

Hausa vernacular architectural style of early Mosque building

A case study of *Yandoka* Street Mosque, Jos

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| ARTICLE INFO | ABSTRACT |
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| <p><i>Article history:</i> Received January 18, 2023 Received in revised form Feb. 19, 2023 Accepted March 22, 2023 Available online April 31, 2023</p> <p><i>Keywords:</i> Contemporary Hausa vernacular architecture Hypostyle Modernism Mosque architecture Transformation</p> <p>*Corresponding author: Babatunde Adekoyejo Jolaoso Department of Architecture, School of Environmental Studies, Moshood Abiola Polytechnic, Abeokuta, Nigeria Email: koyejolaoso@gmail.com</p> | <p><i>This paper investigates the impact of modern and contemporary trends on an eighty-seven years' old mosque in Jos built in the typical Hausa Vernacular Architectural style, as well as the extent to which its vernacular features have been lost and/or retained. The study focused on selected architectural features which do not essentially affects the performance of the primary mosque's functions. A qualitative survey was adopted using case study approach and complemented with content analysis of related literature reviewed to extract information on the challenges of restoration and preservation or conservation of the key features of traditional Hausa Architecture on the Mosque buildings in the study area of Jos, Plateau State, Nigeria from the randomly selected traditional/indigenous builders and practicing architects. The Yandoka Street Mosque was purposively selected as a case study, because of its historical antecedence, religious and communal attachment, as well as its socio-political and cultural relevance in the study area. Information was collected using the unobtrusive observation method and were descriptively presented in the form of layout plan, material deduction, construction techniques and technology adopted for the mosque's construction. Findings shows that, the influence of the identified key factors have become a threatening phenomenon to the survival of the preservation and conservation historical values and heritages of Hausa mosque architectural style. The paper advocates preservation and conservation of the original mosque architectural style from the point of view of sustainability and made recommendations towards the preservation, development and execution of strategies for branding, national identity and protection of value systems for the public good</i></p> |

Introduction

In Arabic, a Mosque is referred to as a *Masjid*. It is a place of worship for the Muslims and the adherents of Islamic religion where they bow in

worship to the Almighty Allah. In today's context, the term mosque refers to a distinct structure (Wirakusumah 2022). History shows that the prophet of Islam, Muhammad (SAW) always gathered with his companions in the *Masjid*/Mosque for various activities other than

praying or worshipping, such as *madrassa* (knowledge sharing), *mashua'rah* (consultation and dialogue), *walimah* (ceremonial events or celebration); and dispute resolution, among others (Ahmed and Hashim 2020).

The effect of globalization and emerging technology is being seen to have galvanised us into a single culture and have in turn eroded our traditional style/rich cultural heritage almost into the oblivion (Tarigan 2023; Lake, Antariksa, and Salura 2021). It is in this stead Danjuma et al. (2021) posited that, traditional architecture is giving way to modern and contemporary architecture, while cultural arts and crafts are being replaced by modern design, leaving future generations unaware of their ancestors. Thus, cultural expressions are the means by which culture is communicated, while architecture is a form of cultural expression through the designing of buildings and structures with the reflection of cultural elements in or on them (Rahmawati, Arifin, and Dwisusanto 2023; Hermawan 2023; Purbadi, Sumardiyo, and Vitasurya 2023).

The term tradition derives from the Latin word - *traditionem*, means "handover, giving or relay," and it is used in a variety of contexts, including beliefs, value, heritage, culture or habits that are taught or transmitted from one generation to the other in a manner and generation. According to Achmad (2019), traditional architecture has an important meaning because it reflects a society's ideas and behaviour, whereas, puts the development of traditional architecture as era-based in the west which is deemed to be an era preceding the modern era (Koupaeei, Borazjani, and Safian 2018).

It implies that, traditional era is absolutely unknown but emerging and manifesting only in the light of modern thoughts in which traditional architecture helps to represent as a world and a way of life. It therefore suggests that the knowledge of people's traditional values benefits not only architects and academics, but also the societies at large (Muljadinata 2023). Traditional buildings are homogeneous and contextual to their built environment. They are embedded in people's vernacular roots, identity, order, principles, and sustainability (Hosseini et al. 2012). Their vernacular architecture appears to have suffered greatly (Caruso et al. 2022). In comparison to modern standards, it is frequently regarded as outdated, inefficient, and aesthetically inappropriate. Technological developments and advancements render traditional architecture

obsolete and encouraging a shift to modern architecture (Nurkarismaya, Siahaan, and Eddy 2020). It is in this stead, this paper aligns with the description of Hausa Mosque Architecture as hypostyle in plan in which the roof is supported on piers/columns and domical walls, whereby walls are surrounded by a dome and with the aim of assessing its trend and the level of retainership or otherwise of the styles of Hausa Mosque Architecture (HMA) in the early Nigeria mosques with the Yandoka Street Mosque, Jos, Plateau, Nigeria as a case study.

Literature review

Traditional architecture is a physical culture that is closely related to people's personalities (Rahim, Arham, and Darmawijaya 2021); which implies that, sociocultural and environmental factors have a strong influence on physical expressions and architectural characteristics. This is in line with the position of Danjuma et al. (2021) that, architectural style can be reflected through the building forms, the use of indigenous building materials and techniques. Therefore, the advancement in building technology in terms of production of materials and construction methods, the influence of modernisation and globalisation has brought about societal/paradigm shift from its traditional state into the contemporary architectural realities.

1. Vernacular architecture

Vernacular architecture (VA) is an unpretentious, simple, indigenous, traditional concept made with local materials and following time-tested forms and types; and that VA has been portrayed as local, primitive, unattractive, and unworthy of preservation (Lodson, Ogbaba, and Elinwa 2018). Every cultural group in the world has its own vernacular, though the approach varies from place to place and person to person. Thus, contemporary architecture has its roots from the vernacular architecture, while modernism overlooks or trivialises people's vernacular architecture (Asadpour 2020). Bouček, Landa, and Soukup (2022) posited that, VA is an essential component of national cultural heritage, while Hamka and Sri Winarni (2021) holds the view that, VA has a very specific form of original work, with very strong local content and philosophy, and it is contextual in nature based on its era. It therefore, expresses the practical and spiritual needs of each community, which shares the same value systems (Creangă et al. 2010). It therefore suggests that, there is no

agreement on a universal definition of vernacular; and that, the conventional understanding of this term is equivalent to the word's native meaning of belonging to the land in which one was born for it to be specifically connected and universally construed in the notion of architecture. The word vernacular has several synonyms, including indigenous, primitive, and spontaneous. It is also be construed as spontaneous. In another token, it can be inferred that, vernacular buildings are those which are part of a group of constructions that were common in a specific region and time; while vernacular architecture is a form of cultural heritage; a form of architecture built without professional guidance or academic tradition; and as such, are structures typically built to meet the users' local/indigenous, individual needs, which have been corroborated by Zhang, Wang, and Zhang (2022) and Momcilovic-Petronijevic, Vasić, and Cvetković (2022) that, architectural works are constrained by the materials available in a given region and reflect local traditions and cultural needs.

2. Mosques

Mosques, along with cultural, social, political, and economic activities, were at the heart of early Islamic cities. They served as the focal point of public settlements as well as the hub of all social life. The primary function of the Mosque is to provide a place of worship, which is a spiritual activity for Muslims. However, throughout Islamic history, they have been an important institution serving multiple functions that are not limited to spiritual matters alone (Kepenek, Kepenek, and Bakır 2022). Its roles expanded to include education, zakat (collection and distribution), charity and alms giving, and political mobilization, as well as a community gathering place.

The first mosque built after the migration of the Prophet (PBUH) was Quba in Medina, Saudi Arabia, in 622 AD. The Masjid-ul-An'Nabawee (the Prophet's Mosque) was built quickly and became the centre of the established Islamic State. The early mosques were then used not only as a place of worship, but also as a public gathering place for ceremonial, educational, and communal activities (binti Marhalim et al. 2015).

According to Baharudin and Ismail (2016), a mosque is an important religious structure that both symbolizes the Islamic faith and serves the diverse needs of the Islamic community. While it is an architectural form, it has the potential to function as a symbol that communicates with its

surroundings and users. They are now a symbol of Islamic iconography and a people's theology. Mosque are the most important institution for Muslims, serving as the nucleus of a globally united community (Asif, Utaberta, and Sarram 2019). A niche is typically created along the wall facing the Mosque's direction of *qiblah*, which is located in the centre of the mosque's main axis (Sarhaddi-dadian, Malekzadeh, and Ramli 2022).

A Mosque built in Hausa vernacular architecture takes into account the people's culture and traditions, as well as weather, material and other local conditions. It depicts aspects of the indigenous people's architectural style in terms of locally established building materials, existing craftsmanship and sub-cultural background dating back decades (Asif, Utaberta, and Sarram 2019). Mosques are constructed in the same architectural typology as people's homes (Kusyanto et al. 2019).

3. Short history of the hausas in Jos

Since the early 1900s, Hausas have settled in Jos and their communities are steeped in ancient local costumes and traditions, as well as religious practice. Their communities grew as a result of the influx of people, which also resulted into modern urbanisation (Umar et al. 2019; Adanu-Tal and Umaru 2017; Obiadi 2015; Jolaoso et al. 2019; Umaru, Bello, and Jolaoso 2022) proposed that the Hausas lived in Jos in communities such as Naraguta, Gangare, and Tudun Wada, which Urquhart (1977) considered to be the Jos Native Town (see figures 1-3).

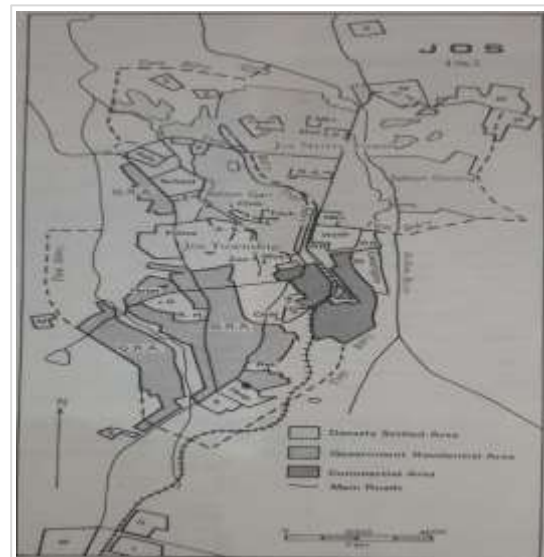


Figure 1. Map of Jos (of the 1900)
 Source: Urquhart 1977

4. Hausa Mosque architecture

This facility is hypostyle in plan in which the roof is supported on piers/columns and domical walls, whereby walls are surrounded by a dome. The design and construction of mosque before the advent of colonisation of Nigeria were influenced by authority of the traditional rulers and carried out by the indigenous builders and their respective family members. These were usually evolved as a reflection of the symbolic value and expression of identity of Islam and Islamic community, which later experienced gradual transformation on account of the influence of the British colonial masters, the Mesopotamian, Chinese, byzantine and Italian architecture; introduction of western education, emerging technology, foreign investments into building constructions and involvement of the expertise of the foreign architects, engineers and builders. Thus, taking away the powers and influence of the traditional ruler under the auspices of the British indirect rule. The Hausa Mosque architecture are mostly characterized by:

- a. Rib vaulting and piers
- b. Decorated walls in ornaments, calligraphy, fluting, geometrical motifs, grooving, etc.,
- c. Arches/archways (pointed, trefoiled or multi-foiled) and Courtyard
- d. Domes (*Qubba*), which symbolises oneness with God and are usually decorated with varieties of geometrical designs and shapes from both the interior and exterior
- e. Mimbar, which is the pulpit from where the sermon (*Khutbah*) is delivered
- f. Minaret (*tower*) are usually tallest part of the mosque building signifying supremacy and oneness of God. It also serves as landmark or point of reference illustrating the location of mosque buildings while symbolising where the call to prayer/worship is done and disseminated in and outside of the building.
- g. *Mihrab* which are mostly semi-circular niches in walls of mosque buildings indicating the direction of the *qiblah* where the congregation faces during worship/prayers
- h. Ablution area is where the spiritual bathing takes place as prerequisite to worship/prayers by the adherents of the faith and congregation.
- i. Construction involves the use of assorted building materials, which include

lateritic/earth/mud bricks, *azara* (palm-trunk/exotic wood/timber); bamboo, thatch, raffia palm-leaves; stones, metal (gold, steel, bronze), coconut/palm kernel clinkers, cement, etc, as reinforcements, cementitious and finishing materials; glass, coconut/palm kernel clinkers, etc. (Dmochowski 1990).

5. Selected examples of pre-Colonial Mosques in the Northern Nigeria eliciting the Hausa Mosque architecture (HMA)

The architectural typology of the selected examples of Hausa traditional Mosques in the northern Nigeria deals with function, form, style, materials (Maslucha 2001) and are characterised by irregular shaped hypostyle floor plan and a somewhat replica of Hausa home planning. The ablution chamber of the mosque was used as a buffer zone between the mosque's courtyard and the ever-busy main street.



Figure 2. Zaria Mosque (1835-1847)

Source: (Farrag 2017)



Figure 3. Kano Mosque (1950s)

Source: (Farrag 2017)

The Zaria Mosque

This Mosque was built around 1835-1847 during third Fulani emir of Zaria (Abdul Karim) and by the chief (indigenous) builder, named Mallam Mikhaila Babban Gwani. The Zaria Mosque remains one of the surviving mosque of Hausa traditional Architecture which set example for other parts of the country. The Zaria Mosque roof-dome was supported by piers/columns with semi-circular/vaulted-ribbed arches with bases which are close to the floor level and were placed in such a manner that obstructs the *Mihrab* views.

The ceiling of the Zaria Mosque consists of patterns of *Azara* (raphia palms) trunk that were tied to each other and used to fill up the space which also reveals a technically sound initiatives and knowledge in the use of indigenous building materials and techniques. It is also decorated with geometrical motifs patterns on its structural arches, Islamic calligraphy and carvings in a manner of visual emphasis, scale and proportion as symbolic expressions. With the emergence of the colonial style the connection of culture and traditions became weakened in the traditional form and the Hausa mosque architecture. Some of the symbolic and visual elements like the dome/mud roof construction that were supported by mud arches became extinct. The ablution/entrance of the Zaria Mosque was replaced with four iwans (large rectangular hall or congregation chamber to the courtyard which are often open on one side, walled on other three sides, vaulted and decorated with calligraphy bands, geometrical designs and glazed tile-works).

The Kano Mosque

This was built in the 15th century (1582) and was destroyed in the 1950s for a rebuild through the help of the British/colonial master in 1963 which was largely inspired or influenced by the eastern (Mesopotamian and Chinese) architecture. The inflow of the Egyptian-Arab merchants into Nigeria and the spread of Islam gave birth to the re-built of the Kano Mosque in Kano, where an observatory tower (called Gobarau) was added thereto amongst other changes, which was later abandoned and replaced with the minarets. With the increase in the size of the congregation, the floor plans grew larger in scale and size with the provision of additional functions and ceremonial spaces while still maintaining overall geometry and symmetry of

the mosques' prayer hall; abstract motifs and painted Arabic inscriptions.

The foregoing has however revealed that, some of the features of HMA of these mosque buildings have undergone transformation, transited and have become diminished due to the influence of the reign of colonial masters, the foreign architects, engineers and builders; renovation, regeneration in the form of accretion, changes in material choices and adoption of modern day/contemporary construction techniques replacement with the use of the blend of steel, timber and concrete materials which came with the attendant threat to the conservation of the native style of Hausa Mosque Architecture (HMA).

Method

Material and procedures

This study adopted a qualitative survey approach by using interview, field observation and case study and content analysis of related reviewed literature to extract information on the challenges of restoration and preservation or conservation of the key features of traditional Hausa Architecture on the Mosque buildings in the study area of Jos, Plateau State, Nigeria from the traditional/indigenous builders and practicing architects. The *Yandoka* Street Mosque was purposively selected as a case study, because of its historical antecedence, religious and communal attachment, as well as its socio-political and cultural relevance in the study area. Information/data was collected using the unobtrusive observation method and were descriptively presented in the form of layout plan, material deduction, construction techniques, and technology adopted for the mosque's construction.

Data collection from the case study (*Yandoka* Street Mosque, Jos, Nigeria)

a. Mosque's location

The Mosque is in the capital city of Plateau State of Nigeria and located within the core native area in the old Jos city popularly referred to as *cikin gari* in Hausa language. It falls within the province of the Jos-North Local Government Secretariat and near the old native authority's office. The mosque was built by the colonial administration, through the native authority to

serve its workers. Physical developments over the years, re-delineation and re-designation of landuse or areas and provinces have now made its presence so conspicuous and contiguous in location on the *Yandoka Street* in Jos, Jos-North, Plateau State, Nigeria. Its location in the cosmopolitan city and heterogeneously populated.

b. Architectural style of the *Yandoka Street Mosque*

The *Yandoka Street Mosque* at Jos is also known and locally referred to as *Masallacin Alhaji Mato Dan Inana*. The architectural style and building materials of the mosque building falls within and under the vernacular architecture akin to the traditional hausa houses. It is characterised by features in material choice and construction techniques, such as in the use of *birji/tubali* (mud/mortar), pinnacle, motifs in walls and wooden panel doors, niches/wall recesses for oil-lamp lighting effects, wall-reliefs, slit-windows, etc. Thus, a strong reflection of the cultural and religious influences of the Hausa people on their building and construction style.

c. Layout plan

The building layout plan is rectangular measuring 6000 x 9000 mm in size with the two entrance doors measuring 900 x 2100 mm (figure 4). On the frontal wall above the doors, there are two high-level windows measuring 600 x 600 mm, as well as slits built as high-level windows measuring 150 x 600 mm (figures 8 and 10) for illumination and complementary ventilation.



Figure 4. Entrance doors motifs



Figure 5. Use of veranda



Figure 6. Sun-dried mud brick wall with relief

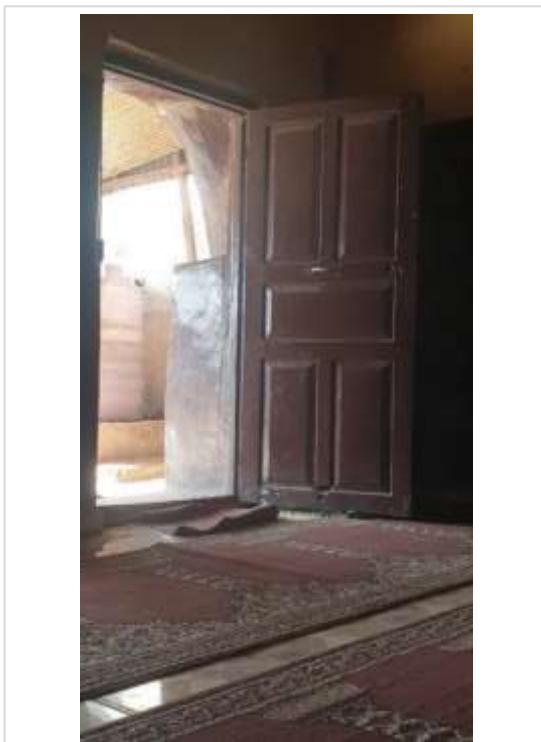


Figure 7. Entrance panel doors with grooves-decor



Figure 8. Slit-windows in walls

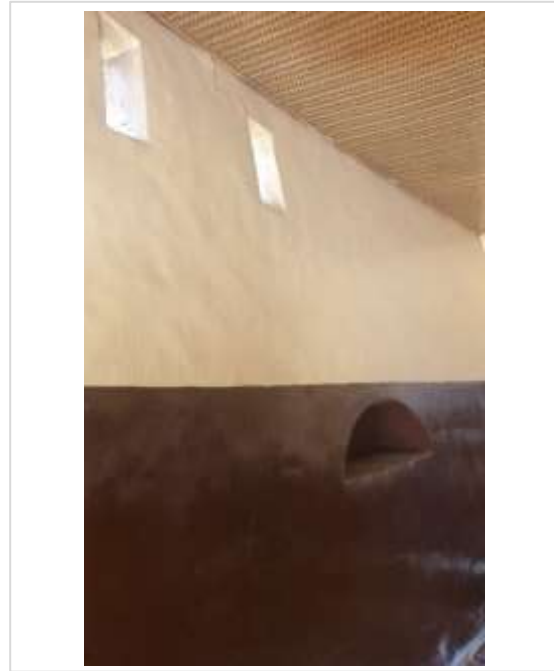


Figure 10. Use and placement of slit-windows in walls

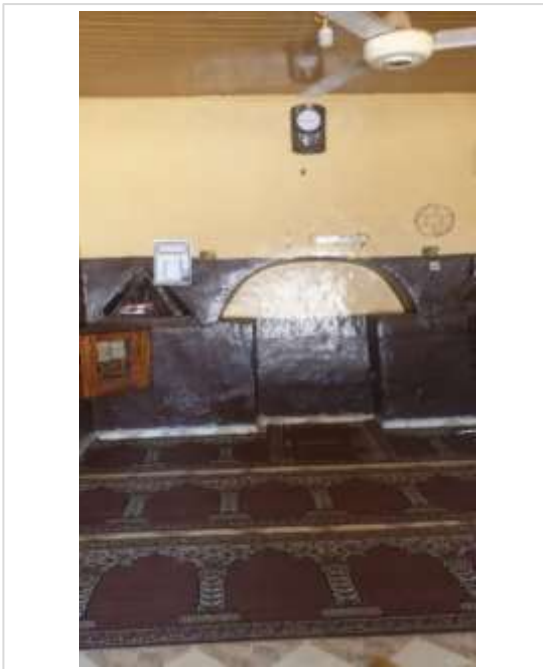


Figure 9. Qibla wall niche



Figure 11. Symbolic entrance doors with reliefs on arch-wall surfaces as decoration



Figure 12. Location of the case study (9°55'38.3"N 8°53'28.1"E 9.927306, 8.891124) Source: Google Map (accessed on 19/01/2023)

d. Material and construction technology

Birji is earth used to make *tubali* and mortar. It is dug out from the *kududdufi*, -the burrow pit carefully chosen by the builder since the *birji* varies considerably from town to town and even from pit to pit. It is birth from the pit in large lumps hard enough to resist a fall of one metre. The *birji* is first broken into small particles with shovel. From then on, the processing is quite different depending on whether it is to be used for tubali, mortar or plaster, as corroborated by [Dmochowski \(1990\)](#). The mosque's wall is massive. It was constructed with regular rectangular sun-dried mud bricks plastered several times with straw reinforced mud mortar. Thereby, the wall became so massive in size and has remained in its original form. The original floor was originally finished with mud, but now transformed with the use of 400 x 400 x 5 mm vitrified floor tile and Persian rugs covering as prayer mats (see, [figures 7, 8, and 9](#)). The original roof/ceiling was built in the Hausa vernacular style with a domed-like shaped mud roof and a pinnacle (*zanko*) adorned with mud and straw (*azara*). The current state of the roof revealed a corrugated zinc cover with PVC ceiling finishes (see, [figures 8, 9, and 10](#)).

The windows on the building's sides remains in their original state with its narrow slits placed at high level with no covering (see [figures 8 and](#)

[10](#)), while the two fairly sized windows in front are also placed at high level, with a wooden frame and finished with glass in their respective original state. The building has two wooden panel doors at the entrances, which is also in their original form. [Figures 8, 9, and 10](#) show "*Barbuki*," a recess on the wall for placing the old traditional oil-lamps for illumination in the Hausa vernacular architectural style. The original walls of the building were decorated externally with motif (see, [figures 4, 5, 6, and 11](#)).



Figure 13. Light pole, dating back to 23th January, 1947

Result and discussion

Historic buildings have in recent time been found to be faced with challenges of the influence of modernisation, commerce, civilisation, technological development, antiquarians, globalisation, governmental physical development projects; and the consequential paradigm shift, among others. The salient finding is as tabulated below:

Table 1. Salient findings from the study sample

| Key elements | Original state | Present state |
|---------------------|---|--|
| Architectural style | Hausa vernacular architectural style (figures 4-13) | Presently, the building has undergone modifications/transformation processes to extent of the complete disappearance of the domed-shaped mud roof (from the outside views), the beautifully vaulted ceiling with its intrinsic design and construction (from inside views); the complete removal of the pinnacle (<i>zanko</i>) from the façade with the introduction and adoption of the use of |

| Key elements | Original state | Present state |
|--|--|--|
| | | veranda and corrugated zinc roof-covering arising from the influence of technological changes and westernisation of values system. |
| Façade | Traces of retainership of its original style with the use of exterior motifs and decorated entrance wooden panel doors (figures 4-13) | The beauty of the façade reflected distortion with the introduction of the veranda, which has in turn original style of the façade (figures 4-6 and 12-13) |
| Building elements (element-by-element) | <p>Elements that remained in their original form/position are.</p> <ul style="list-style-type: none"> a) Slits-windows (figures 8 and 10) b) Window architraves c) Wooden panel doors (figure 7) d) Lamp holders' niches (<i>Barbuki</i>) figures 8-10 | <p>Some of the original building elements have been transformed either by renovation, upgrading or replacement especially in:</p> <ul style="list-style-type: none"> a) Floor which are now finished with vitrified tiles b) Wall which are also internally plastered with the use of sand-cement mortar and finished in gloss paint c) Ceiling finished in PVC strips d) Replacement of the Old mud domed-vaulted roof and ceiling with corrugated zinc covering and PVC ceiling used underneath/internally e) Lamp holders (<i>Barbuki</i>) now houses the Amplifier, battery and Qur'an (figures 8-10) |
| Interior decoration | <p>Vaulted ceiling decorations and internal motifs completely loss</p> <p>Two lamp holders remained, but are presently put into other uses (figures 8-10)</p> <p>The niche on the <i>qibla</i> wall remained (see figure 9)</p> | <p>The vaulted ceiling decorations is presently covered by the introduced of PVC ceiling (figures 8-10)</p> <p>Most of the internal motifs have been removed to allow for the sand-cement plastering (figures 8-10)</p> |

Summary of findings from table 1 and figures 4-13 expresses the Architectural style of the mosque building as a reflection of the Hausa Vernacular Architecture in its original form. Over the years the building had undergone transformational changes or modifications, which had in turn led to the obscurity of the domed-shaped mud roof from the outside, the beautifully vaulted ceiling with its intrinsic design and construction from inside, the extinction of the pinnacle (*zanko*) from the façade with the introduction of veranda and the re-roofing with the corrugated zinc materials in line with the emerging technological changes, westernisation, globalisation and paradigm shift in the value systems.

However, the original style with exterior motifs is still been maintained on the façade of the Mosque. The decorative ornamentations on the façade are mostly found around the niches/wall-recesses, entrances and doors. Events have shown that, the influence of these factors have become a threatening phenomenon to the survival of the

preservation and conservation historical values and heritages of hausa Mosque architectural style.

Conclusion

The findings further revealed that, the mosque is about 87 years old and it has remained useful, functional and emotionally relevant to the people, in spite of the passage of time. It is however, faced with challenge or the threat of deterioration, destruction and extinction of the original features of hausa vernacular architecture relating to mosque buildings. It is against backdrop that, the paper advocates preservation and conservation from the point of view of sustainability of the original mosque architectural style for better understanding of history and identity. The paper therefore recommends the review of existing development policy, related frameworks or guideline to accommodate the adoption of preservation and conservation of history and heritage strategies as a requirement for the physical development control; government's

provision of reward system that will engender and promote the preservation, conservation and restoration of vernacular architecture; the review of academic curricular (from the primary to tertiary levels) for a better understanding of the issues in preservation and conservation of history, heritages and value systems; the government's prompt and appropriate remedial action to restore, preserve and sustain all identified relevant building structures towards the preservation, development and execution of strategies for branding, national identity and protection of value systems for the public good.

It is hoped that the paper will further generate useful conversation finding viable alternative approach(es) against the infamous prevalent denigration that are usually brought about by Nigeria successive government's indiscriminate demolition of building structures in the name of urban renewal and its concomitant adverse effect on the conservation and preservation of architectural character and heritages.

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