IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)
e-ISSN: 2278-1684, p-ISSN: 2320-334X, Volume 23, Issue 5 Ser. II (Sep. – Oct. 2026), PP 106-125
www.iosrjournals.org

Documentation And Preservation of Traditional Architecture: The Cultural Heritage of Ekpoma's Ancient Housing

AKHANOLU, Abumere Agbon
Department of Architecture, Faculty of Environmental Studies, Ambrose Alli University, Ekpoma, Edo State.
+2348056119370
abu3arc@aauekpoma.edu.ng

Abstract
The rich cultural heritage of Ekpoma's ancient housing is a testament to the community's history, identity and architectural resilience. These traditional structures not only provide a glimpse into the past but also serve as a symbol of community pride and cultural continuity. Ekpoma's ancient housing is a unique example of traditional architecture, reflecting the community's traditions that have been passed down through generations, serving as a tangible connection to the community's identity. However, the rapid pace of urbanization and modernization has led to the neglect and deterioration of these cultural treasures. This study aims to document and preserve the cultural significance of Ekpoma's ancient housing, using a mixed quantitative and qualitative approach to explore the intersection of traditional architecture, cultural heritage and digital preservation. The study's primary objectives are to create a comprehensive record of Ekpoma's traditional architectural styles, examine the challenges facing their preservation and to investigate the application of digital documentation techniques, such as Building Information Modeling (BIM), to conserve Ekpoma's traditional architecture. By doing so, this research will contribute to the preservation of Ekpoma's cultural heritage, promote community engagement and raise awareness about the importance of preserving traditional architecture, ultimately informing policy and decision-making processes related to cultural heritage conservation in Nigeria and beyond.

Keywords: *Traditional Architecture, Urbanization, Cultural Significance, Sustainability, Heritage Preservation*

Date of Submission: 15-10-2026 Date of Acceptance: 28-10-2026

I. INTRODUCTION

BACKGROUND OF THE STUDY

Traditional architecture is a vital component of a community's cultural heritage, reflecting its history, identity and values (Lawrence, 2019). Cultural heritage plays a crucial role in shaping national identity, promoting tourism and fostering community engagement (UN-Habitat, 2016). In Nigeria, cultural heritage is particularly important, given the country's diverse cultural landscape and complex history (Okoye, 2017). Nigeria's architectural heritage is a reflection of its history, with various styles and influences evident in its buildings and monuments. From the ancient city of Kano to the colonial-era architecture of Lagos, Nigeria's built environment is a testament to its rich cultural heritage (Adeyemi, 2018). However, the preservation of this heritage is a complex issue, requiring careful planning, management and community engagement.

Ekpoma is a significant town and traditional region located in the heart of Esan West Local Government Area of Edo State, Nigeria. It serves as the administrative headquarters of the local government area and is a prominent cultural, educational and economic center for the Esan people, one of the major ethnic groups in Edo State (The African Archives, 2024). Esan oral traditions suggest that the overriding factor in the choice of Esan as a settlement area was the fertility of the land (Lorenz, 2021). Ekpoma is rich in cultural heritage and in the heart of Esan land, this heritage is expressed through various festivals, traditional ceremonies, religious practices and its architectural style (Aigboduwa *et al.*, 2025). This rich cultural heritage of ancient housing dates back to the pre-colonial era (Probst, 2016). These traditional structures are not only significant for their architectural value but also for their cultural and historical importance (De Beukelaer & Tran, 2024). These structures are a testament to the community's history, traditions and values and have been passed down through generations (Markus, 2016; Mba *et al.*, 2025). They are an integral part of the community's identity, shaping the way people live, interact and perceive themselves and their environment. Moreover, Ekpoma's ancient housing is a

reflection of the community's resilience and adaptability, having withstood the test of time and various environmental challenges (Onaiwu, 2021).

Esan architecture and community organization have undergone many changes since the turn of the century (Markus, 2016; Onaiwu, 2021). Strip settlements developed along roadways, first built by the British during the colonial era, in order to take advantage of the trade and development which followed the roads (Aigboduwa *et al.*, 2025). Imported building materials, such as concrete blocks and corrugated metal roofing, were introduced along with non-traditional designs. Modern buildings are principally a feature of large towns, where motor parks, churches and shops of every description have become community landmarks (Lorenz, 2021).



Figure 1: *Historical Satellite Map of Ekpoma in 1984 (Google Earth, 2026)*



Figure 2: *Historical Satellite Map of Ekpoma in 2006 (Google Earth, 2026)*



Figure 3: *Current Satellite Map of Ekpoma in 2026 (Google Earth, 2026)*

In recent years, there has been a growing recognition of the importance of preserving Nigeria's cultural heritage. Efforts have been made to document and preserve historic buildings and to promote cultural tourism (Olukanni, 2019). Ekpoma's ancient housing is facing numerous challenges, including environmental degradation, urbanization and urban development, as well as a lack of documentation (Mba *et al.*, 2025). The loss of these cultural treasures would not only erase the community's history but also deprive future generations of their cultural identity (Graham *et al.*, 2016). It is essential to document and preserve Ekpoma's ancient housing to ensure the continuation of the community's cultural heritage.

AIM

This study aims to document and preserve the cultural significance of Ekpoma's ancient housing, exploring the intersection of traditional architecture, cultural heritage and digital preservation.

RESEARCH OBJECTIVES

This study has three primary objectives and they are to:

i. create a comprehensive record of Ekpoma's ancient housing, highlighting its cultural significance and architectural features;
ii. examine the challenges facing the preservation of Ekpoma's ancient housing and explore potential solutions; and to
iii. investigate the application of digital documentation techniques to conserve Ekpoma's traditional architecture.

RESEARCH QUESTIONS

The following research questions have been formulated to guide this study:

i. What are the distinctive architectural styles unique to Ekpoma’s traditional housing?
ii. What are the socio-cultural, spiritual and functional meanings embedded in Ekpoma’s traditional housing forms?
iii. What factors are responsible for the loss, abandonment or transformation of traditional architecture in Ekpoma?
iv. What indigenous knowledge systems and craftmanship are associated with the building and maintenance of these houses?
v. How can modern documentation tools improve the preservation of Ekpoma’s traditional architecture?

SIGNIFICANCE OF THE STUDY

This study is significant due to its potential to contribute to the preservation of Ekpoma's cultural heritage and raise awareness about the importance of preserving traditional architecture. By documenting and preserving Ekpoma's ancient housing, this study will provide a valuable resource for future generations, scholars and researchers interested in the cultural heritage of Nigeria and beyond. By highlighting the importance and challenges of preserving traditional architecture, policymakers and practitioners can develop more effective strategies for conserving cultural heritage buildings.

SCOPE

The study will focus on Ekpoma, a town in Edo State, Nigeria. The study will create a comprehensive record of Ekpoma's ancient housing, highlighting its cultural significance, architectural features and historical importance. The study will investigate the challenges facing the preservation of Ekpoma's ancient housing, including environmental degradation, urbanization and lack of documentation. The study will explore the application of digital documentation techniques, such as Building Information Modeling (BIM), to conserve Ekpoma's traditional architecture. The study adopts a mixed methods approach, using peer-reviewed secondary sources of data from journals, online print media, books and articles, as well as field studies in the study area, retaining thematic significance in the research process.

LIMITATIONS

Geographically, the study is limited to Ekpoma, a town in Edo State, Nigeria and its surrounding areas. The findings may not be generalizable to other regions or cultures. The study focuses specifically on traditional architecture and does not cover other aspects of Ekpoma's cultural heritage expression. Access-wise, the study is limited by the number of traditional buildings that can be documented and studied. The study's reliance on digital documentation techniques may be limited by access to technology, software and expertise. Despite these limitations, the study aims to provide a comprehensive understanding of Ekpoma's traditional architecture and contribute to the preservation of Nigeria's cultural heritage.

II. LITERATURE REVIEW

CULTURAL SIGNIFICANCE OF TRADITIONAL NIGERIAN ARCHITECTURE

According to UNESCO, cultural heritage is “the legacy of physical artefacts and intangible attributes of a group or society that are inherited from past generations” (De Beukelaer & Tran, 2024). Traditional architecture is an integral part of this legacy, providing a tangible connection to the community's past and shaping its identity. The cultural significance of traditional architecture lies in its ability to reflect the community's values, beliefs and practices (Akhanolu & Ahianba, 2025). Traditional buildings are physical structures imbued with spiritual, social and cultural meanings that are essential to the community's identity (Graham *et al.*, 2016). The design and layout of traditional buildings often reflect the social hierarchy, economic status and cultural practices (Lawrence, 2019). The relationship between architecture and culture is complex and multifaceted. On one hand, architecture can shape culture by influencing the way people live, work and interact with one another (Okpoko, 2018; Akhanolu & Ahianba, 2025).

The importance of traditional architecture is also recognized by international organizations such as UNESCO, which has established various conventions and charters to protect and promote cultural heritage (von Scholermer, 2020; De Beukelaer & Tran, 2024). These international efforts highlight the significance of traditional architecture as a cultural resource that needs to be preserved for future generations.

Traditional architecture plays a significant role in shaping community identity and fostering a sense of belonging among community members (Lawrence, 2019). According to Ashworth and Tunbridge, traditional buildings are “repositories of collective memory” that reflect the community's history, values and cultural practices (Graham *et al.*, 2016). These structures are often imbued with symbolic meanings that are essential to the community's identity and sense of place (Pardo, 2023).

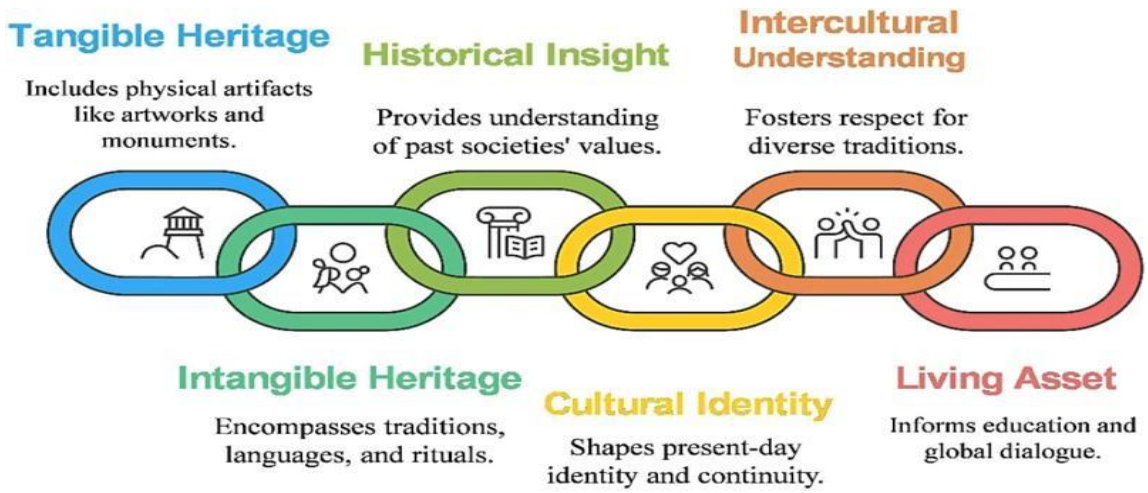


Figure 4: *Foundations of Cultural Heritage (Fu & Razmjooy, 2025)*

Studies have shown that traditional architecture can contribute to community cohesion and social integration by providing a shared sense of identity and belonging (Pardo, 2023). For instance, traditional buildings can serve as community gathering spaces, hosting cultural events and festivals that promote social interaction and community bonding (Lorenz, 2021). In many cultures, traditional architecture is also seen as a reflection of the community's relationship with the environment (Pardo, 2023). Traditional buildings are often designed to respond to local climate, topography and natural resources, demonstrating a deep understanding of the environment and its limitations (Lawrence, 2019). The importance of traditional architecture in shaping community identity and promoting sustainability has been recognized by scholars and practitioners alike (Leyzerova *et al.*, 2016). However, the preservation of traditional architecture is often challenged by urbanization, gentrification, modernization and cultural globalization, which can lead to the loss of cultural heritage and community identity (Mba *et al.*, 2025).

TRADITIONAL NIGERIAN ARCHITECTURE

Hausa architecture is significantly influenced by Islam, using materials like mud bricks and featuring intricate calligraphy and ornamentation. Yoruba architecture emphasizes courtyard-centered layouts, while Igbo architecture focuses on symbolic ornamentation and communal spaces. Bini and Esan Architecture (including Ekpoma) is inspired by ancient artistry, showcasing intricate designs in the wall and floor finishes. These cultural influences have resulted in unique architectural styles, reflecting the values and traditions of each ethnic group (Ikudayisi & Odeyale, 2021; Auwalu, 2019).

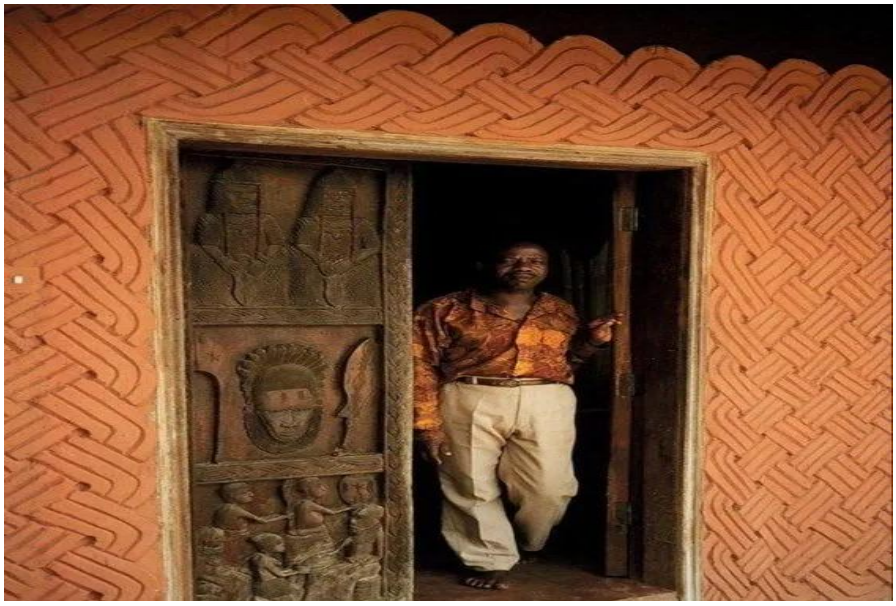


Figure 5: *Bini/Esan Architectural Style (The Nigerian Architect, 2025)*

Climate, available materials and geographical location have shaped traditional Nigerian architecture. For example, Hausa buildings use thick mud walls for insulation, while Yoruba and Igbo structures incorporate local materials like thatch and bamboo. This environmental adaptation has enabled sustainable and resilient architecture (Adeyemi, 2019).

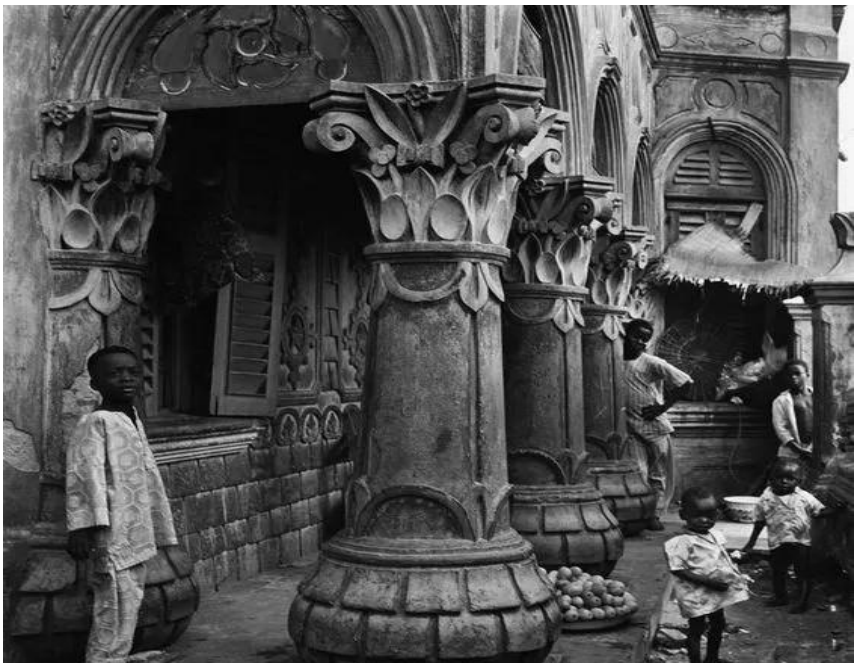


Figure 6: *Yoruba Architectural Style (The Nigerian Architect, 2025)*

Social hierarchy, family structure and economic activities have also influenced traditional Nigerian architecture. For instance, Hausa compounds often feature separate spaces for men and women, reflecting social and cultural norms. The affluent class tends to opt for luxurious designs, while the middle class combines traditional elements with modern aesthetics (Mba *et al.*, 2025).

Religion also plays a significant role in shaping Nigerian architecture. Islamic principles dictate design elements like geometric patterns and ornate details in Hausa and Fulani architecture, while Christian households incorporate religious artifacts and symbols (Obiadi, 2015).

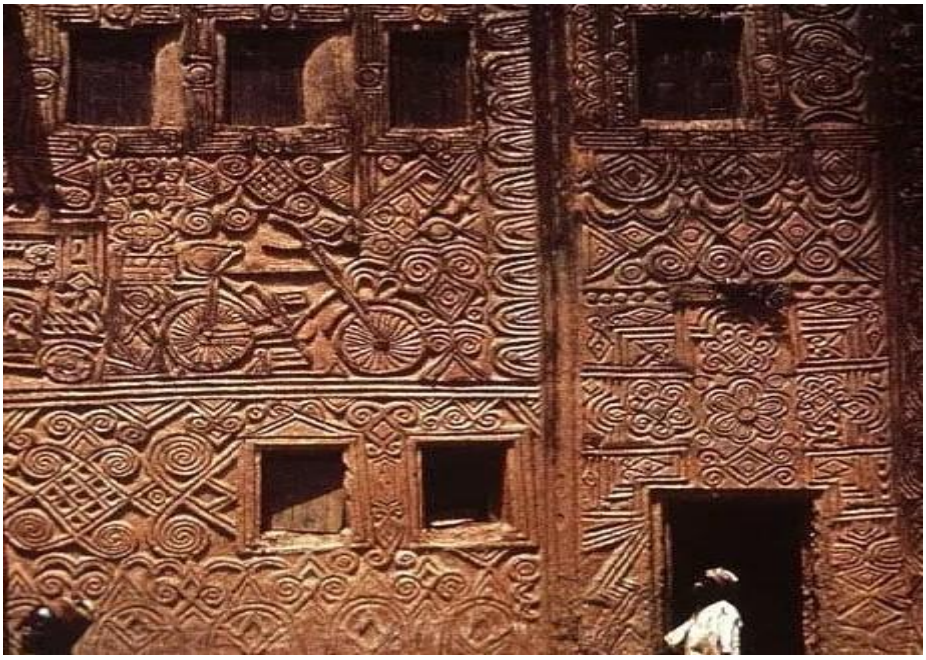


Figure 7: *Fulani Architectural Style (The Nigerian Architect, 2025*)

ORIGINS OF TRADITIONAL ESAN ARCHITECTURE

Traditional Esan buildings are constructed of earth built up in gradual intermediate processes. Building starts at the end of the rainy season, when water and mud are abundant, but the weather is now dry enough to allow the structure to completely dry (Lorenz, 2021). Mud is gathered in a pit near the building site, lumped up and molded into a two-foot-tall short wall. When this wall is completely dry, another two-foot course is added to it. The walls of a typical house consist of four courses. When complete, the walls are smoothed inside and out and plastered with clay and water (Aigboduwa *et al.*, 2025). Nowadays, those who still build with mud clay often form the lumped mud into bricks with a mold. They seal the mudwalls and gives them a shiny polish. Sometimes women will decorate the façade of the main house or their own quarters, with geometric, organic and occasionally representational motifs in natural white, black or blue pigments (Lorenz, 2021).

Esan houses are built on a rectangular floor plan (Markus, 2016). The simplest house consists of just two main rooms; a man's sleeping room, as well as a public room. His wife's bedroom and kitchen are located in separate structures behind the house, across a small yard (Aigboduwa *et al.*, 2025). The beams and lintels of courtly Esan buildings bear the simplest of carved designs, but because these structural elements are not ordinarily decorated, they convey a sense of lavishness to the regal home. There are a few representational images, but the most common design is a repeat pattern of hatched rectangles or triangles (Markus, 2016; Lorenz, 2021).

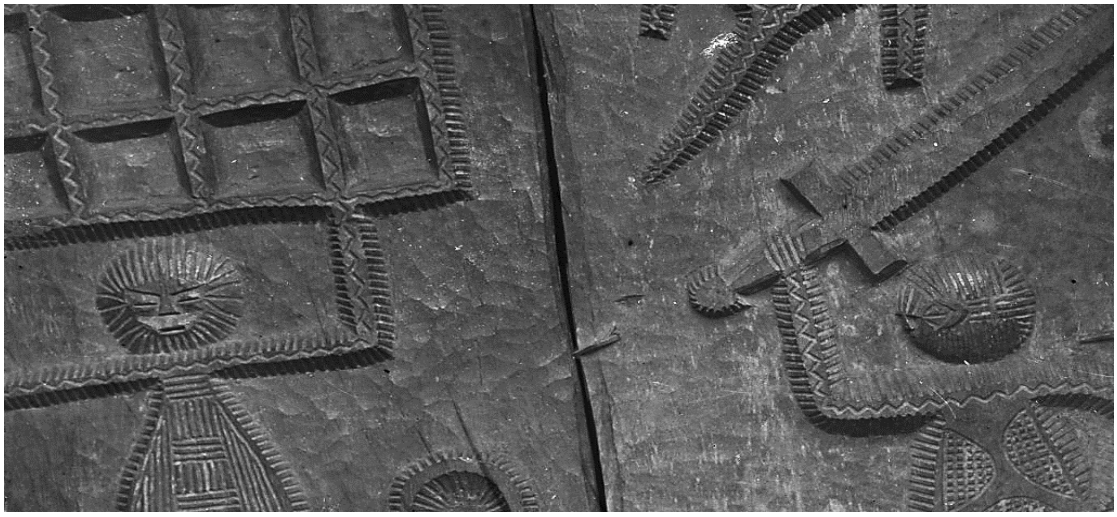


Figure 8: *Carved Wooden Door Panel, Ubiaja, Esan South-East (Lorenz, 2021)*

In an ancient/traditional Esan house, the furniture is imbued into the structure of the building. Seating is provided by a banquette running along the façade, rear wall and courtyards of the house. Traditional mud-made beds, now rarely seen, are enclosed in molded compartments built into the wall. Smaller carved niches serve as shelves and closets. Small openings in the thick walls help to maintain a comfortable indoor temperature. A verandah covered with a thatched roof supported by earthen or wooden posts helps shield residents from the harsh sun or rains, as well as providing a comfortable place for work or socializing (Markus, 2016; Lorenz, 2021).



Figure 9: *Esan Traditional Sculpted House Posts, Ubiaja, Esan South-East (Lorenz, 2021)*

CHALLENGES OF PRESERVING TRADITIONAL ARCHITECTURE

Preserving traditional architecture is a complex and challenging task, especially in the face of urbanization, modernization and cultural globalization (Mba *et al.*, 2025). According to UNESCO, cultural heritage is facing numerous threats, including neglect, abandonment and destruction, which can lead to the loss of cultural identity and community heritage (De Beukelaer & Tran, 2024).

One of the major challenges of preserving traditional architecture is the lack of documentation and inventory of cultural buildings (Leyzerova *et al.*, 2016). Many traditional buildings are not properly documented, making it difficult to develop effective conservation plans and protect them from destruction (Vitiello *et al.*, 2022). Another challenge is the impact of urbanization and modernization, which can lead to the destruction of traditional buildings and the loss of heritage (Mba *et al.*, 2025). Urbanization can also lead to changes in land use, population growth and increased pressure on existing infrastructure, which can put pressure on traditional buildings (Onaiwu, 2021). Climate change is also a significant challenge facing traditional architecture, as it can lead to increased weathering, erosion and damage to buildings. Additionally, the lack of maintenance and upkeep of traditional buildings can lead to their deterioration and eventual collapse (Vitiello *et al.*, 2022).

DIGITAL DOCUMENTATION AND PRESERVATION OF CULTURAL HERITAGE

Digital documentation and preservation of cultural heritage have become increasingly important in recent years, driven by the need to conserve and promote cultural heritage in the face of urbanization, conflict and natural disasters (von Scholermer, 2020). Digital technologies such as 3D scanning, photogrammetry and Building Information Modeling (BIM) offer new opportunities for documenting and preserving cultural heritage (Ulvi, 2021).

Digital documentation can provide a permanent record of objects, allowing for their preservation and conservation for future generations. Digital documentation can also facilitate the restoration and reconstruction of damaged or destroyed cultural buildings (Abusaleh, 2024). The use of digital technologies in cultural heritage preservation has several benefits, including improved accuracy, increased efficiency and enhanced accessibility (Dore & Murphy, 2025). Digital documentation can also facilitate collaboration and knowledge sharing among stakeholders, including researchers, conservators and community members (Zhou *et al.*, 2024).

However, digital documentation and preservation of cultural heritage also pose several challenges, including issues related to data management, storage and sustainability (von Scholermer, 2020). The long-term preservation of digital data requires careful planning, management and maintenance to ensure that the data remains accessible and usable over time.

Digital Preservation and Sustainability

Digital preservation is a critical aspect of cultural heritage preservation, as it ensures the long-term conservation and accessibility of digital data related to cultural heritage (De Beukelaer & Tran, 2024). Digital

preservation involves a range of strategies and techniques, including data migration, digital archiving and preservation metadata (Pacheco *et al.*, 2023). Sustainability is a key consideration in digital preservation, as digital data can become obsolete or degraded over time if not properly managed (Dore & Murphy, 2025). Digital preservation requires a long-term commitment to maintaining and updating digital data, as well as ensuring its accessibility and usability over time. Several digital preservation strategies have been developed, including data replication, backup and recovery and digital archiving (Bor & Cropper, 2023). These strategies can be used in combination to ensure the long-term preservation of digital data related to cultural heritage.

Role of Technology in Preserving Cultural Heritage

Technology plays a significant role in preserving cultural heritage by providing innovative solutions for documentation, conservation and promotion (De Beukelaer & Tran, 2024). Digital technologies such as 3D scanning, photogrammetry and Building Information Modeling (BIM) enable the creation of detailed digital models of buildings and objects (Ulvi, 2021). These digital models can be used for various purposes, including documentation, conservation, restoration and education (Dore & Murphy, 2025). Additionally, digital platforms and social media can be used to promote cultural heritage and increase awareness about its importance (Leyzerova *et al.*, 2016).

Technology also facilitates collaboration and knowledge sharing among stakeholders, including researchers, conservators and community members (Zhou *et al.*, 2024). Digital platforms can be used to share knowledge, expertise and resources, promoting a more collaborative and integrated approach to cultural heritage preservation.

Challenges and Opportunities in Digital Preservation of Cultural Heritage

One of the major challenges is ensuring the long-term accessibility and usability of digital data, given the rapid pace of technological change (Dore & Murphy, 2025). Additionally, digital preservation requires significant resources and investment, which can be a challenge for institutions and organizations with limited budgets (Pacheco *et al.*, 2023).

Despite these challenges, digital preservation also presents opportunities for increasing access to cultural heritage, promoting collaboration and knowledge sharing and enhancing the overall preservation of cultural heritage (Leyzerova *et al.*, 2016). Digital preservation can also facilitate new forms of scholarship and research, such as computational analysis.

BUILDING INFORMATION MODELING (BIM) IN CULTURAL HERITAGE PRESERVATION

Building Information Modeling (BIM) is a digital representation of the physical and functional characteristics of a building or cultural heritage site (Bor & Cropper, 2023). In the context of cultural heritage preservation, BIM offers a powerful tool for documenting, conserving and managing cultural buildings (Cotella, 2023). BIM can be used to create detailed digital models of buildings, including their geometric, spatial and temporal characteristics (Dore & Murphy, 2025). These models can be used for a variety of purposes, including documentation, conservation, restoration and education. One of the key benefits of BIM in cultural heritage preservation is its ability to facilitate collaboration and knowledge sharing among stakeholders (Zhou *et al.*, 2024). BIM models can be shared and accessed by multiple stakeholders, including researchers, conservators and community members, facilitating a more collaborative and integrated approach to cultural heritage preservation.

However, the use of BIM in cultural heritage preservation also poses several challenges, including issues related to data collection, modeling and management (Cotella, 2023). Additionally, the complexity and uniqueness of cultural buidlings can make it difficult to develop BIM models that accurately reflect their characteristics. Despite these challenges, BIM offers a powerful tool for cultural heritage preservation, enabling the creation of detailed digital models that can be used for a variety of purposes.

The preservation of cultural heritage is an evolving field that requires continuous innovation and adaptation to new challenges and opportunities (Abusaleh, 2024). Future directions in cultural heritage preservation will likely be shaped by technological advancements, changing societal values and emerging global challenges.

III. CASE STUDIES

Case Study 1: The Preservation of Hausa Traditional Architecture in Nigeria

The Hausa people are known for their rich cultural heritage and their traditional architecture is a testament to this (Batagarawa & Tukur, 2019). The preservation efforts in Kano have focused on maintaining the traditional Hausa buildings, such as the famous Kano City walls and the ancient palace of the Emir of Kano (Umar *et al.*, 2019).



Figure 10: *Hausa Traditional Architecture – Outer Walls (Bayt Al Fann, 2023)*

According to Ali and Agbu (2021), the Kano State government has implemented various initiatives to preserve the state's cultural heritage, including the restoration of historic buildings and the promotion of traditional crafts. These efforts have helped to promote tourism and economic development in the state.



Figure 11: *Hausa Traditional Architecture – Inner Walls (Bayt Al Fann, 2023)*

However, the preservation of Hausa traditional architecture in Nigeria faces several challenges, including neglect, abandonment and destruction of traditional buildings (Bayt Al Fann, 2023). Therefore, there is a need for concerted efforts from government, stakeholders and the community to preserve this important aspect of Nigerian cultural heritage.

Case Study 2: Conservation of the Brazilian House, Lagos Island, Nigeria

The Brazilian House (also known as the *Ilojo* Bar) is a historic building located on Lagos Island, showcasing the city's rich cultural heritage. Built in the 19th century, the house is a blend of Brazilian and Nigerian architectural styles (Ursprung, 2016). The Brazilian House is a testament to the cultural exchange between Brazil and Nigeria during the 19th century. Many Brazilian returnees, known as "*Agudas*", settled in Lagos and brought with them their architectural styles, which blended with the local culture (Okpalanozie & Adetunji, 2021).



Figure 12: *Brazilian House, Lagos Island (Ursprung, 2016)*

The Lagos State Government has implemented measures to protect the building's cultural significance (Owamoyo & Tabibi, 2023). The building has been repurposed as a cultural center and museum, showcasing the history and culture of Lagos and Nigeria.

Despite the conservation efforts, the Brazilian House still faces significant challenges. The conservation project requires significant funding, which can be difficult to secure, especially in a developing country like Nigeria. The building is also located in a prime area of Lagos, making it vulnerable to urbanization and development pressures (Ursprung, 2016).

Case Study 3: The Elmina Castle Conservation Project, Ghana

The Elmina Castle, located in Ghana, is a historic fortification that played a significant role in the transatlantic slave trade. The castle has been designated a UNESCO World Heritage Site and is considered one of the most important historical sites in Africa. Today, the castle serves as a museum and memorial to the slave trade (Bruku, 2015).



Figure 13: *Aerial View of Elmina Castle, Elmina, Ghana (Tremblay, 2023)*

The Ghana Museums and Monuments Board, in collaboration with international partners, has undertaken conservation efforts to preserve the Elmina Castle (Bruku, 2015). The castle has been converted into a museum, with exhibits showcasing the history of the slave trade and the castle's significance.

Despite these efforts, the Elmina Castle still faces significant challenges, as rising sea levels and extreme weather conditions threaten the castle's structure and stability (Tremblay, 2023). Moreover, managing tourism in a way that balances economic benefits with preservation concerns is a also a constraint.



Figure 14: *Ground View of Elmina Castle, Elmina, Ghana (Tremblay, 2023)*

Case Study 4: The Conservation of the Historic District of La Habana Vieja, Cuba

La Habana Vieja, the historic district of Havana, Cuba, is a UNESCO World Heritage Site and one of the most iconic urban centers in the Americas. The district's rich cultural heritage is reflected in its colonial architecture, vibrant streets and historic landmarks. La Habana Vieja was founded in 1519 and quickly became a major commercial center in the Spanish colonies. The district's architecture reflects a blend of Spanish, African and indigenous influences, with buildings dating back to the 16th to 20th centuries (Shugars, 2025).

The Cuban government, in collaboration with international organizations, has undertaken significant conservation efforts to preserve La Habana Vieja's historic district (Scarpaci, 2011). district's infrastructure has been improved, including the installation of modern utilities and transportation systems.



Figure 15: *La Habana Vieja, Havana, Cuba (Shugars, 2025)*

Despite these efforts, La Habana Vieja still faces significant challenges. Conservation efforts require significant funding, which can be difficult to secure, especially in a developing country like Cuba (Shugars, 2025). The district's growing popularity as a tourist destination has also led to concerns about over-tourism and the impact on local residents.

IV. METHODOLOGY

RESEARCH APPROACH

This study employs a mixed-methods research approach, combining both qualitative and quantitative methods to achieve a comprehensive understanding of the preservation of traditional architecture in Ekpoma. The qualitative approach involves a robust literature review of cultural heritage and its preservation as it is relevant to this contextual study, as well as in-depth case studies of similar contexts to give thematic comparisons and relational depth to the study. The quantitative approach involves in-depth interviews with community members, traditional leaders and relevant professionals involved in cultural heritage preservation, as well as administering surveys to a representative sample of the community. This provides rich, contextual data on cultural significance, community perceptions and preservation challenges, as well as numerical data on the physical condition of traditional buildings, demographic characteristics of the community and the economic impact of cultural heritage preservation.

Sampling Strategy

Community members and traditional leaders are purposively selected based on their knowledge and experience of traditional architecture and cultural heritage preservation. Sample size for this study is justified by depth, rather than numbers. 35 participants are sampled; 7 elderly residents, 7 elderly houseowners, 7 traditional builders/craftsmen, 7 architects with knowledge and experience in traditional Esan architecture, 4 community leaders, 2 historians and 1 chief.

V. DATA COLLECTION METHODS

In-depth interviews are conducted with community members and traditional leaders to provide rich, contextual data on the cultural significance of traditional architecture, community perceptions and preservation challenges. Surveys are administered to a representative sample of the community to gather data on the physical condition of traditional buildings, demographic characteristics of the community and the economic impact of cultural heritage preservation. Observations are made of traditional buildings to gather data on their physical condition, architectural features and usage patterns. Relevant documents, such as historical records, photographs and architectural plans, where available, are analyzed to gather data on the history and development of traditional architecture in Ekpoma.

Data Quality and Reliability

To ensure the quality and reliability of the data, the interview guide and survey questionnaire are pilot-tested with a small group of community members to ensure that they are clear and effective. Data is also validated through triangulation of multiple sources and methods.

DATA ANALYSIS METHODS

The data collected from the interviews, surveys, observations and documentary analysis is analyzed using both qualitative and quantitative data analysis methods.

Qualitative Data Analysis

The interview transcripts and observation notes are analyzed using thematic analysis to identify patterns, themes and meanings related to the preservation of traditional architecture in Ekpoma. The documentary analysis involves examining historical records and photographs to identify trends and insights into the development and preservation of traditional architecture in Ekpoma.

Quantitative Data Analysis

The survey data is analyzed using descriptive statistics to summarize the demographic characteristics of the community, the physical condition of traditional buildings and the economic impact of cultural heritage preservation.

Data Integration

The qualitative and quantitative data is integrated to provide a comprehensive understanding of the preservation of traditional architecture in Ekpoma. This involves comparing and contrasting the findings from the qualitative and quantitative data analysis to identify patterns, themes and insights that can inform preservation efforts.

VI. FINDINGS AND DISCUSSION

FINDINGS

The findings of this study reveal that traditional architecture in Ekpoma is facing significant challenges, including neglect, abandonment and destruction of traditional buildings. The study also identifies several factors contributing to these challenges, including modernization, urbanization and lack of maintenance.

Themes from the Data

The importance of cultural heritage was a dominant theme in the data, with participants and case studies highlighting its significance in promoting tourism, economic development and community engagement. The findings suggest that cultural heritage is a valuable resource that can contribute to the social, economic and cultural well-being of communities. The challenges in preserving cultural heritage were another major theme that emerged from the data. Participants and case studies identified several challenges, including lack of funding, inadequate conservation efforts and over-tourism. These challenges highlight the need for effective management and preservation strategies to protect cultural buildings. Community involvement was identified as a critical factor in preserving cultural heritage. The findings suggest that community engagement and participation are essential for promoting awareness, ownership and responsibility for cultural buildings. Community involvement can also help to ensure that preservation efforts are sustainable and effective.

DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Age Distribution

The age distribution of respondents is given in *Chart 1* below:

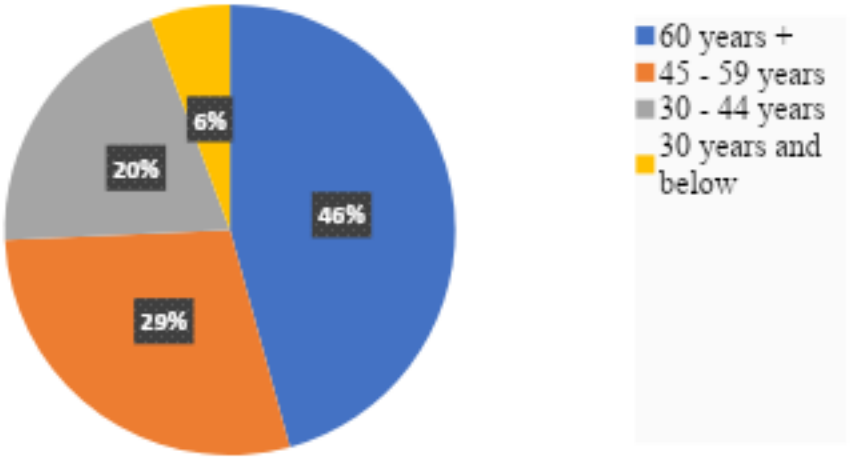


Chart 1: *Age Distribution of Respondents (Researcher's Field Studies, 2026)*

Gender Distribution

The gender distribution of the respondents is presented in *Table 1* below:

Gender	Frequency	Percentage
Male	32	91%
Female	3	9%

Table 1: *Gender Distribution of Respondents (Researcher's Field Studies, 2026)*

Occupation

The occupation of the respondents is presented in *Table 2* below:

Occupation	Frequency	Percentage
Retired	14	40%
Architect	7	20%
Mason/Artisan/Craftsman	7	20%
Civil Servant	3	9%
Other	4	11%

Table 2: *Occupation of Respondents (Researcher's Field Studies, 2026)*

Level of Education

The level of education of the respondents is presented in *Table 3* below:

Level of Education	Frequency	Percentage

Primary	6	17%
Secondary	11	31%
Tertiary	15	43%
Postgraduate	3	9%

Table 3: *Respondents' Level of Education (Researcher's Findings)*

The findings suggest that the respondents are predominantly elderly with a mix of occupations and varying levels of education.

PHYSICAL CONDITION OF TRADITIONAL BUILDINGS

The physical condition of traditional buildings in Ekpoma is a cause for concern. Many of the buildings are in a state of disrepair, with cracks, broken walls and leaking roofs. According to 89% of the respondents (31 respondents), the physical condition of traditional buildings in Ekpoma is poor, while 8% (3 respondents) described it as fair and 2% (1 respondent) as good.



Figure 17: *Traditional House in Iruekpen with Damaged Outer Wall (Researcher's Field Studies, 2026)*



Figure 18: *Traditional House in Ihumudumu with Deteriorating Wall (Researcher's Field Studies, 2026)*



Figure 19: *Traditional House in Iruekpen with Damaged Roof (Researcher's Field Studies, 2026)*



Figure 20: *Traditional House in Eguare with External Damages (Researcher's Field Studies, 2026)*



Figure 21: *Traditional House in Ujoelen with Internal Flooring Deterioration (Researcher's Field Studies, 2026)*

The study also reveals that many traditional buildings in Ekpoma are not regularly maintained or repaired. According to 77% of the respondents (27 respondents), traditional buildings are not regularly

maintained, while 20% (7 respondents) reported that maintenance is done occasionally and 2% (1 respondent) reported that maintenance is done regularly.

QUALITATIVE ANALYSIS OF INTERVIEWS (THEMATIC PRESENTATION)

From the in-depth interviews, the following paraphrased quotes are presented:

Threats to Traditional Architecture in Ekpoma

- **Loss of Indigenous Construction Techniques:** When asked about the materials used for ancient houses, most of the elderly respondents emphasized the use of earth and local materials. One of the traditional builders stated "*Our fathers did not use cement. They used 'ukhun' mixed with palm kernel shaft… that house will stand for 100 years and remain cool inside*" (Participant 4, Traditional Builder, 78 years, Ujoelen).
- **Modernization and urbanization:** The drive for modern bungalows with cement blocks was identified as a major threat to ancient housing. "*Many traditional buildings are being demolished to make way for modern structures, especially by the children and grandchildren of the family*" (Participant 7, Community Leader, 67 years old, Ihumudumu).
- **Lack of Maintenance and Repair**: Respondents noted that traditional building knowledge is disappearing, making repairs difficult. "*Traditional buildings are not being properly maintained, leading to deterioration*" (Participant 9, Architect, 46 years old, Eguare, Ekpoma). Another responded that, "*Before, every December, we used to replaster the walls with fresh mud. Now, nobody knows how to mix it again. The young boys don't want to learn*" (Participant 4, Traditional Builder, 78 years, Ujoelen).
- **Neglect and Abandonment:** Migration was directly linked to abandoned compounds. "*Many traditional buildings are being abandoned and left to decay*" (Participant 2, Bricklayer, 39 years old, Eguare). "This compound has been empty since my brother traveled to Lagos 15 years ago. No one to sweep it, the roof has even fallen" (Participant 5, Chief, 67 years old, Idumebo)
- **Lack of funding:** Financial constraint was a recurring theme. "*Insufficient funds to maintain and repair traditional buildings*" (Participant 16, Architect, 43 years old). "*To repair this old roof with thatch or zinc is now very expensive. Palm fronds are scarce. Cement price is going up every day*" (Participant 29, Female Houseowner, 69 years old, Uke).
- **Lack of awareness:** Even Community members undervalue the heritage of traditional buildings. When shown a traditional building of significance, one respondent responded by saying, "*We did not know this house was important. We thought it is just old. Nobody told us its heritage*" (Participant 11, Youth Leader, 34 years old, Emaudo).
- **Lack of documentation:** Traditional buildings and their history are not being properly documented. "*No one has come to take pictures or draw a rough plan of our houses before. If you did not come now, when these elders die, the history will die with them*" (Participant 1, Artisan, 27 years old, Ukpenu).

These findings suggest that traditional architecture in Ekpoma is facing significant challenges that threaten its preservation.

Opportunities for Preserving Traditional Architecture in Ekpoma

- **Community involvement:** Communities are willing to participate in preservation efforts, if engaged. "*We can form group to maintain our fathers' houses*" (Participant 17, Community Elder, 72 years old, Idumebo)
- **Tourism potential:** Traditional architecture can be a major tourist attraction. "*If you people repair one fine and keep it well, people from other places will come and see how Esan people used to live before. We can make money from it, like abroad countries*" (Participant 29, Female Houseowner, 69 years old, Uke).
- **Cultural significance:** Preserving traditional architecture can help preserve cultural heritage. "*This house is where my father was buried. We do our family meeting in this parlour. Nobody can erase our identity*" (Participation 3, House Owner, 65 years old, Iruekpen)
- **Government support:** Government can provide support for preservation efforts. "*We need government to help us. If they list our houses as heritage like they did for Benin, they can help us with money to repair*" (Participant 31, Community Elder, 82 years old, Ihumudumu).

These findings suggest that while there are challenges to preserving traditional architecture in Ekpoma, there are also opportunities that can be leveraged to promote preservation.

VII. CONCLUSION

This study has explored the preservation of traditional architecture in Ekpoma, Nigeria, with a focus on its cultural significance, current state, challenges and opportunities for preservation. The study has revealed that traditional architecture in Ekpoma is facing significant challenges and has also identified opportunities for

preservation, including community engagement, tourism potential and government support. The study recommends a multi-faceted approach to preservation, including documentation, policy development, financial support, community engagement and tourism development. The preservation of traditional architecture in Ekpoma requires a collaborative effort. Furthermore, the study's findings highlight the importance of community engagement and participation in preservation efforts. Community members are the custodians of traditional architecture and play a critical role in its preservation. Therefore, any preservation effort must involve and empower local communities to take ownership of their cultural heritage. In addition, the study's findings suggest that preserving traditional architecture can have economic benefits, such as generating income through tourism and creating jobs. Overall, this study provides a comprehensive understanding of the preservation of traditional architecture in Ekpoma, Nigeria. Its findings and recommendations have implications for policymakers, practitioners and community members who are interested in preserving traditional architecture and promoting cultural heritage. By working together, we can ensure that the cultural heritage of Ekpoma is protected and celebrated for generations to come.

VIII. RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

i. The State and Local Government should create a documentation center to record and preserve the history and significance of traditional architecture in Ekpoma.
ii. The Federal Government should develop a standardized policy framework for preserving traditional architecture in Nigeria.
iii. Financial agencies, Government parastatals and Private investors should provide financial support for the maintenance and restoration of traditional buildings.
iv. Architects, Builders and Heritage Preservation Professionals should engage with local communities in preservation efforts and public awareness campaigns.
v. Federal, State and Local Governments should develop tourism infrastructure to promote the cultural significance of traditional architecture.

REFERENCES

[1]. Abusaleh, S. W. (2024). Enhancing preservation outcomes for architectural heritage buildings through machine learning-driven future search optimization. *Asian Journal of Civil Engineering*, **25**(7), 5277-5292.
[2]. Adeyemi, A. (2019). Application of Architectural Sustainability Principles for Faculty of Architecture, University of Ibadan: A Study of South-West Federal University, Nigeria. *Masters Theses, University of Ibadan*.
[3]. Adeyemi, A. A. (2018). Adaptive reuse of cultural heritage buildings in Nigeria: Challenges and opportunities. *Journal of Cultural Heritage Management and Sustainable Development*, **8**(2), 123-138.
[4]. Aigboduwa, S. A., Orogo, T. & Enesi, F. (2025, December). Bioclimatic Integration of Edo Vernacular Mud Architecture with Modern Modular Design for Sustainable Urban Housing in Edo State, Nigeria. In *International Conference on Engineering, Science and Urban Sustainability (ICESUS 2025)* (pp. 161-170). Atlantis Press.
[5]. Akhanolu, A. & Ahianba, J. E. (2025). Architecture as a Reflection of Cultural Continuity: A Study of Traditional Trends. *International Journal of Innovative Science and Research Technology*, **10**(4), 3744-3746. https://doi.org/10.38124/ijisrt/25apr2259
[6]. Ali, H. S. & Agbu, R. S. (2021). Conservation and regeneration of historic buildings: The case of Badalar Kano (Kano city wall), Nigeria. *Conservation and Management of Archaeological Sites*, **23**(1-2), 42-60.
[7]. Auwalu, I. (2019). Exploring the different vernacular architecture in Nigeria. *International Journal of African Society, Cultures and Traditions*, **7**(1), 1-12.
[8]. Batagarawa, A. & Tukur, R. B. (2019). Hausa traditional architecture. In *Sustainable Vernacular Architecture: How the Past Can Enrich the Future* (pp. 207-227). Cham: Springer International Publishing.
[9]. Bayt Al Fann (2023). *The Art of Hausa Architecture*. https://www.baytalfann.com/post/the-art-of-hausa-architecture
[10]. Bor, S. & Cropper, S. (2023). Extending meta-organization theory: a resource-flow perspective. *Organization Studies*, **44**(12), 1939-1960.
[11]. Bruku, S. (2015). Community engagement in Historical site protection: Lessons from the Elmina Castle Project in Ghana. *Conservation and Management of Archaeological Sites*, **17**(1), 67-76.
[12]. Chan, H. (2021). Bund 18, Shanghai. *Asian Revitalization: Adaptive Reuse in Hong Kong, Shanghai and Singapore*, 139.
[13]. Cotella, V. A. (2023). From 3D point clouds to HBIM: application of artificial intelligence in cultural heritage. *Automation in Construction*, **152**, 104936.
[14]. De Beukelaer, C. & Tran, T. (2024). Between cultural trade and cultural development: examining the first decade of UNESCO's International Fund for Cultural Diversity. *Cultural Trends*, **33**(1), 91-110.
[15]. Dore, C. & Murphy, M. (2025). Integration of Historic Building Information Modeling (HBIM) and 3D GIS for recording and managing cultural heritage sites. *Journal of Academic Research and Innovation*, **2**(1), 8.
[16]. Fu, X. & Razmjooy, N. (2025). Preserving and enhancing cultural heritage through art design using feature pyramid network optimized by modified builder optimization algorithm. *Science Reports*, **15**, 42603. https://doi.org/10.1038/s41598-025-26564-2.
[17]. Google Earth. (2026). Google Earth Satellite Images of Ekpoma, Edo State, Nigeria. *Retrieved October 8, 2026 from Google Earth Mobile App*.
[18]. Graham, B., Ashworth, G. & Tunbridge, J. (2016). *A geography of heritage*. Routledge.
[19]. Ikudayisi, A. E. & Odeyale, T. O. (2024). Designing for cultural revival: African housing in perspective. *Space and Culture*, **24**(4), 617-634.
[20]. Lawrence, R. J. (2019). House form and culture: what have we learnt in thirty years? In *Culture-Meaning-Architecture* (pp. 53-76). Routledge.

[21]. Leyzerova, A., Sharovarova, E. & Alekhin, V. (2016). Sustainable strategies of urban planning. *Procedia Engineering*, **150**, 2055-2061.

[22]. Little, M. (2024). Stolen Potential: A Look at Traditional African Architecture and Sustainable Practices. *Medium*. https://medium.com@feliciamlittle/stolen-potential-a-look-at-traditional-african-acrhitecture-and-sustainable-building-practices-075cc34e3449.

[23]. Liu, C. (2024). The contemporary adaptability of the value-system critical conservation paradigms in Chinese Urban Regeneration: the case of the Bund in Shanghai. *Restauro Archeologico*, **32**.

[24]. Lorenz, C. A. (2021). *Esan Political Art, Architecture and Architectural Reliefs*. https://www.esanland.org/2021/04/esan-political-art-architecture-and.html

[25]. Markus, B. (2016). Review of courtyard house in Nigeria: Definitions, history, evolution, typology and functions. *AFRREV STECH: An International Journal of Science and Technology*, **5**(2), 103-117.

[26]. Mba, E. J., Ozigbo, C. A., Oforji, P. I., Ozigbo, I. W., Onyia, C. D., Benignus, U. U. & Emmanuel, L. (2025). Cultural Heritage in Contemporary Nigerian Architecture: Case Study of Enugu, Kano and Lagos. *Asian Research Journal of Arts & Social Sciences*, **23**(4), 52-68.

[27]. Nam, N. T. & Thanh, N. N. (2024). The role of local communities in the conservation of cultural heritage sites: A case study of Vietnam. *Journal of Asian Scientific Research*, **14**(2), 179.

[28]. Obiadi, B. N. (2015). The Rebirth of Traditional Architecture in Nigeria. *Tropical Built Environment Journal*, **1**(4).

[29]. Okoye, U. O. (2017). Nigerian architecture: A review of the cultural and historical context. *Journal of Architecture and Planning*, **22**(1), 1-15.

[30]. Okpalanozie, O. E. & Adetunji, O. S. (2021). Architectural Heritage Conservation in Nigeria: The Need for Innovative Techniques. *Heritage*, **4**, 2124-2139.

[31]. Okpoko, A. I. (2018). Nigerian architecture: A review of the traditional and modern trends. *Journal of Architecture and Planning*, **13**(1), 1-12.

[32]. Olukanni, D. O. (2019). Sustainable development through adaptive reuse: A Nigerian perspective. *Journal of Sustainable Development*, **12**(3), 155-167.

[33]. Onaiwu, D. N. (2021). Rural-Urban integration and spatial planning in Edo State, Nigeria. *Ghana Journal of Geography*, **13**(1), 50-62.

[34]. Owamoyo, L. & Tabibi, B. (2023). The Impact of Globalisation on Traditional Architecture in Nigeria: A Case Study of Lagos Island. *Advances in Applied Sociology*, **13**, 636-650

[35]. Pacheco, A., Da Silva, C. G. & De Freitas, M. C. V. (2023). A metadata model for authenticity in digital archival descriptions. *Archival Science*, **23**(4), 629-673.

[36]. Pardo, J. M. F. (2023). Challenges and current research trends for vernacular architecture in a global world: a literature review. *Buildings*, **13**(1), 162.

[37]. Probst, P. (2016). Picturing the past: Heritage, photography and the politics of appearance in a Yoruba City. In *Reclaiming heritage* (pp. 99-125). Routledge.

[38]. Scarpaci, J. L. (2011). Urban heritage, representation and planning: comparative approaches in Habana Vieja and Trinidad, Cuba. *On Location: Heritage Cities and Sites*, 61-88.

[39]. Shugars, M. (2025). The Opacity of Cuba's La Habana Vieja. *ReVista (Harvard Review of Latin America)*. https://revista.drclas.harvard.edu/the-opacity-of-cuba's-la-habana-vieja

[40]. Smith, L. (2020). Uses of heritage. In *Encyclopedia of global archaeology* (pp. 10969-10974). Cham: Springer International Publishing.

[41]. The African Archives. (2024). Ekpoma Kingdom. *Umojambele – Articles*. https://theafricanarchives.org/article/ekpoma-kingdom-

[42]. The Nigerian Architect. (2025). We Are Losing Our Identity: Reviving the Nigerian Style of Architecture. *Medium*. https://medium.com/@9ja_Architect/we-are-losing-our-identity-reviving-the-nigerian-style-of-architecture-18ca2b9039ce

[43]. Tremblay, I. (2023). Echoes of History: Exploring Ghana's Cape Coast and Elmina Castles. *For Peek*. https://peek.com/accra-greater-accra-region-ghana/r064bm/echoes-of-history-exploring-ghanas-cape-coast-and-elmina-castles/ar06jdmb

[44]. Ulvi, A. (2021). Documentation, Three-Dimensional (3D) Modelling and visualization of cultural heritage by using Unmanned Aerial Vehicle (UAV) photogrammetry and terrestrial laser scanners. *International Journal of Remote Sensing*, *42*(6), 1994-2021.

[45]. Umar, G. K., Yusuf, D. A., Ahmed, A. & Usman, A. M. (2019). The practice of Hausa traditional architecture: Towards conservation and restoration of spatial morphology and techniques. *Scientific African*, **5**, e00142.

[46]. UN-Habitat. (2016). International guidelines on urban and territorial planning. *United Nations Human Settlements Programme*.

[47]. Ursprung, P. (2016). The Portuguese-Brazilian House in Lagos. *Chair for the History of Art and Architecture*. https://victorlepik.com/the-portuguese-brazilian-house-in-lagos

[48]. Vitiello, V., Castelluccio, R. & Trampetti, S. (2022). The Recognition of Cultural Value as an Element for the Preservation of the 20th-Century Heritage: Application of the ICOMOS Multidisciplinary Approach to the ex SMOM of Pozzuoli. *Heritage*, **6**(1), 284-299.

[49]. von Schorlemer, S. (2020). UNESCO and the challenge of preserving the digital cultural heritage. *Santander Art and Culture Law Review*, **6**(2), 33-64.

[50]. Wild Great Wall. (2026). Shanghai Bund Guide: Top Spots, Tips & Things to do. *Adventure Tours*. https://wildgreatwall.com/shanghai-bund-travel-guide/

[51]. Yu, C. (2016). Regenerating Urban Waterfronts in China: The Rebirth of the Shanghai Bund. *Waterfronts Revisited*, 163-176.

[52]. Zhou, Z., Xi, Y., Xing, S. & Chen, Y. (2024). Cultural bias mitigation in vision-language models for digital heritage documentation: a comparative analysis of debiasing techniques. *Artificial Intelligence and Machine Learning Review*, **5**(3), 28-40.