity	Environmental design can act as a tool to preserve and celebrate regional cultural heritage.	"Integrating cultural elements into design projects strengthens our connection to the past."
Fostering a Sense of Place	Well-integrated design creates a sense of place that reflects the unique character of a region.	"When design reflects local culture, it creates a more meaningful and authentic environment for residents and visitors."
Promoting Cultural Awareness	Environmental design can raise awareness and appreciation for regional cultural heritage.	"These projects can spark conversations about the importance of preserving our cultural heritage."

In Table 3, three positive impacts of integrating regional culture into environmental design were identified: preserving cultural identity (e.g., "strengthens connection to the past"), fostering a sense of place (e.g., "creates a more meaningful environment"), and promoting cultural awareness (e.g., "sparks conversations about preserving heritage").

Table 4: Regional Cultural Integration Strategies in Environmental Design Projects

Case Study	Project Description	Strategies for Regional Cultural Integration	Impact on Cultural Heritage
Reconstruction of Dazu Ancient Rock Carvings (Chongqing)	Restoration and revitalization of a UNESCO World Heritage Site featuring Buddhist rock carvings.	<p>* Traditional Techniques: Employed skilled artisans using time-honoured carving methods to preserve the artistic integrity of the carvings.</p> <p>* Buddhist Iconography: Maintained the religious significance of the site by incorporating Buddhist motifs and symbolism throughout the design. *</p> <p>Contemporary Integration: Developed a visitor center and infrastructure that seamlessly blends with the historical carvings, utilizing modern materials and sustainable practices.</p>	<p>* Preserved Artistic Legacy: Safeguarded the traditional carving techniques and ensured the longevity of the rock carvings for future generations.</p> <p>* Enhanced Accessibility: Improved visitor experience through modern amenities while maintaining the spiritual significance of the site. *</p> <p>Economic Benefits: Increased tourism and fostered cultural appreciation, contributing to the local economy.</p>
West Lake Bordwalk Rehabilitation Project (Hangzhou)	Restoration of historical gardens and integration with modern pedestrian walkways along the West Lake UNESCO World Heritage Site.	<p>* Historical Restoration: Revived the original design and landscaping of the gardens, preserving the cultural heritage and aesthetic value. *</p> <p>* Material Continuity: Utilized traditional materials and construction techniques to maintain the historical character of the walkways. *</p> <p>* Modern Functionality: Incorporated modern pedestrian-friendly elements like walkways, lighting, and resting areas, enhancing accessibility.</p>	<p>* Preserved Landscape Significance: Maintained the cultural and scenic value of the West Lake landscape by restoring its historical gardens. *</p> <p>* Enhanced Public Use: Created a more accessible and user-friendly space for residents and tourists to connect with the cultural heritage of the West Lake. *</p> <p>Promoted Sustainable Tourism: Encouraged environmentally conscious tourism by prioritizing pedestrian access and appreciating the natural beauty of the lake.</p>

In Table 4, Two case studies showcased successful regional cultural integration strategies. The Dazu Rock Carvings' restoration (Chongqing) employed traditional techniques, Buddhist iconography, and contemporary design for a visitor center, preserving heritage, enhancing accessibility, and boosting the local economy.

Hangzhou's West Lake Bordwalk Project restored historical gardens, used traditional materials, and incorporated modern features, achieving cultural preservation, improved public use, and promoting sustainable tourism.

Table 5(a): Analysis of Historical Documents on Regional Cultural Influences in Environmental Design

Document	Period	Key Findings	Examples of Regional Cultural Integration
Treatises on Garden Design (e.g., Yuán yě)	Various dynasties (e.g., Ming Dynasty)	* Emphasis on Harmony with Nature: Principles of landscape design that integrate architectural elements with natural surroundings. * Symbolic Meanings of Elements: Use of plants, rocks, and water features to convey specific cultural and philosophical meanings. * Regional Variations: Adaptations of design principles and materials to suit local climates and ecological features.	* Suzhou Gardens: Gardens incorporate water features, rock formations, and pavilions to create miniature landscapes reflecting the philosophy of harmony with nature. * Linger ing Garden (Suzhou): Utilizes rockeries, ponds, and winding paths to represent a journey through a poetic landscape.
Building Codes (e.g., Yingzao Fashi)	Song Dynasty	* Technical Specifications: Detailed instructions on construction methods, materials, and structural principles for different building types. * Regional Adaptations: Variations in construction techniques and materials based on local resources and climatic conditions. * Incorporation of Vernacular Styles: Guidance on building design that reflects regional architectural traditions.	* Tulou Earthen Houses (Fujian): Earthen construction techniques and circular layouts adapted to the mountainous terrain and communal living practices. * Hui-style Architecture (Anhui): Whitewashed walls, black tile roofs, and intricate wood carvings reflecting local craftsmanship and aesthetic preferences.

Table 5(b): Analysis of Historical Documents on Regional Cultural Influences in Environmental Design

Document	Period	Key Findings	Examples of Regional Cultural Integration
Regional Gazetteers (Difangzhi)	Various dynasties	<p>* Detailed Descriptions: Information on local building practices, materials used, and cultural influences on the built environment. *</p> <p>Historical Context: Insights into the evolution of regional design styles and their connection to social and cultural practices. *</p> <p>Geographic Considerations: Descriptions of how regional topography, flora, and fauna influence design choices.</p>	<p>* Diaolou Watchtowers (Guangdong): Descriptions of watchtowers blending defensive features with local materials and decorative elements. *</p> <p>Courtyard Houses (Northwest China): Gazetteers detail how courtyard layouts and building materials are adapted to the harsh climate of the region.</p>

In Table 5, Historical documents provided valuable insights into regional influences on environmental design. Treatises on Garden Design (e.g., Yuán yě) emphasized harmony with nature and symbolic elements, exemplified by Suzhou Gardens. Building codes (e.g., Yingzao Fashi) offered technical details and regional adaptations, evident in Tulou Earthen Houses. Regional Gazetteers documented local practices and cultural influences, like Diaolou Watchtowers and Northwest China's courtyard houses.

#### 4. DISCUSSION

Our document analysis revealed how historical design treatises like the Yuán yě emphasized harmony with nature and symbolic elements, evident in Suzhou Gardens. Building codes provided technical details and regional adaptations, as seen in Tulou Earthen Houses. Regional gazetteers documented local practices and cultural influences, like Diaolou Watchtowers and the courtyard houses of Northwest China. These historical documents provided a foundation for understanding how cultural values have been traditionally integrated into environmental design. Day proposes that modern environmental art design thrives on thematic expression (Day, 2017). Designers must craft a cohesive theme through the strategic application of design concepts. This necessitates a holistic integration of various factors, including materials, functionality,

local culture, and the surrounding environment. One possible explanation is that the design should seamlessly blend cultural meaning and real-life experiences. To achieve this, preliminary research is vital. Designers should examine the elements, colours, and traditional furnishings associated with the local culture. By systematically cataloguing these elements, they can construct a thematic framework that guides the design process. To ensure the theme's rationality, scientific grounding, and originality, the design and planning stages become crucial. Clear positioning of design elements and thoughtful post-design planning are essential for creating a final product that boasts distinct cultural character and a unique thematic identity.

Cao suggests that the relationship between environmental art design and regional culture is one of mutual influence (Cao, 2020). By examining into a region's unique cultural heritage, environmental art design can discover specific styles ripe for innovative integration. This integration can enrich and broaden cultural understanding while infusing the artwork with fresh cultural and spiritual meaning. However, for this fusion to be successful, it must be grounded in the actual needs of the local community and adhere to the established principles of environmental design. In today's approach to environmental art design, regional culture is no longer simply an embellishment, but a fundamental element. This allows environmental art to not only beautify surroundings but also serve as a powerful reflection of the intricate relationship between humans, nature, and the environment they share.

Advances in science, technology, and the humanities provide valuable tools for understanding and integrating regional culture into environmental art design. Detailed future development plans in these fields can guide the exploration of local cultural heritage and its application within environmental design projects (Cao, 2020). This comprehensive approach, combining traditional knowledge with modern advancements, fosters the theoretical and practical capabilities necessary for regional cultural development. By fully integrating a region's unique spiritual culture, environmental art design can not only enhance the aesthetic qualities of a space but also serve as a powerful symbol of the region's identity. From a research perspective, the primary focus lies in analysing the current state of regional culture in relation to environmental art design. By effectively incorporating these cultural elements into design extensions, the project can accelerate the seamless integration of regional culture and its environment. This ultimately leads to a process of mutual inheritance and innovation, where both cultural aspects and environmental design elements evolve in content, form, and other dimensions.

Our survey findings indicated a strong emphasis on regional cultural integration. Participants valued its role in creating a sense of place and enhancing project attractiveness. However, they also acknowledged challenges in effectively integrating cultural elements into contemporary designs. Preferred methods included utilizing traditional materials and incorporating regional design motifs, alongside engaging with local communities throughout the design process. The contemporary phenomenon of globalization fosters the exchange of cultural values, prompting the introduction of the term "cultural globalization" within academic discourse (Iwabuchi, 2018; Raikhan et al., 2014). Cultural globalization reflects the accelerating integration of nations into the global system. This process is driven by advancements in transportation and economic relations, the rise of transnational corporations and a global marketplace, and the pervasive influence of media. Cultural globalization presents a complex picture, encompassing both positive and negative aspects. On the one hand, it facilitates increased communication and mutual understanding among diverse populations. The expansion of cultural contacts in the modern world fosters communication and knowledge exchange, potentially bridging divides between nations.

Our interview analysis identified three key challenges for integrating regional culture: balancing tradition with modern aesthetics, limited designer knowledge about regional heritage, and ensuring meaningful community participation. Successful strategies involved in-depth research on the local context, creatively adapting traditional design principles, and fostering collaboration with local stakeholders. These themes were further supported by the case studies.

We suggest that environmental art design currently faces a challenge in balancing the inclusion of regional culture with achieving a cohesive aesthetic. While many projects incorporate regional cultural symbols, they often lack a deeper conceptual understanding. This results in a superficial application where various symbols are simply amassed, failing to capture the essence of the local culture. Regional culture encompasses a vast array of elements, including folk customs, historical narratives, and the surrounding environment. To effectively integrate and innovate upon these elements, designers need not only strong design skills but also a profound understanding of the local context. However, the current design process often prioritizes the quantity and visual appeal of the artwork over in-depth cultural research. This, coupled with potential misinterpretations of cultural elements, leads to a cluttered application of symbols with little connection to the underlying cultural significance. Ultimately, such an approach fails

to achieve a true "city built by culture" and may even detract from the overall aesthetics of the design.

Previous studies suggest that (Yang et al., 2021; Yang & Kim, 2023) regional cultures possess distinct characteristics rooted in factors like ecological practices, folk traditions, historical narratives, and living habits. To ensure the successful inheritance and innovation of environmental art design, designers must prioritize the integration of regional culture. This requires a deep dive into the local cultural nuances of the designed space, encompassing not only the readily apparent aspects but also the underlying knowledge systems and traditions embedded within the culture. However, the current design process often suffers from an uneven distribution of time between cultural exploration and design execution. This time pressure frequently results in a knowledge gap, where designers lack a comprehensive understanding of the relevant regional culture, hindering their overall creative vision. Since design symbols derived from regional culture form the core element of successful environmental art, a superficial grasp of these symbols poses a significant challenge. Misinterpretations due to one-sided interpretations of cultural elements lead to designs where the cultural references are unclear or poorly integrated. Ultimately, this not only undermines the intended meaning of the environmental artwork but also detracts from the overall aesthetic appeal.

Our case study of the Dazhu Ancient Rock Carvings' restoration showcased the use of traditional carving techniques, Buddhist iconography, and contemporary design for a visitor center. This achieved the goals of preserving artistic heritage, enhancing accessibility, and boosting the local economy. Similarly, Hangzhou's West Lake Boardwalk Project restored historical gardens, used traditional materials, and incorporated modern features, achieving cultural preservation, improved public use, and promoting sustainable tourism. China's modern urban arts and crafts design can achieve sustainable development by embracing both standardized design processes and diverse creative approaches. The nation's rich tapestry of regional cultures, shaped over centuries, continues to significantly influence contemporary environmental art design. Many exemplary projects in China seamlessly integrate regional cultural elements, as evidenced by the distinct styles of Hui-style architecture, Fujian Tulou earthen buildings, and the Ancient City of Ping Yao (Cao, 2020). However, even the most cutting-edge technologies and ideas can become outdated in our ever-evolving world. Therefore, effectively inheriting and innovating upon regional culture in environmental art design requires designers to analyse the local historical and cultural landscape. This understanding

should be coupled with a balanced perspective on both modern civilization and traditional culture. By prioritizing cultural themes within design features, educational institutions can play a crucial role by integrating regional cultural courses into their curriculum. This fosters a new generation of designers equipped to actively promote the standardization and diversification of environmental art design, ultimately ensuring the long-term sustainability and stability of the field in China.

Xie observed that environmental art design thrives on a careful balance between inheriting and innovating regional culture (Xie, 2023). Designers must strive for a comprehensive understanding of the local context, encompassing geographical features, historical narratives, cultural nuances, and traditional customs. This knowledge informs the design process, allowing for the effective integration of these elements with modern environmental art concepts (Xu et al., 2020).

We propose that a crucial aspect of this integration is acknowledging that simply replicating the past does not constitute genuine cultural inheritance. For instance, during historic city reconstruction projects, demolishing existing structures and rebuilding them identically is a distortion of the environmental art design concept. Therefore, a rational approach to cultural inheritance is necessary. Moving beyond reproduction, environmental art design can achieve continuity and innovation by seamlessly blending traditional cultural elements with contemporary design principles.

We propose that effective environmental art design that highlights historical and regional character necessitates thorough preliminary research. This involves analysing the local geography, historical narratives, ethnic customs, and other cultural aspects. Through a critical analysis that combines this knowledge with relevant design principles, designers can identify the interconnectedness between various elements. Concurrently, gathering, sorting, and refining relevant regional cultural materials is crucial. The selection of design materials should, whenever possible, harmonize with the local culture. Furthermore, the initial design exploration can serve as a springboard for creative expression. By effectively integrating local culture and artistic principles, the final design can embody regional characteristics and local cultural identity.

## 5. CONCLUSION

Our study explored strategies for integrating regional culture into



environmental design in China. We found historical documents provided valuable background on traditional practices. Surveys revealed a strong emphasis on cultural integration but also acknowledged challenges. Interviews identified balancing tradition with modernity, designer knowledge limitations, and community engagement difficulties as key hurdles. Case studies showcased successful projects that employed in-depth research, adaptation of traditions, and local collaboration. While this study provides valuable insights, limitations include the sample size and focus on China. Future research could explore these methods in other regions and investigate the long-term social and economic impacts of culturally integrated design projects.

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