



Cultural Continuity in Urban Architecture: Exploring Indigenous Design Principles in Modern Public Spaces

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ABSTRACT: This study explores the integration of indigenous design principles into contemporary urban public architecture as a means of preserving cultural identity while meeting modern functional demands. Through qualitative analysis of architectural case studies including Nike Art Gallery in Nigeria, Gando Library in Burkina Faso, and Mapungubwe Interpretation Centre in South Africa, the research demonstrates how traditional spatial typologies, materials, and symbolic frameworks can be meaningfully reinterpreted for urban contexts. The findings reveal that indigenous architectural systems offer valuable solutions for cultural continuity, environmental responsiveness, and social engagement in public spaces. Projects that thoughtfully integrate traditional design logics such as courtyard layouts, passive cooling systems, and culturally significant ornamentation, create emotionally resonant environments that foster community belonging and identity. However, implementation barriers persist, including outdated perceptions of traditional architecture, limited professional training in vernacular techniques, and regulatory frameworks favoring standardized construction models. The study concludes that successful cultural integration requires moving beyond superficial decoration to embrace deeper spatial philosophies rooted in place-based knowledge systems. Recommendations include reforming architectural education, developing supportive policies, fostering community collaboration, and creating design toolkits for cultural integration to promote more inclusive and sustainable urban environments.

KEYWORDS: Indigenous architecture, cultural continuity, urban public spaces, traditional design principles, architectural identity

I. INTRODUCTION

1.1. Background and Context

In the contemporary urban landscape, the architectural identities of many cities in the Global South are increasingly being shaped by global aesthetics and imported planning paradigms. While

modernization has undoubtedly expanded the functional and infrastructural scope of urban environments, it has also contributed to a growing detachment between built spaces and the cultural narratives of the people who inhabit them. Nowhere is this dissonance more evident than in public architecture, where the erasure of indigenous design expressions continues to marginalize local identities and undermine the social and symbolic function of space (Cobbinah, 2023; Adebara, 2023).

Nigeria, like many African nations, is home to a wealth of architectural traditions rooted in indigenous cosmologies, materials, and spatial practices. From the mud-walled compounds of the Hausa in the North, to the sculptural facades of the Tiv, to the structured courtyards of the Yoruba, these spatial systems were not merely utilitarian but deeply expressive, mediating relationships, climate, and communal rituals. However, these once-vibrant architectural languages are rarely translated into today's urban public architecture, which tends to follow Western modernist logics of efficiency and visual uniformity (Ologun et al., 2024; Al-Adilee, 2024). The result is a homogenization of space that fails to reflect the complexity and plurality of cultural identities present in Nigerian cities.

This issue of cultural erasure is not unique to Nigeria. Across the world, urban designers and scholars are increasingly concerned with the role of culture in shaping inclusive and responsive public environments. In regions like Mongolia and China, scholars have examined how urban squares and post-1978 planning models have diluted cultural expression in public architecture, pushing for a return to regionally grounded design practices (Malek & Jiao, 2025; Sun, 2020). Similarly, research in postcolonial cities has emphasized the value of cultural integration in shaping not only aesthetic outcomes, but also community belonging and psychological well-being (Khandan & Rezaei, 2022; Nejad et al., 2020). In many of these cases, indigenous principles; whether spatial, material, or symbolic, offer practical frameworks for designing



more inclusive, resilient, and culturally grounded spaces.

Recent works in architectural theory suggest that indigenous design systems should not be viewed as static or regressive, but rather as evolving knowledge frameworks that continue to inform sustainable and socially responsive environments (Davidová et al., 2023; Yuan et al., 2025). Indigenous architecture is inherently climate-adaptive, community-centered, and rich in symbolic meaning; qualities urgently needed in public spaces where issues of exclusion, environmental degradation, and identity loss persist. In the context of Nigeria, this becomes especially important in youth-oriented environments, where architecture has the potential to shape identity, foster intergenerational exchange, and serve as a living archive of culture.

Moreover, scholars like Li and Sahari (2022) emphasize the importance of regional culture as a design lens that fosters continuity and familiarity in urban public spaces. Their work aligns with growing calls in urban planning literature to develop public environments that are not only functionally adequate but also emotionally and symbolically resonant (Cui & Misdih, 2025; Enos et al., 2023). By neglecting these cultural dimensions, public architecture risks becoming alienating and generic, further deepening the disconnect between citizens and their environments.

It is within this context that the present study seeks to explore how indigenous architectural principles drawn from Nigeria's plural cultural landscape can be thoughtfully integrated into contemporary public architecture. Rather than advocating for a nostalgic return to the past, the study argues for a forward-looking approach where indigenous knowledge systems are adapted, reinterpreted, and harmonized with modern design needs. The goal is to promote spatial continuity that respects cultural identity while meeting the functional demands of today's cities.

To this end, the paper investigates spatial typologies (e.g., courtyards, plazas), material expressions, ornamentation, and symbolic frameworks that can be recontextualized for modern public architecture. Drawing on international and local case studies, the research examines how these principles can contribute to more inclusive, identity-affirming, and sustainable urban spaces. In doing so, it speaks to architects, planners, educators, and policymakers who are increasingly tasked with balancing modern development pressures with the need to preserve and promote cultural diversity in the built environment.

II. LITERATURE REVIEW

2.1. Indigenous Design as Cultural Knowledge

Indigenous architecture is more than a vernacular response to environment; it is a form of cultural knowledge that encodes cosmology, social structure, sustainability practices, and identity within the built environment. Across various Nigerian cultures, architecture has long functioned as a spatial narrative of place and people. For instance, the Hausa's hierarchical spatial zoning reflects Islamic and communal living values, while the Igbo compound layout emphasizes lineage, gender roles, and social cohesion (Ologun et al., 2024). These spatial systems are not arbitrary but are rooted in centuries of adaptation and symbolic meaning, forming a design language that is both practical and philosophical.

Globally, researchers have begun to frame indigenous architecture as a dynamic system rather than a static heritage. Nejad et al. (2020) argue for a shift from decorative tokenism to transformative indigenous placemaking, where design reflects indigenous worldviews rather than merely borrowing visual motifs. Davidová et al. (2023) expand this perspective further by advocating for "more-than-human" approaches, emphasizing relational networks between humans, nature, and spirit-worlds, common across indigenous cultures globally. Such approaches contrast with Eurocentric design paradigms that often isolate human utility from ecological or metaphysical meaning.

In the Nigerian context, these indigenous models have not been meaningfully incorporated into urban development frameworks. Instead, public architecture is often guided by imported forms and standardized typologies that erase cultural differences (Adebara, 2023; Al-Adilee, 2024). Reintegrating indigenous design thus represents an opportunity not only for cultural preservation but for generating more emotionally responsive and environmentally adaptive architecture.

2.2. Cultural Expression and Spatial Identity in Public Architecture

The role of culture in shaping public architecture has become a central concern in urban design discourse, particularly in multicultural and postcolonial societies. According to Khandan and Rezaei (2022), culture-based psychological approaches to public space design result in environments that users find more engaging, legible, and emotionally safe. This is especially important in societies where built environments have been historically shaped by colonial or global frameworks that neglect local sensibilities.



Li and Sahari (2022) emphasize that regional cultural cues; such as local materials, ornamentation, and symbolic spatial patterns, enhance the legibility and resonance of urban public spaces. These design gestures foster continuity and familiarity, allowing communities to recognize themselves within their cities. Similarly, Malek and Jiao (2025) show how Mongolian urban squares, when designed with traditional iconography and orientation patterns, serve not only as civic spaces but also as carriers of collective memory and pride. In Nigeria, however, modern public architecture is frequently characterized by minimalist and international styles, often seen as aspirational but culturally hollow. As Adebara (2023) notes, the dominance of concrete, steel, and glass constructions in urban Nigeria contributes to a growing detachment between people and the cultural meanings embedded in space. This architectural detachment is particularly acute for young people, who navigate environments that neither reflect their heritage nor inspire emotional attachment. To bridge this gap, integrating indigenous architectural logic such as compound typologies, patterned shading devices, and symbolic gateways, could restore meaning and cultural fluency in the public realm.

2.3. Case Studies: Reinterpreting Tradition in Contemporary Design

A number of recent projects demonstrate the possibilities and limitations of integrating indigenous design principles into contemporary public architecture. These case studies, drawn from both local and global contexts, offer valuable insights into strategies for balancing cultural continuity with modern function.

One compelling example is **Nike Art Gallery** in Lagos, founded and curated by Chief Nike Davies-Okundaye. Although not a government-sponsored civic structure, the gallery functions as a significant public cultural space, promoting Nigerian heritage through architecture, visual arts, and community programming. Architecturally, the gallery incorporates traditional Yoruba and Igbo motifs in both form and ornamentation, using vibrant murals, indigenous textile patterns, and locally crafted installations. The spatial arrangement invites interaction and exploration, functioning both as a cultural museum and a living center for artistic engagement. The project illustrates how a public-facing institution can leverage indigenous identity not only in content but also in architectural language, bridging the gap

between tradition and contemporary cultural expression (Adebara, 2023; Al-Adilee, 2024).

Internationally, **Francis Kéré's Gando Library** in Burkina Faso is another celebrated case. The project integrates local laterite soil, traditional passive ventilation, and a communal courtyard structure, reinterpreted with contemporary detailing. The result is a space that feels both rooted and modern, emphasizing the social value of indigenous forms in collective learning and gathering (Nejad et al., 2020; Davidová et al., 2023).

Additionally, in South Africa, the **Mapungubwe Interpretation Centre** utilized historical cultural layers in its design narrative. The project demonstrated how regional aesthetics and local craft traditions can be meaningfully embedded into infrastructure projects without sacrificing modern utility or elegance (Tzeng et al., 2022).

These case studies underline the importance of a critical, not superficial, application of indigenous elements. When done thoughtfully, such integration enhances social relevance, improves sustainability, and strengthens spatial identity.

III. METHODOLOGY

This study adopts a qualitative, exploratory research approach aimed at investigating how indigenous design principles can be meaningfully integrated into modern urban public spaces. Given the cultural and interpretive nature of the research focus, this methodology allows for in-depth engagement with textual sources, architectural case studies, and scholarly discourse rather than numerical data analysis.

3.1. Research Design

The research is structured around comparative case study analysis and literature synthesis. This involves reviewing selected architectural projects that demonstrate attempts; successful or otherwise, at integrating indigenous cultural elements into contemporary public spaces. These cases are drawn from both Nigerian and international contexts to provide a broader understanding of best practices and transferable insights.

3.2. Case Study Selection Criteria

The case studies examined in this research were carefully selected based on their relevance to the central themes of indigenous design integration and cultural continuity in public architecture. Priority was given to projects that actively incorporate indigenous materials, symbols, or spatial



typologies in a meaningful and context-sensitive way. Additionally, each project functions as a public or publicly accessible space, ensuring relevance to urban users and the broader community.

Cultural relevance within the local context was another key factor in selection. Projects that engage with their immediate cultural environment; whether through spatial arrangement, material use, or symbolic ornamentation, were prioritized, particularly those that have received recognition for their contribution to cultural education or community engagement.

Based on these criteria, three case studies were chosen: Nike Art Gallery in Lagos, Nigeria; Gando Library in Burkina Faso, designed by Francis Kéré; and the Tainan Bus Station Proposal in Taiwan. These examples represent a mix of scales, geographies, and programmatic functions, but each illustrates how indigenous design principles can be reinterpreted within a modern architectural framework. Together, they offer diverse insights into strategies, challenges, and the cultural potential of integrating tradition into contemporary urban spaces.

3.3. Data Collection and Analysis

Data was collected through secondary sources, which includes peer-reviewed journal articles, architectural publications, project descriptions, and cultural reviews. The analysis involved thematic coding of recurring indigenous design principles such as spatial hierarchy, symbolism, ornamentation, and materiality. Findings from the case studies were then synthesized to identify patterns, strategies, and challenges relevant to cultural continuity in urban architecture.

3.4. Limitations

This study is limited by its reliance on documented case studies rather than fieldwork or primary interviews. As a result, the insights are

interpretive and conceptual rather than empirical. However, the scope remains sufficient for a design-focused academic exploration intended to inform theory and practice in architecture and urban design.

IV. FINDINGS AND DISCUSSIONS

This section presents key findings from the literature and case study analysis, organized into four thematic discussions: the cultural value of indigenous forms, social engagement through space, environmental responsiveness, and the challenges of implementation. Together, these findings support the argument that indigenous design principles can contribute to more meaningful, inclusive, and sustainable public architecture.

4.1. Cultural Value and Continuity

Indigenous architectural systems are deeply embedded with meaning, serving as visual and spatial codifications of community identity, beliefs, and memory. In all three case studies, cultural continuity was achieved not merely by aesthetic mimicry, but through thoughtful reinterpretation of traditional design logics. At the Nike Art Gallery, architectural features such as patterned façades, murals, and interior spatial rhythms recall traditional Nigerian artistic expressions. These design strategies serve not just as decoration, but as cultural cues that embed the space with emotional familiarity and narrative richness.

Similarly, the Gando Library uses the courtyard form; a common feature in many West African communities, not only to organize circulation and promote ventilation, but also to reinforce communal interaction, echoing traditional gathering spaces. The Mapungubwe Interpretation Centre in South Africa incorporates indigenous construction methods and clustered spatial forms to preserve the cultural integrity of the local site while adapting it for urban use.

Table1: Comparison of Indigenous Design Integration in Case Studies

| Project | Indigenous Design Features | Public Function | Environmental Strategy |
|-------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------|
| Nike Art Gallery (Nigeria) | Traditional motifs, mural art, vernacular materials | Art hub, cultural education | Shading, natural materials |
| Gando Library (Burkina Faso) | Courtyard layout, passive ventilation, local bricks | Community library, social space | Thermal mass, passive cooling |
| Mapungubwe Interpretation Centre (South Africa) | Timbrel vaulting, courtyard layout, locally sourced earth bricks | Museum, interpretation centre, cultural education | Passive cooling, local materiality, low-impact construction |



These examples highlight how architecture can function as a living archive, sustaining cultural continuity even as it evolves into new contexts and programs.

4.2. Space, Belonging, and Social Engagement

Architecture plays a vital role in shaping how individuals and communities experience belonging. Public spaces that reference local traditions often evoke a deeper sense of identity and pride, which in turn enhances social cohesion. Studies by Khandan and Rezaei (2022) and Enos et al. (2023) show that culturally embedded public spaces encourage participation, learning, and emotional connection, particularly when targeted at younger generations.

The Nike Art Gallery, for instance, is not only a space of art display but a dynamic cultural hub where art-making workshops, storytelling sessions, and indigenous craft demonstrations regularly take place. Its architecture fosters interaction and cultural transmission in a way that resonates with community members and international visitors alike. This model reinforces the idea that public architecture can serve as a vessel for intergenerational exchange when grounded in familiar cultural language.

Beyond individual buildings, the broader urban context also benefits from culturally responsive design. When indigenous aesthetics and spatial logics are integrated at the city scale, such as through the design of plazas, marketplaces, or transport hubs, they help weave a sense of continuity throughout daily life. This not only fosters more inclusive and emotionally engaging environments but also encourages civic participation and collective stewardship of space. As Li and Sahari (2022) argue, public spaces that reflect regional cultural patterns promote a sense of rootedness, making cities feel less anonymous and more like an extension of the community's identity. Such environments are particularly important in postcolonial and rapidly urbanizing societies, where cultural dislocation is often a byproduct of modernization.

4.3. Environmental Responsiveness of Traditional Systems

One of the most overlooked strengths of indigenous design is its inherent environmental intelligence. Indigenous architecture evolved through centuries of climate adaptation, using passive cooling techniques, shading, thermal massing, and natural ventilation long before these became buzzwords in sustainable design discourse.

The Gando Library demonstrates this beautifully through its use of locally sourced laterite bricks and ventilation-driven roofing systems that regulate temperature and airflow without mechanical systems (Nejad et al., 2020; Davidová et al., 2023). In contrast to conventional “modern” buildings reliant on imported materials and energy-intensive cooling, these design strategies emphasize sustainability through cultural logic.

Likewise, many Nigerian vernacular forms, from shaded verandas to perforated walls, can be reimaged in modern urban settings to reduce environmental impact while reinforcing cultural familiarity (Ike et al., 2024). The findings support the argument that indigenous architectural principles offer a dual benefit: cultural preservation and ecological performance.

4.4. Barriers to Implementation

Despite the clear value of indigenous design integration, several barriers hinder its widespread adoption. One major challenge is the perception that traditional forms are outdated or incompatible with contemporary life. This bias often stems from colonial-era narratives that equated modernity with Westernization, dismissing indigenous knowledge systems as primitive or backward (Cobbinah, 2023; Yuan et al., 2025).

Furthermore, architects and developers frequently face constraints such as limited budgets, lack of training in traditional techniques, and regulatory frameworks that favor standardized construction models. In some cases, indigenous references are reduced to surface-level ornamentation without deeper engagement with spatial logic or meaning (Li & Sahari, 2022; Ologun et al., 2024).

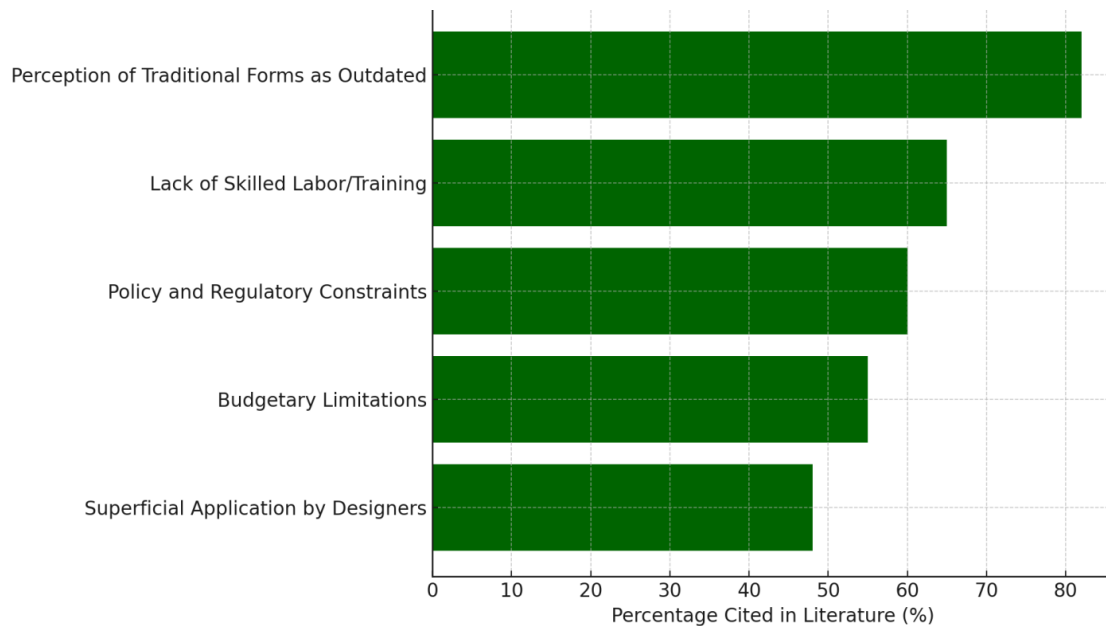


Fig.1: Common Barriers to Indigenous Design Integration in Urban Architecture

To overcome these challenges, there is a need for architectural education and policy reforms that legitimize and support culturally grounded design approaches. Collaboration with local artisans, historians, and community stakeholders can also facilitate more authentic and respectful integration of indigenous principles in urban architecture.

V. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The exploration of indigenous design principles within the context of contemporary public architecture reveals a powerful opportunity for cultural continuity, social engagement, and environmental responsiveness. As demonstrated in the reviewed literature and case studies, indigenous architecture offers living frameworks for designing spaces that are emotionally meaningful, environmentally appropriate, and socially inclusive.

Projects such as Nike Art Gallery, Gando Library, and Mapungubwe Interpretation Centre show that it is possible to integrate tradition without compromising modernity. These examples underline that successful cultural integration goes beyond superficial ornamentation, drawing instead on deeper spatial logic, material expression, and symbolic meaning rooted in place-based knowledge systems.

At the same time, this research acknowledges the persistent challenges to widespread implementation, particularly in

postcolonial contexts like Nigeria. These include outdated perceptions of tradition, limited training in vernacular techniques, and policy environments that often privilege globalized, standard models of architecture. Nevertheless, the growing global discourse on decolonizing design and reconnecting architecture with local identities offers hope for a more balanced and culturally anchored urban future.

In essence, when thoughtfully reinterpreted and applied with respect, indigenous design systems serve not as limitations but as valuable catalysts for innovation. They offer the means to infuse public architecture with human-centered values, restore cultural connections, and shape urban spaces that are both environmentally responsible and deeply resonant with community identity.

5.2. Recommendations

Based on the findings, the following recommendations are proposed for architects, educators, policymakers, and stakeholders in the urban development sector:

- i. **Reform Architectural Education:** Design schools should incorporate indigenous spatial philosophies, materials, and construction techniques into core curricula, not as electives or history lessons, but as living systems of knowledge relevant to contemporary design.
- ii. **Policy and Regulatory Support:** Urban planning frameworks should be revised to allow and encourage the use of culturally grounded design principles. This includes funding incentives for



projects that demonstrate contextual responsiveness and community engagement.

- iii. Community Collaboration: Architects and planners should engage local artisans, historians, and cultural custodians during design processes. This participatory model ensures authenticity and deepens the cultural integrity of the built space.
- iv. Design Toolkits for Cultural Integration: Development of open-access toolkits or design guides that outline adaptable indigenous typologies, materials, and spatial strategies across different Nigerian ethnic groups could support both young designers and established professionals.
- v. Pilot Projects and Living Labs: Government agencies and NGOs should sponsor small-scale pilot projects, such as youth centers, libraries, or cultural hubs that intentionally explore the fusion of traditional and modern design approaches. These can serve as research laboratories and public demonstrations of cultural continuity in practice.
- vi. Public Education and Awareness: Greater effort should be made to shift public perception by highlighting successful culturally integrated projects through exhibitions, publications, and media. This can help reposition tradition as a foundation for innovation rather than a symbol of the past.

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