DESIGN PROPOSAL FOR MODEL ISLAMIC SCHOOL, KANO

WITH EMPHASIS ON HARMONISING HAUSA AND ISLAMIC ARCHITECTURE

BY:

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DECLARATION

I, BABA HURAIRA UMAR hereby declare that this thesis titled: DESIGN PROPOSAL FOR MODEL ISLAMIC SCHOOL, KANO (HARMONIZING HAUSA AND ISLAMIC ARCHITECTURE) is an original product of my own research work under the supervision of Prof. (Mrs.) S.N Zubairu. All materials used in the study have been duly acknowledged in the references.

Baba 27/10/2010

STUDENT'S SIGNATURE

CERTIFICATION

This thesis titled 'DESIGN PROPOSAL FOR MODEL ISLAMIC SCHOOL, KANO STATE' by BABA HURAIRA UMAR (M.TECH/SET/2004/1315) meets the regulations governing the award of Masters of Technology (M.Tech) of the Federal University of Technology, Minna, Niger State and is approved for its contribution to scientific and literary presentation

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ABSTRACT

The plight of our children, the constant hazards they are daily exposed to on the streets, has become an appalling problem in Northern Nigeria. Mass migration of these children commonly reffered to as *Almajirai* (*singular: Almajiri*) usually underage to cities for the attainment of Islamic/*Qur'anic* education without the proper accommodation and environment to help them achieve a comprehensive education acts as a detterent for a well rounded and sound education. This needs to be addressed, solutions need to be proffered, a better learning environment needs to be created. The establishment of a Model Islamic School to accommodate, instruct and give these children the Islamic/*Qur'anic* education they crave, and more, by obtaining a sound western education with a dose of vocational training added, will in a long way start addressing these pressing human and environmental problems that the *Almajiri* syndrome poses. This is the sole aim of this thesis work. The school would strive to give an in-depth Islamic/*Qur,anic* education and a well rounded Western education which would greatly benefit the children, their parents and the society and our nation as a whole.

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INTRODUCTION

1.1 Background to the study

Education, it is agreed, is the single most important factor in the development of any community or nation. A good quality education affords a people a good quality of life, and at the minimum, a fairly decent standard of living with a sound mindset. Without a qualitative education, an unhealthy society riddled with violence and different forms of vices will prevail, as is what obtains now in Northern Nigeria.

The sight of a young boy in tattered, dirty clothes with a bowl in hand begging for alms is a common sight, especially in Northern Nigeria. These children are commonly referred to as *Almajirai*. There is a growing concern on the hazards such children (*Almajirai)* are exposed to, daily.

These hazards include environmental hazards which includes exposure to harsh weather conditions such as the Harmattan weather, scorching sunshine, exposure to violence, vices and the streets susceptibility of the '*Almajiri'* child to airborne, water and skin diseases; psychological factors of being abandoned by their parents and the society as a whole, this hinders the development of the '*Almajiri'* child.

Various efforts have been made by individuals either by contributing funds or materials to schools to which the "*Almajirai*" go to, or to the teacher under whose care, the Almajirai are. However, this is at best, insufficient, the society needs to stand up to face the challenge of proffering better options to the *"Almajiri*" child for the choice of a better future.

Such options would entail the integration of the Western/Secular education system alongside the *Qur'anic* and '*Islamiyyah*' curriculum with a dose of vocational skills added. Such would invariably improve the standard of living of the *"Almajiri"* and in turn, the society as a whole. The establishment of a Model Islamic school will ensure a check on the hazards, which include environmental, social, health which the *"Almajiri*" is exposed to.

The society cannot afford to keep folding its arms to the glaring truth facing the society on the plight of the '*Almajiri*' child. A change need to be sought and solution proffered. This challenge is unarguably the most important venture that the northern states need to embark on as it affects the future of the country as a whole.

1.2 Statement of the Research Problem.

The Northern states of Nigeria and Kano state in particular is swamped with the problem of the '*Almajiri*' child. These children go about begging for alms around the city, unmindful of the great hazards the daily exposure such traipsing involves. The Scholars commonly called '*Mallams*' to whom such children are entrusted with, do not have the resources to cater for these children, and in turn, let loose these children to roam the streets looking for food to sustain them. The accommodations where they reside are in an appalling condition and in a state not even fit for animals.

The rooms are inadequate to say the least. A $30m^2$ room can house an up most of 80 -100 pupils. This should be unacceptable to say the least according to any standard. The children need an accommodation to shelter and cater for their needs and educational pursuits. The urgent need for this accommodation spurred the impetus for this design proposal.

1.3 Aim and Objectives

1.3.1 Aim

The aim of this thesis is to harmonize Islamic and Hausa Architectures in a typical Model Islamic School in Kano.

1.3.2 Objectives

i) To strengthen the ability of learners to read, write and memorize the *Qur'an* alongside other conventional subjects.

ii) To broaden the scope of the existing *Qur'anic* curriculum with a dose of vocational skills.

iii) To promote good and efficient educational planning through the collection of data.

iv) To provide a modern, yet traditional learning environment conducive for learning for the "*Almajiri*"

v) To provide a healthy learning environment with quality education to assist the child in facing new challenges in this fast changing world.

vi) To ensure the sustainability of the programme by the involvement of governmental and non-governmental aid.

1.4 Research Justification.

The accommodations housing the '*Almajiri*' children are at best, inadequate, poorly planned, or not at all. Poor housing conditions, easy spread of diseases and infections. There needs to be a properly planned structure that that would house and provide a conducive environment for learning.

Products would be better educated and better equipped at being self –reliant, having attained some vocational training in some skills, and would have an easier time integrating into the society. They would have had a basic education and in the same vein, would have partaken in '*Qur'anic*' recitation and memorization, as obtained in the traditional Islamic schools. The personal welfare of Pupils, Teachers' is enhanced, and the learning environment improved.

The integration of Hausa Architecture with Islamic Architecture with came naturally with the research location of the thesis and subsequently, the function of the structures to be so constructed.

1.5 Scope of the Study

The Model Islamic School to be designed is to integrate Western/Conventional education with Islamic education and to study how Hausa and Islamic Architecture could work in harmony on the design. However, since integrated Islamic schools are not many, there is a limitation on materials available.

1.6 Contribution to Knowledge

1.6.1 Fusion of Islamic and Hausa Architectural styles

The integration at the planning styles of the Hausa Architecture with the exquisite features of Islamic Architecture which includes domes ,arches, integration of gardens and water features, within a learning environment for pupils learning the *Holy Qur'an,* in a safe environment, conducive for learning, as opposed to what obtains now.

The harmonization of the Hausa Architectural style with the Islamic Architectural styles is apt for this design proposal.

The fusion of the two Architectural styles with a Hausa dominated populace in an environment where Islamic/Conventional education is taught and designed specifically for such purpose, taking into consideration the culture and norms of that specific environment which the fusion of the two styles of Hausa and Islamic Architecture, this thesis hopes to harmonize Hausa and Islamic Architecture with a view to promoting Nigerian Architecture in an Islamic environment.

CHAPTER TWO

LITERATURE REVIEW

2.1 Review of related topics in books, thesis and papers

2.1.1 An Overview of Islamic School System

Over a millennium ago, by means of the age-long Trans-Saharan trade route that linked the Bilad-as-Sudan (Sub – Saharan Africa) with North – Africa, Islam reached West Africa and subsequently "Hausa Land'. One of the most prominent factors responsible for the spread of Islam in Hausaland was the role of the "Wangarawa" traders and scholars. These were a group of traders who first brought Islam to Northern Nigeria. Islamic scholarship flourished over a stretch of centuries (13^{th} – 18^{th}) and across the life spans of successive empires in the Bilas-as-Sudan (Ghana, Mali, Songhai and Bornu). (Shehu, 2002)

In the late 14^{th} century, a new Capital of the Kanuri empire was established in Bornu at N'gazargamu by Ali bin Dunama, otherwise named Ali Ghazai, who ruled during the period of 1476 – 1503 A.D (Shehu, 2002). The Islamization of Bornu took place during the reign of Mai Idris Alooma (1570 – 1602). The Madrasahs or Islamic schools were established.

In Hausa land, in the early 14^{th} century, about forty 'Wangarawa' traders were considered to be the persons who first brought Islam with them to Kano during the reign of Ali Yaji who ruled Kano during the years 1349 – 1385. A mosque was built, the Imam, the Muezzin and the Qadi were appointed later during the reign of Yaqum (1452 – 1563). Some Fulani scholars migrated to Kano and introduced books on Islamic jurisprudence to the Muslims in Kano. During this period,

Muslim scholars were attracted to come to Kano from Timbuktu to teach and preach Islam (Shehu, 2002).

Some of the great centres of learning that flourished in later centuries include Gao, Djenne and Timbuktu in the defunct Songhai empire, and Kano, Katsina and Zaria in Hausaland (Muhammad Dukku, 2003). Timbuktu was the most distinguished city of learning where students were taught from all parts of Africa. The Sokoto Jihad leaders, thus, were products of the Timbuktu scholarship tradition. They had an immense role in boosting Islamic education.

A fact testified to by several pioneer European explorers like Clapperton. He found as he put, a people ".... Civilized, humane and pious", by the time he arrived in the first quarter of the 19th century. (Morel, 1968:47). Blyden (1911) also expressed his amazement with regards to literacy excellence and communication saying,

"There is regular epistolary communication throughout this region in Arabic language, sometimes in the vernacular, written in Arabic character".

The *'Makarantar Allo'* – the fountainhead of the scholastic excellence aforementioned was reported that around the time the Colonialists came to Northern Nigeria, were well over 20,000 such schools covering the then Sokoto Calliphate (Shehu, 2002). According to Galadanci (1993).When the British arrived Northern Nigeria, they found Islamic education was widespread and well developed.

2.1.2 Development of Islamic School System in West Africa

The history of Islamic schools in the West African sub-region is synonymous with the history of Islam in West Africa. The introduction of Islam came simultaneously with literacy in Qur'an, the primary focus of which was the memorization of the Qur'an as a foundation to the learning of Islamic sciences.

The Northern Nigerian Islamic Society takes Qur'anic study as an integral part of the socialization process of every child. A child is expected to be registered with a community based Qur'anic school. Upon graduation, the child is expected to be able to recite the Qur'an, read and write Arabic scripts. In societies where the Western system of education exists, children attend the primary schools in the mornings and Qur'anic schools in the evening.

The Qur'anic schools predate the coming of the colonialists. The individual method of teaching was used where students learn to read at their own pace. This process continues until the child learns the whole Qur'an.

2.1.3 Variants of Islamic Institutions in Northern Nigeria

The *'Tsangaya'* Scholarship, Curriculum and Methodology.

The *'Tsangaya'* school is a typical Hausa word denoting an institution or school where Qur'an is taught on boarding basis to both children and adults. This system is mainly for male students.

2.1.4 Structure of The Tsangaya School

The 'Tsangaya' school building structure is mainly primitive. Thatched huts surround a courtyard where a bonfire is lit in the middle of the courtyard which provides illumination at night.

In a typical '*Tsangaya*" building structure, the house of the Principal is located close to the entrance of the compound and his assistants, boarding not too far from him. The students' hostel comprises of simple small rooms made of mud clay bricks aligned in a straight line.

A temporary hut, commonly referred to as *'Kiskadi'* where the students spend their day after school hours is made up of mud bricks and thatched roof located outside the compound.

2.1.5 Structure of The 'Makarantar Allo'

The 'Makarantar Allo' (Zaure – type) is the first shift from the strict *'Tsangaya'* setting. In this system, the learning and memorization of the Qur'an is combined with doses of Islamic jurisprudence (Hadith), Theology (ilm) and Arabic language.

The 'Makarantar Allo' is made up of rooms aligned in a row serving as classrooms. They are flanked by the side with the Principal's quarters comprising of a room and a sitting area (Zaure) around a large compound. The students' hostel rooms are arranged in a single row with bunks of beds made up of wood for sleeping.

2.1.6 Structure of A Typical Islamiyyah School

The first documented *Islamiyyah* school is the one founded in Zaria in 1956 by a group of activists (Shehu, 2002). The *Islamiyyah* schools are 'day' – oriented, as such, the pupils come to learn everyday from their respective homes and depart after lessons end. Their health and feeding needs are cared for at home.

The building structure of the *Islamiyyah* school is improved and made into classrooms imitating normal Western schools.

In the rural areas, they operate largely in entry rooms in local houses made with mud blocks and thatch roofs called 'saray'. They are designated into a graduation of classes in both rural and urban settings.

As a deviation from the 'Makarantar Allo', girls also attend these schools.

Table 1.0

Number of Qur'anic/Islamiyya Schools in Kano State.

School	Number
Qur'anic (General)	6,070
Islamiyyah (General)	3,396
Qur'anic primary	446
Model Primary	187
Tahfizul Qur'an	20

Source: Ismail, 2003

2.1.7 Model Islamic Primary Schools

Islamic organizations such as Islamic Education Trust (IET) Minna, Islamic Trust of Nigeria (ITN) Zaria, the Islamic Foundation, Kano started establishing Model Islamic Primary Schools in the 1980's.

The need for schools of such type kept growing, as such the scope and awareness of such institutions grew rapidly. With awareness came real integration of the

Islamic and Western education in one institution. Amongst the teachings of Arabic and Qur'anic studies was the western curricula as is studied in normal secular primary schools.

2.2 Research Area

2.2.1 Hausa and Islamic Architecture

To a large extent, the influence of Islam has greatly affected what we now know as Hausa Architecture. The advent of Islam in 'Hausa land' has affected the kind of Architecture accepted and practiced. The law and rule of Islam has had a dramatically profound effect on the psyche and thoughts of the 'Hausas' as a people. This law advocates strict privacy for women, a feature can be seen from the absence of openings from the '*cikin gida*' to the outside.

The tall walling surrounding courtyards provide privacy, security and intimacy, in that only persons allowed and known intimately may proceed to the *'cikin gida'* where the women reside.

Extensive use of tall walling known as 'Katanga' and other forms of walls protect the properties of households and prevent unnecessary intrusions. These walls are also used in Hausa Architecture to enclose the house boundary.

The skills and building materials available to the Hausa community is also one of the evident factors responsible for the form of construction used in Hausa architecture.

The advent of Islam also brought about changes and additions to the type of shapes used during construction and for decorations. The use of circular shapes prevailed

before the coming of Islam, however with the advent of Islam, the rectangular shape came into being, thus both circular and rectangular shapes are used during construction and decoration.

2.2.2 Brief History of Traditional Hausa Architecture

The term 'Hausa' is a linguistic designation referring to the people of Northern Nigeria and Southern Niger who speak the Hausa language by birth or as a first language (Habu, 1986).

The origin and early history of the Hausa people is almost uncertain. It is believed that during the 9th and 10th centuries A.D., a group of immigrants from the East came to Northern Nigeria.

Some knowledge however, was found of this region during the 14th and 15th centuries from travelers who wrote about their adventures. Hausa language is inclusive of all groups and peoples that have been assimilated into the Hausa culture such as Arabs, Tuaregs, Fulanis(Barkindo ,1983).

The history of Hausaland can be said to fall into four periods.

The Habe Kingdom, the Fulani Empire, the Colonial Period and the Period of Independence of Nigeria. The main architecture aspects to note during these periods are as follows:

2.2.3 Habe Kingdom

Because of wars, monumental walls were built around strong Hausa towns as Zaria, Bauchi and Kano. The coming of Islam transformed house-forms to suit

Islamic teachings such as privacy for women and the permission of marriage of up to four wives.

The tallest mud structure in Nigeria, stands in Katsina, known as the 'Gobarau Minaret' which was used as a tower for sighting enemies.

2.2.4 The Fulani Empire

The Fulani Sultan of Sokoto lorded over the Hausaland. Trade, arts and crafts developed and towns like Kano became trading centres, thus affecting the architectural structure of town settlement as new suburbs were created for visitors. An example of such is Unguwan Baki (Strangers' quarters) in Kano.

2.2.5 The Colonial Period and Independence

The coming of the Europeans brought about a change in the architectural set-up of the Hausaland. The Europeans brought with them new building ideas using different building materials such as sandcrete blocks, cement and aluminium roofing sheets.

2.2.6 Location of Hausa Land

Hausaland is bordered on the North by the Tuaregs, on the west by the Djarma and Songhai, on the East by the Kanuris and the South by smaller ethnic entities like the Gwaris, Kajes, Biroms in Niger, Kaduna and Plateau.

Its land area stretches across Kano, Kaduna, Bauchi, Sokoto and Niger.

2.2.7 Environmental Conditions Affecting Hausa Architecture Climate, Vegetation and their effect on Hausa Architecture.

In the Northern part of Hausaland, the Sahel Savannah prevails with its semi-arid conditions. Rainfall is little and lasts for about 4 months. A high diurnal range in temperature exists during the dry season, as such, it is important for buildings to have a high thermal capacitance in order to maintain a comfortable indoor temperature. Massive mud walls and reinforced mud ceilings do this trick.

Vegetation is very scanty and consists of thorny shrubs like '*mimisa*', which is used as reinforcement for mud armatures and for filling panels of mud roofs, dum palm (goriba) used as the main structural member in mud roof construction.

Further South into the Guinea Savannah, rainfall is still higher. The Deleb palm is found in the river- valley with Bamboo (gora) used in roof construction and in filling of panels between ribs and beams.

The overall regional architecture of Hausaland is greatly affected by variability in climate and availability of building materials.

2.2.8 Hausa Architecture and Construction

The basic shapes used for plans are the circle and rectangular forms. The circular shape was the only one initially used. It was achieved by the use of mud, stones, cornstalks or grass as the building is derived. The coming of Islam and its related building technology brought about the use of the rectangular shape for plans. Attached are some of the basic shapes used in Hausa traditional architecture.(Galadanci,1993).

2.2.9 Construction

Generally, excavated earth from the nearest burrow pit is transported to building site and piled in heaps of 80 – 90 cm height. Water is added and the mud is trampled to a mortar consistency. This material is then molded into bricks of circular cone shapes called 'tubali' and left to dry for at least 2 weeks.

Foundation of building is then dug to a depth of about 50cm. The dried bricks are then laid in courses, covered with mortar consisting of mud and horse or donkey manure, short cut grass mixed with water.

2.3.0 Flat Mud Roof Construction

The flat and mud roof construction are usually made with poles of deleb palm (Azara) not exceeding 0.05 x 0.10 x 2.40m; made by splitting the palm tree lengthwise and set side by side diagonally across the corners at the top of the wall, inwards progressively.

The '*Zana*' mat is spread on top of the arrangement and 5cm layer of mud is then spread, followed by 10 – 15 cm thick mud mortar. A thin layer of water proof plaster is finally lain.

2.3.1 Vaulted Roof Construction

This type of construction involves the use of reinforced curved beams of Azara arches springing from opposite walls supporting the vaulted mud roof. The curved beams are known as '*baka*'. Mud roofs are drained with the aid of spouts.

2.3.2 Hausa Architectural Decorative Forms

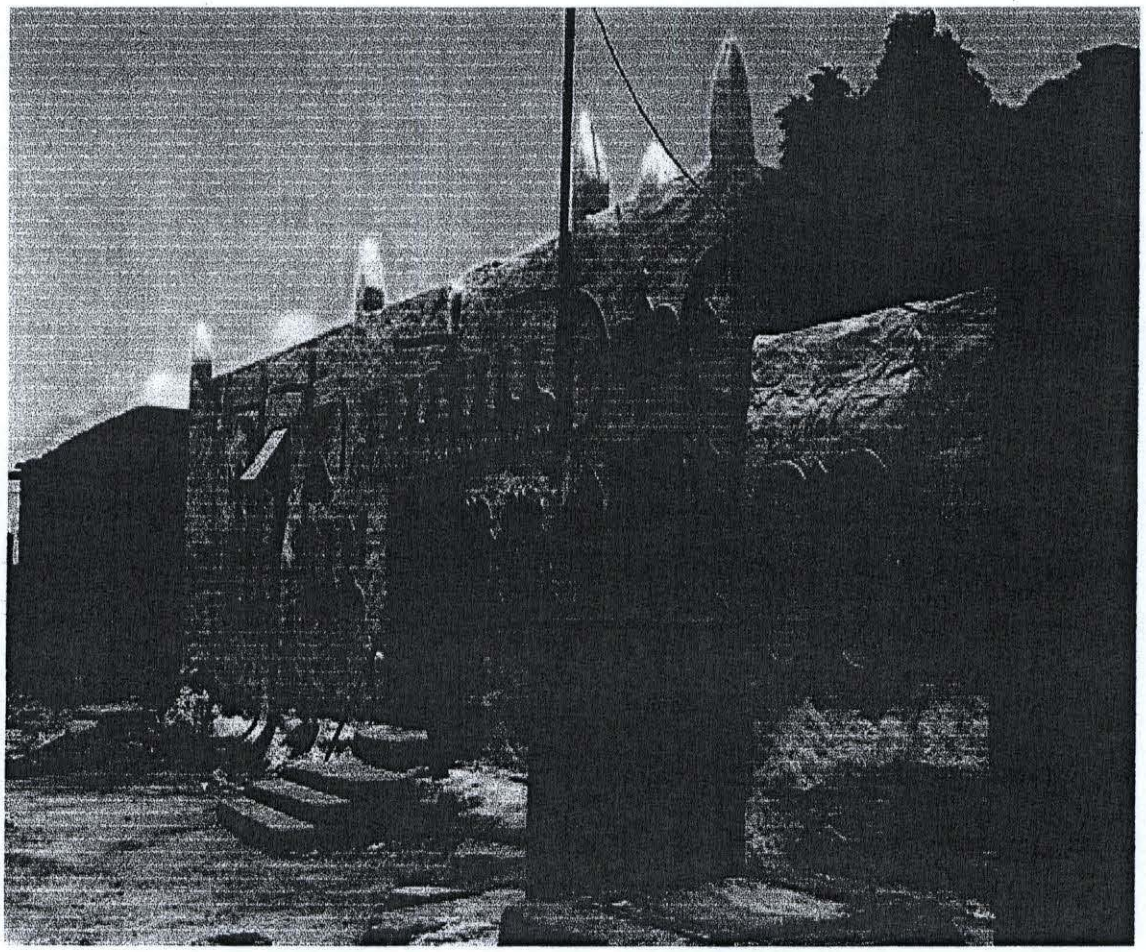
The most striking feature of Hausa Architecture is the external decoration of buildings which usually surround doors but which may cover whole building walls

that face the streets. This striking motifs naturally attracts attention and speculation of visitors.

The first of the three main decorations found in Hausa architecture is made by modeling fresh mud plastic manually into arabesque features.

The second type of decorations found is made by cutting ornaments into wet cement or mud plaster and the third is made by painting on a plain white wall.

Plate 2.0

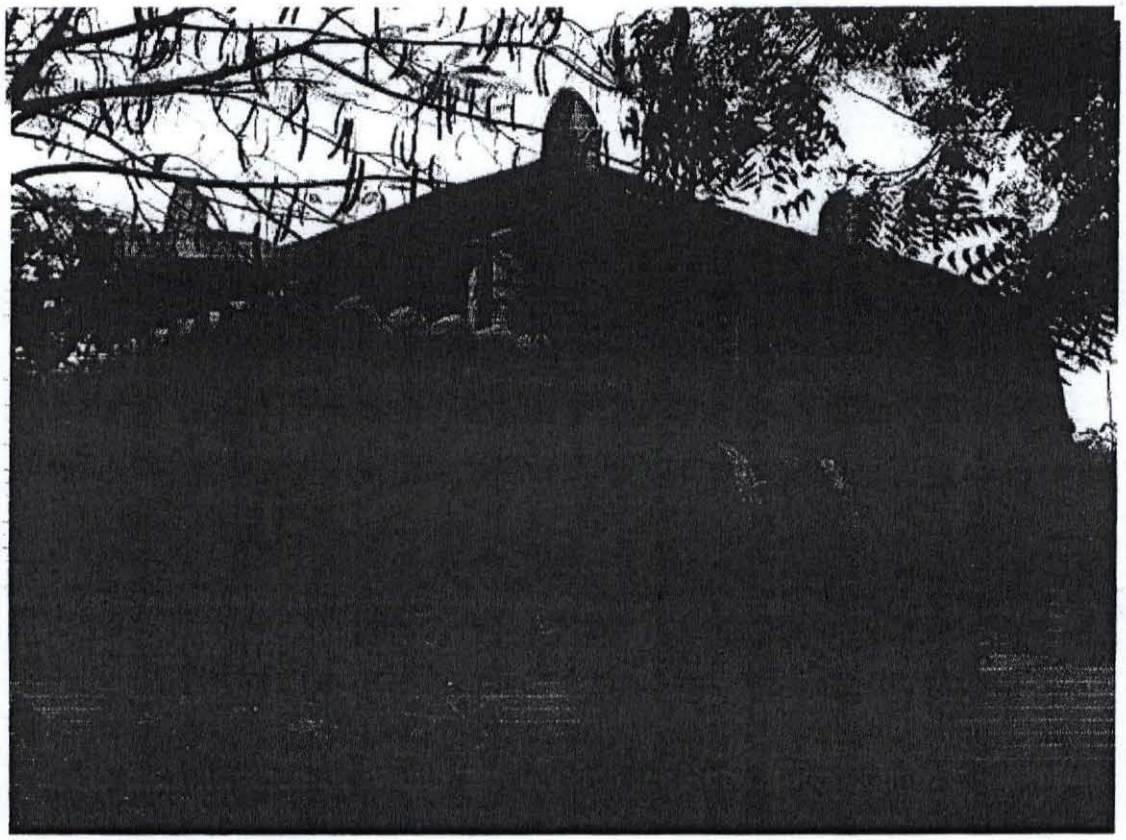


A Typical House depicting Hausa decorative forms and tall wallings

Some older and fine examples of the first decorative style mentioned are found around doors of some of the huts inside the 'cikin – gida'. Decorative arts are appreciated therefore for their own sake as a source of pleasure and not only as a

public demonstration of wealth the massive mud construction lighter and more picturesque appearance.

Plate 2.1



A Typical Hausa Compound in Kano depicting Hausa decorative forms.

2.3.3 **Furniture**

The furniture used in Hausa architecture is few. These include grass mats and earthen beds, which could be heated with embers from underneath.

The 'Tsangaya' school area however is located at the entrance of a compound. The students' boarding facilities contain wooden bed bunks with a cloth attached at both ends; much like a hammock, where the pupils sleep. It is filled with wrappers, which serve as bedding for pupils.

The outer rooms for lessons are clean and tidy with a typical low mud platform used for sitting

2.3.4 Influence of Islam on Hausa Architecture

Islam had a profound effect on Hausa architecture, with its spread came a change in the thought of the Hausa people. The law and rule of Islam advocates strict privacy for its women. This feature can be seen from the absence of openings from the cikin gida to external walls.

The tall walls surrounding entire compounds also provides a much adherred- to, privacy.

The permission to marry as many as four wives by Islam also influenced Hausa architecture. The prevalent system of extended family structure also reflects in the Hausa architecture.

The decorative forms used in Hausa architecture were integrated from Islamic architecture. As such, much of Hausa decorative forms are Islamic in origin.

2.3.5 Typical Compound of a Mallam

The compound shown in figure below belongs to a Mallam Balarabe in Zaria city. The unit is surrounded by a mud wall 3.50m high. The round entrance hut (zaure), with a lobby in front, has an internal diameter of 4.40m, around mud wall, supporting the conical thatched roof, is approximately 50 cm thick, with a reddish mud plaster as a finish on both sides.

One oval, two round and one square grass mat as well as several goat skins, are laid out on the floor which has a cement finish.

In the Zaure, the compound head (maigida) sits to teach the Qur'an.

He also rests and receives guests and friends. No male stranger is allowed further into the compound and only a very close friend or a trustworthy personality of high rank is entertained in the second entrance hut (shigifa) numbered as room 4.

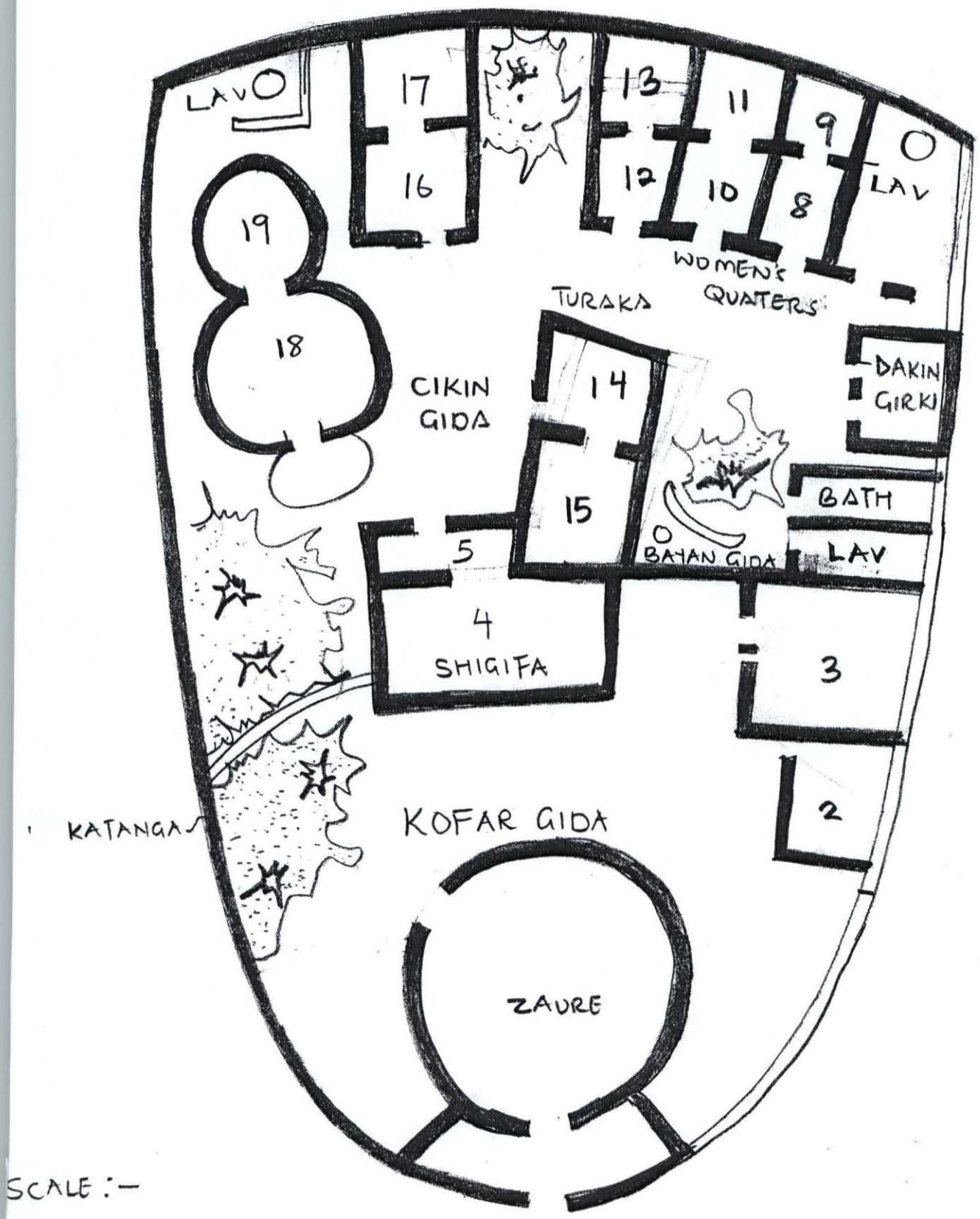
The door of the Zaure leads to the interior and is covered by a straw mat to prevent males from looking into the compound.

The second entrance hut (shigifa: rooms 4 and 5) are divided to a larger room. Alligned at one end of the compound are rooms for the 'Mallams' pupils or 'Almajirai'. Rooms 2 and 3 are for this purpose. Opposite them at the other end is the Principal's room..

The interior of the residential unit (cikin – gida) where only close relatives of the house head, women and girls or boys under age of puberty are permitted, contains the women's quarters numbered 6 – 13 on plan.

The huts of the Mallam are shown as rooms 14 and 15. Rooms 16 and 17 are of his married sons and his widowed mother in rooms 18 and 19. The dry and wet season cooking place are located in a central space. This compound also contains a well, latrines and bathroom alongside the main compound wall.

Fig. 2.0



SCALE :-

1 2 3 4 5 6m

FLOOR PLAN OF 'MALLAM BALARABE' COMPOUND.

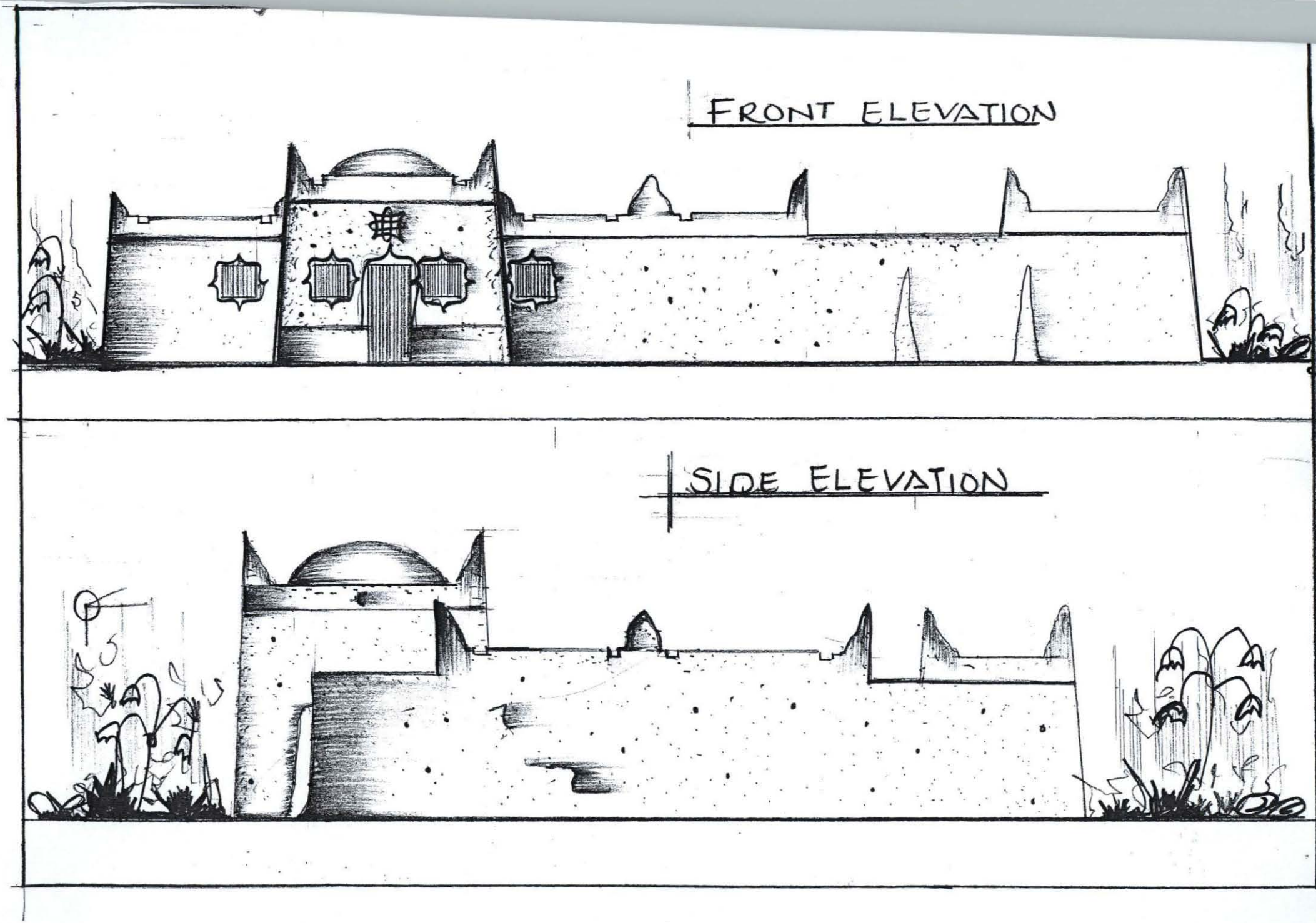


Fig. 2.1

2.3.6 An Overview of Islamic Architecture

Islamic architecture started in Medina in the year A.D.622, when the Prophet Muhammad (p.b.u.h) migrated from Mecca to Medina. The Prophet teached from his house for 10 years. This house was the simple model for the Mosque that shortly thereafter was to become Islamic Architecture's most important undertaking.

2.3.7 Origins And Characteristics

By the end of the 7th century, Islam had spread to the western Mediterranean into Central Asia. Thereafter, Islamic rulers and their people created various distinctive types of buildings with many important common characteristics. These styles are now generally known as Islamic.

Many of the characteristics of Islamic styles have regional influences as Islam flourished mainly in Middle East, Southern Asia and North Africa. However, whenever Islam spread, it established a cultural tradition coupled with the annual pilgrimage to Mecca (Hajj), this did much in unifying the thought and architecture of Islam.

A set of attributes of the Islamic faith which had a great influence on its architecture include the dominance of Islam and the total submission to its way of life by Muslims; the acceptance of the transitory nature of earth life and the practice of personal humility and abhorrence of image worship in Islam. As such no distinctive difference in techniques applied in religious buildings and others exists.

However, expressive architecture is applied to buildings of direct social or community purpose.

2.3.8 Architectural Characteristics

Most Islamic buildings are fundamentally related to a principal axis. This prime axis – was the basis of the formal disposition of gardens, buildings and parts of buildings.

The Islamic Calligraphic styles used as decorations and on mosque and decorative objects such as mosque lamps and vases system of thought was partly produced by the use of Arabic as a common language and as the only language of the Qur'an. This is evident in the development of an art known as 'Arabesque' which is used extensively in Islamic Architecture.

This rich linguistic and poetic heritage of the Arabic language and the deep respect accorded the Qur'an. This is evident in the gracefulness of Arabic scrip which led to the development of Arabesque.

Islamic art had an early Christian and Byzantine influence and of Sasanian art - Pre-Islamic Persia. Of a formative effect is Chinese influence on Islamic painting, pottery and textiles.

Early Arabs brought no styles of their own when they conquered Byzantine, Iranian, Visiogothic and later Indian lands which had long and ancient artistic traditions. Islam had to use and modify the forms of conquered territories to create a meaningful art to identify the new culture. Thus, Islamic architecture has Greco-Roman, Iranian and Indian or high Byzantine forms as a synthesis.

Among the things that made these forms Islamic, were modified details in the rearrangement of columns to make a hypostyle and addition of minaret to the

mosque inspired the Ottoman mosque. Islamic art was exemplified by the combination of styles from different regions.

2.3.9 Space and Geometry

All geometry have been rendered to the study of conventional solids and shapes by abstract formalism of western perception. Islamic geometry took an architectural model of mathematics unrivaled by the west.

The function attached to spaces in Islamic architecture is of great significance. Spiritualism had a great impact on vision and aesthetics tampered with the geometry of spaces in Islamic space conception.

Space within the Islamic context is the medium through which the Qur'anic messages of heaven, earth and paradise are conceived.

An interior orientation gives credence to harmonizing concept of spiritualism due to meditation practices as the five daily prayers.

The privacy in isolating and seclusion of females gives the interiors an inward appearance, such is evident in use of screens (musharibiyas) the annexation of the inner compound by compartmental positioning in interiors.

A continuity in fluidity articulates the use abstract in decorations. A mental projection towards the Ka'aba mosque forms the basis for positioning of the qibla.

2.4.0 Qibla

The majority of Islamic buildings are fundamentally related to a principal axis-the Qibla. It is the direction which mosques face.

2.4.1 **The Mosque**

The mosque is a place of worship for Muslims. It also acts as a school and a place where meetings and businesses were conducted. The first example was the courtyard of the Prophet's house at Medina

The earliest of these mosques consists of open courts surrounded by arcades or timber colonnades with flat roof. The mosque became the dominant building in Islamic architecture because of its importance to the life of the community.

2.4.2 **Mihrab**

A mihrab is a niche in the plan of a mosque that indicates the qiblah where the leader of a congregation stands. The Mihrab creates an impression of a door to Mecca.

Mihrabs are usually decorated ornately. The first appearance was during the reign of the Ummayyad Khalif-al-Walid I (705 – 715).

When the Muslims conquered Syria in 636, they took over and converted numerous Basilican churches into Mosques.

The basilicas were long, triple arched buildings with pitched roofs and an altar at the Eastern end. However, the Mihrabs were created on the Southern walls and new entrances in the Northern walls were altered by Muslims.

The congregation assembles in line traversing the main axis and takes its cue from the imam.

2.4.3 **Courtyards and open spaces**

Courtyards are a basic aspect of Islamic architecture. They serve as the regulating system for spaces, rooms or buildings, which are subordinate to it. The landscapes create an openness to space that adds to aesthetics. In palaces for instance, had a central fountain or garden pools – a contemplation of earthly paradise.

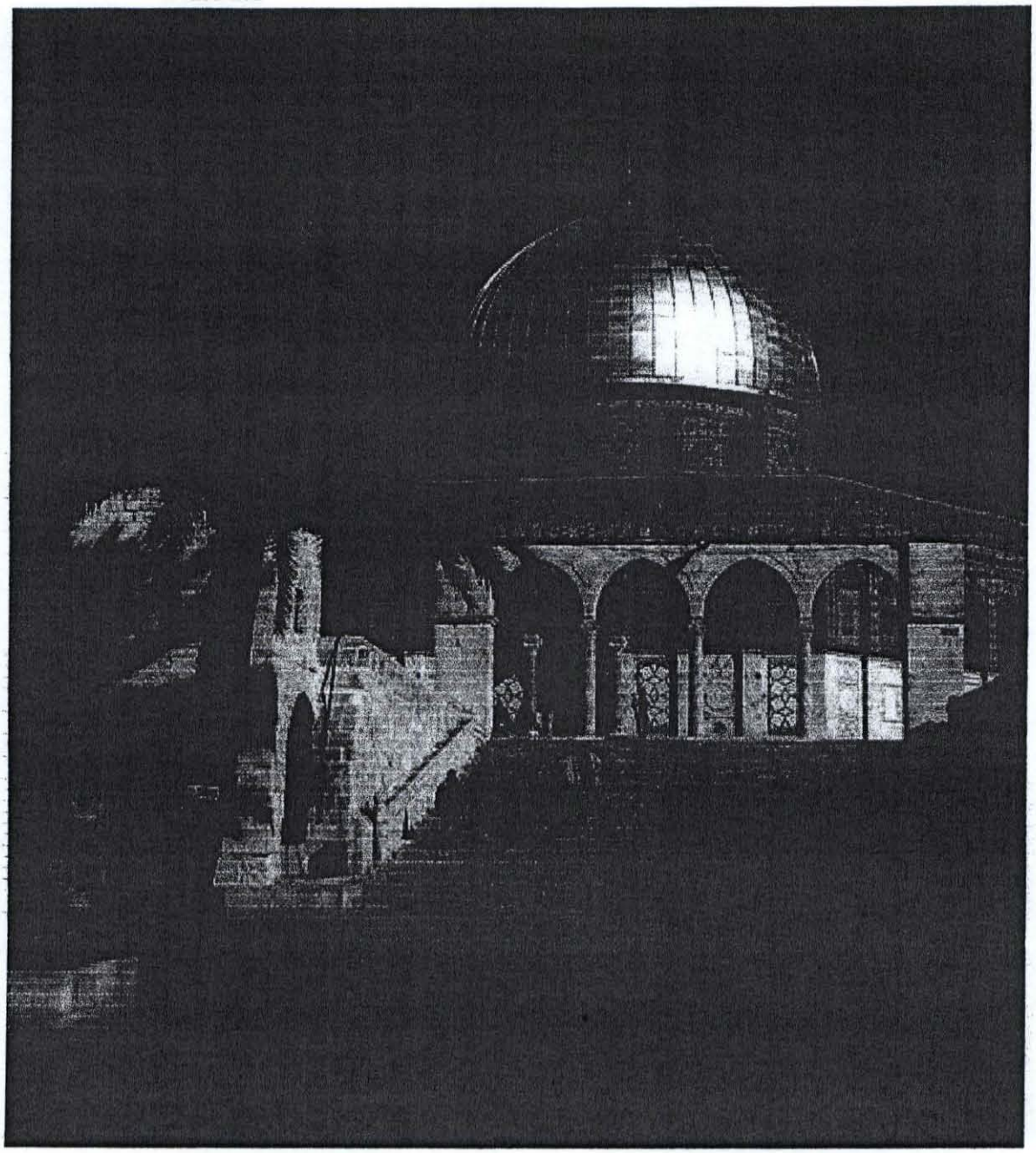
The common mosque usually has a courtyard which precedes the prayer chamber and contains a tank or fountain for ritual ablution.

In larger mosques, the courtyard is usually surrounded by arcades. In most cases, the courtyards had Arabic inscriptions.

2.4.4 **Domes**

The dome is a round on a base like circle. The dome signifies a power. The earliest surviving mosque is the building known as 'Dome of the Rock in Jerusalem. It is one of the greatest religious structures of the world and marks a spot where Prophet Muhamma (p.b.u.h) ascended to heaven as tradition have it.

Plate 2.2



Dome of the Rock (Masjid al Aqsa).

The mosque has a dome set on a high drum and a centralized form of Roman Architecture.

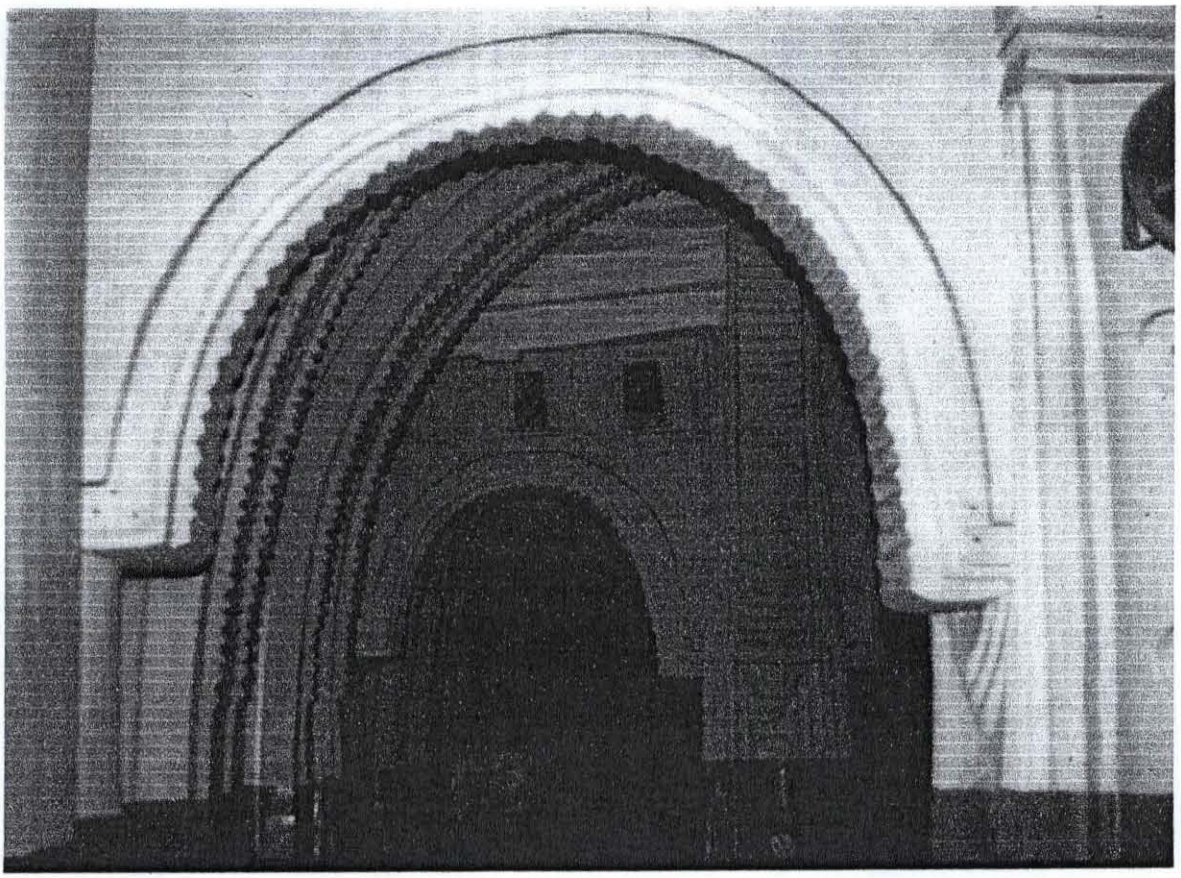
The dome is glided and the rest of the building is covered with colourful tile mosaic both within its interior and its exterior.

There are variations in the basic style of domes. Some mosques have domes over each end of the aisle while others have central domes. Some domes have ridges to

2.4.7 **The Arch**

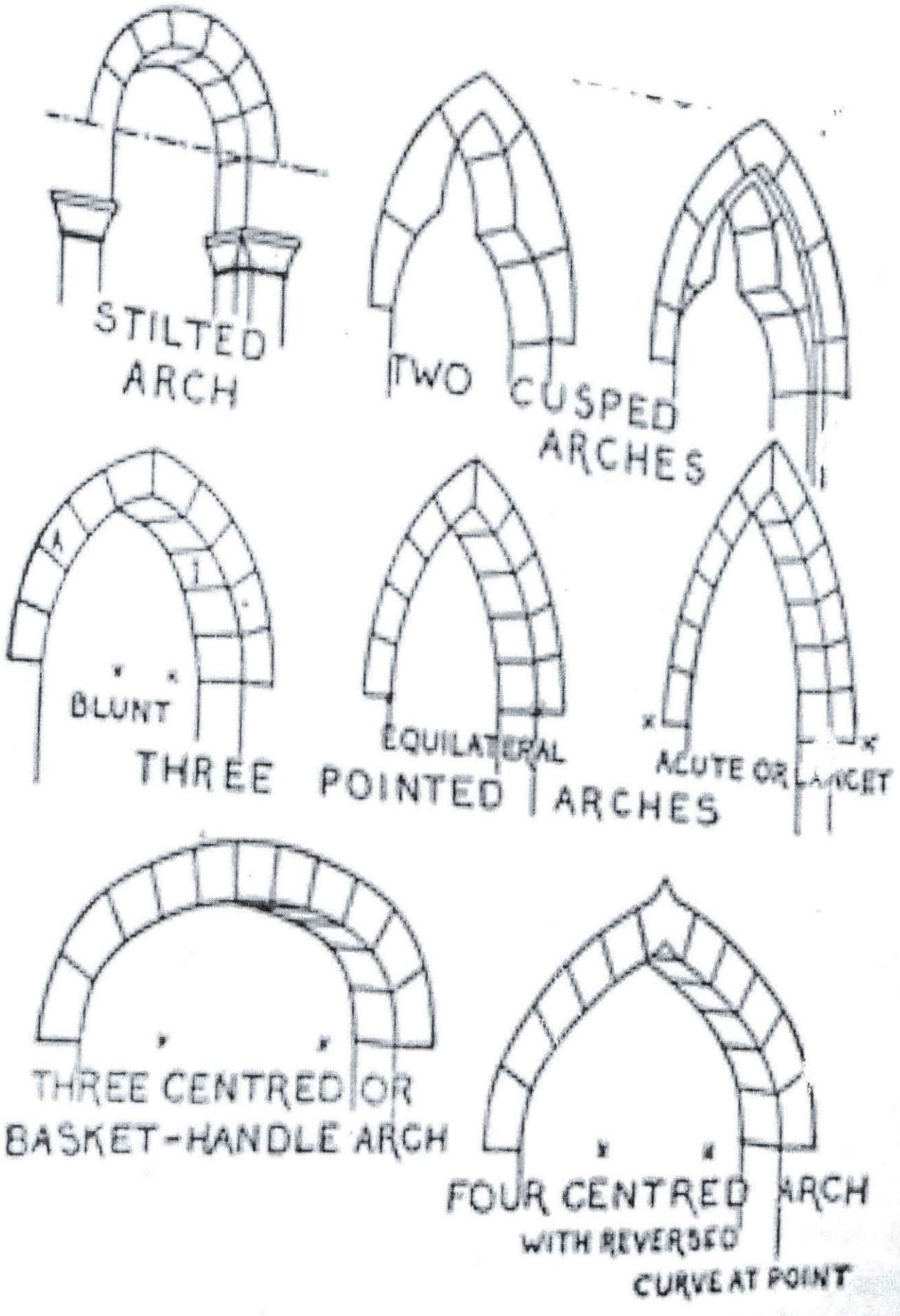
The arch is a dominant and distinctive form of Islamic architecture. These arches are different in nature. The most important of which is the pointed arch which was principally two and four centered. Among precise architectural features, the column arcades are frequently recurrent. The horse-shoe arch also prominently features in Islamic buildings.

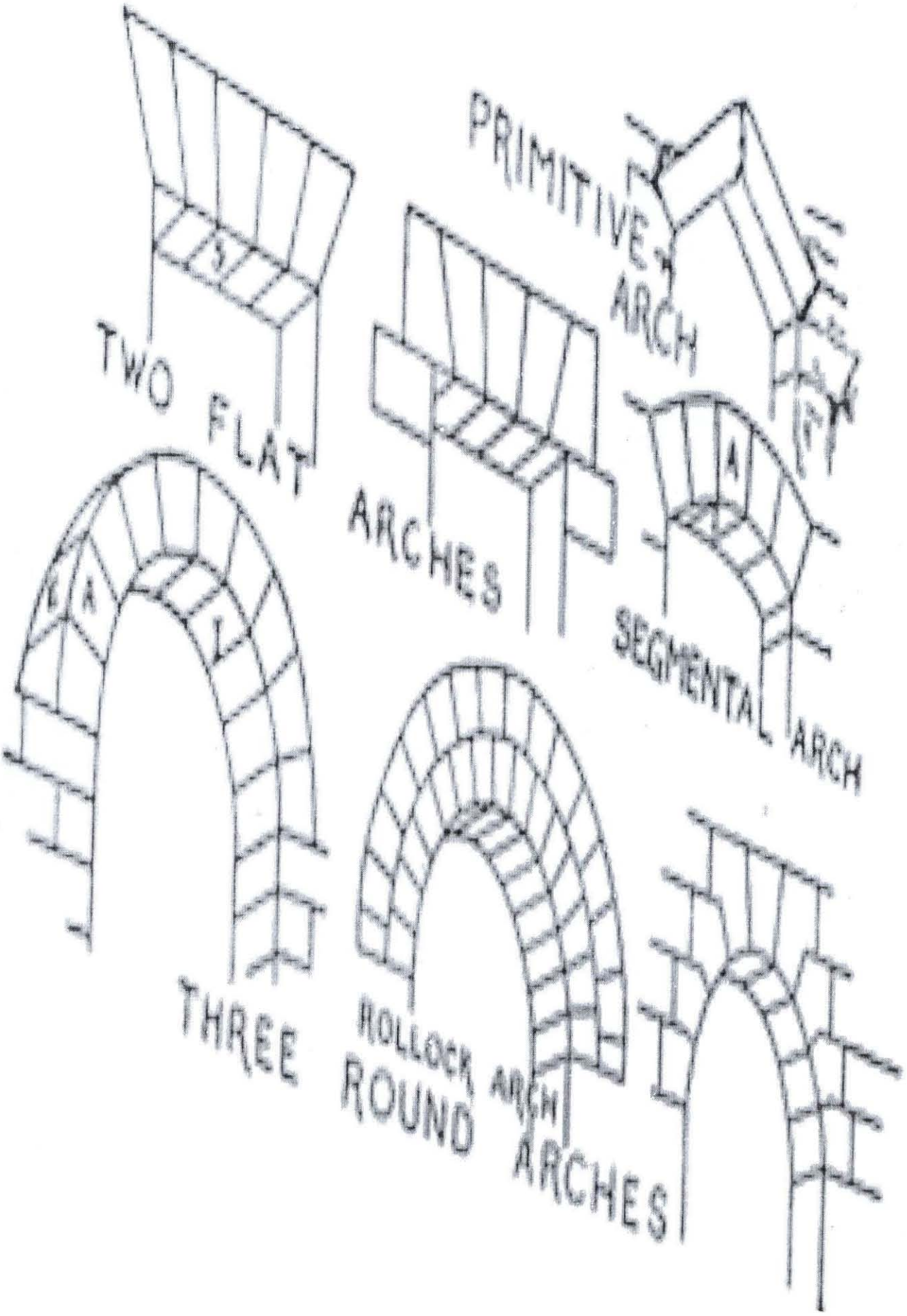
Plate 2.4



Interior view of the Zaria mosque.

Figure 3 Showing Different Types of Arches




TWO FLAT ARCHES
PRIMITIVE ARCH
SEGMENTAL ARCH
THREE ROUND ARCHES
ROLLOCK ARCH

2.4.8 Similarities Between Islamic and Hausa Architecture

As has been afore-said, many similarities abound between Hausa and Islamic architecture.

This is in no small measure due to the fact that the coming of Islam influenced what we now know as Hausa architecture.

Elements of Islamic architecture that feature prominently in Hausa architecture include the use of rectangular shapes for buildings; and the seclusion of women from public places. This factor influenced the strict privacy accorded to Hausa homes where only men that are relatives or intimate friends are allowed into households. This phenomenon is also commonly referred to as 'ba shiga'.

The use of archs also prevails in Islamic architecture and feature a great deal in Hausa architecture. Other forms of decorative elements used in Hausa architecture are an integration from Islamic influence.

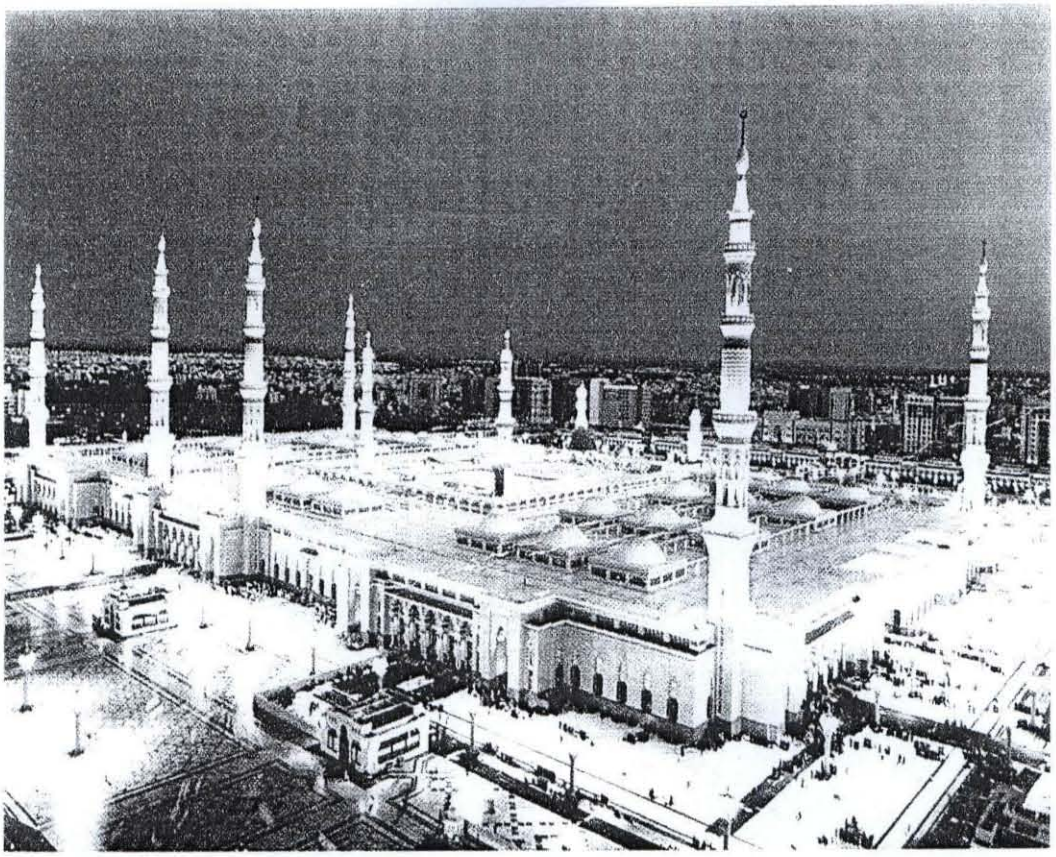
2.4.9 Case Study of Mosque of Medina

This is known as the first building of Islamic architecture.

The structure consists of a court about 100 cubic square meters enclosed by walls nearly 7 cubic square meters high. The lower part being built of stone and the upper part of sun baked clay bricks. No part was roofed. Connected to the structure were the dwellings of the prophet and his wives. In one angle of the court was set a bench under a tiled roof as a refuge for the indigent of those sharing exile with the master.

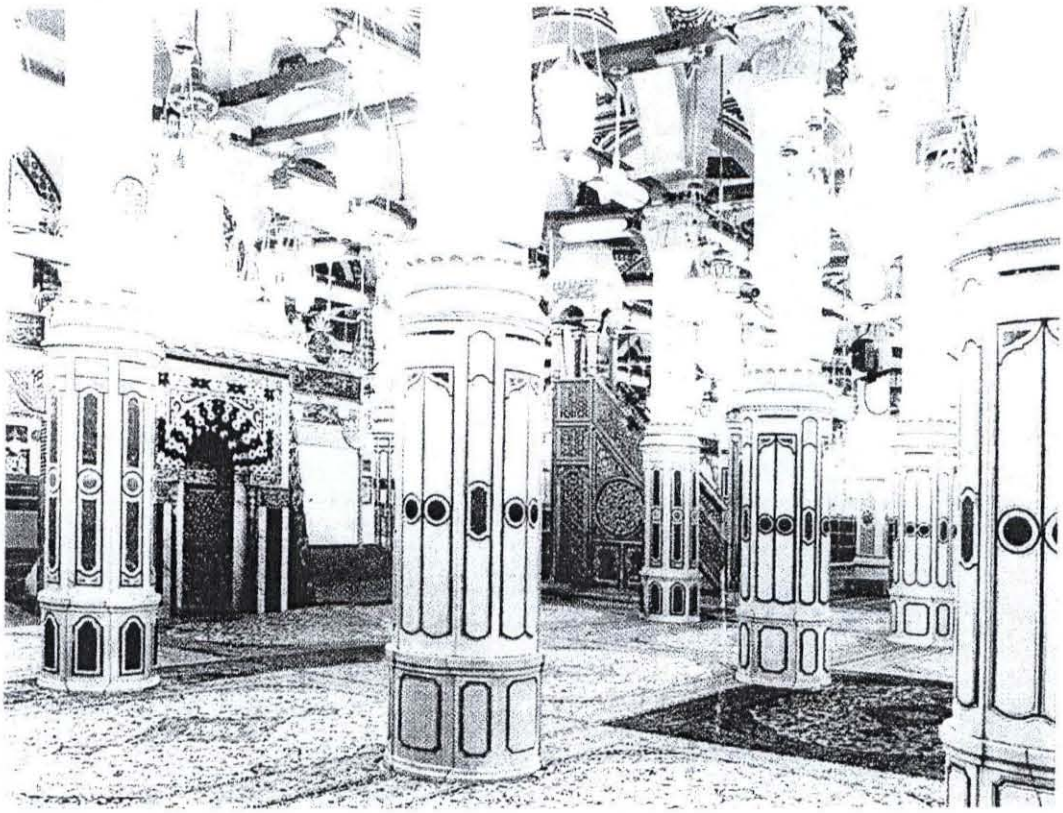
The 'qibla' was placed in the north wall. In 624 A.D, Prophet Muhammad (p.b.u.h) ordered it to be moved to the south side looking towards Mecca, the new qibla.

Plate 2.5.0 showing views of Mosque of Medina



Aerial View of Mosque of Medina

Plate 2.5.1



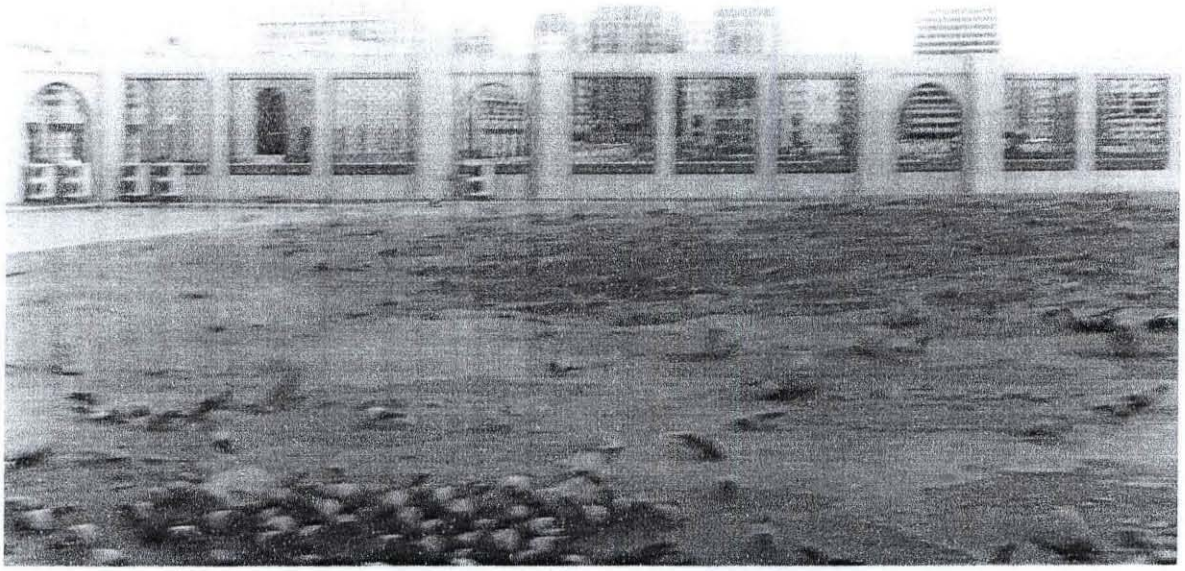
Interior View of Mosque of Medina

A shelter from the rays of sun was erected, later when the companions of the Prophet complained of exposure. It was formed of interwoven palm branches smeared outside with clay and supported by trunks of palm trees. The roof was so low that it could be touched standing upright.

The prophet's mosque was re-built in 638 A.D. by the Caliph Umar (634 – 644) as it had become too small. A considerable part was pulled down and a new and larger structure erected, consisting of a walled enclosure with a cobbled pavement and six entrances.

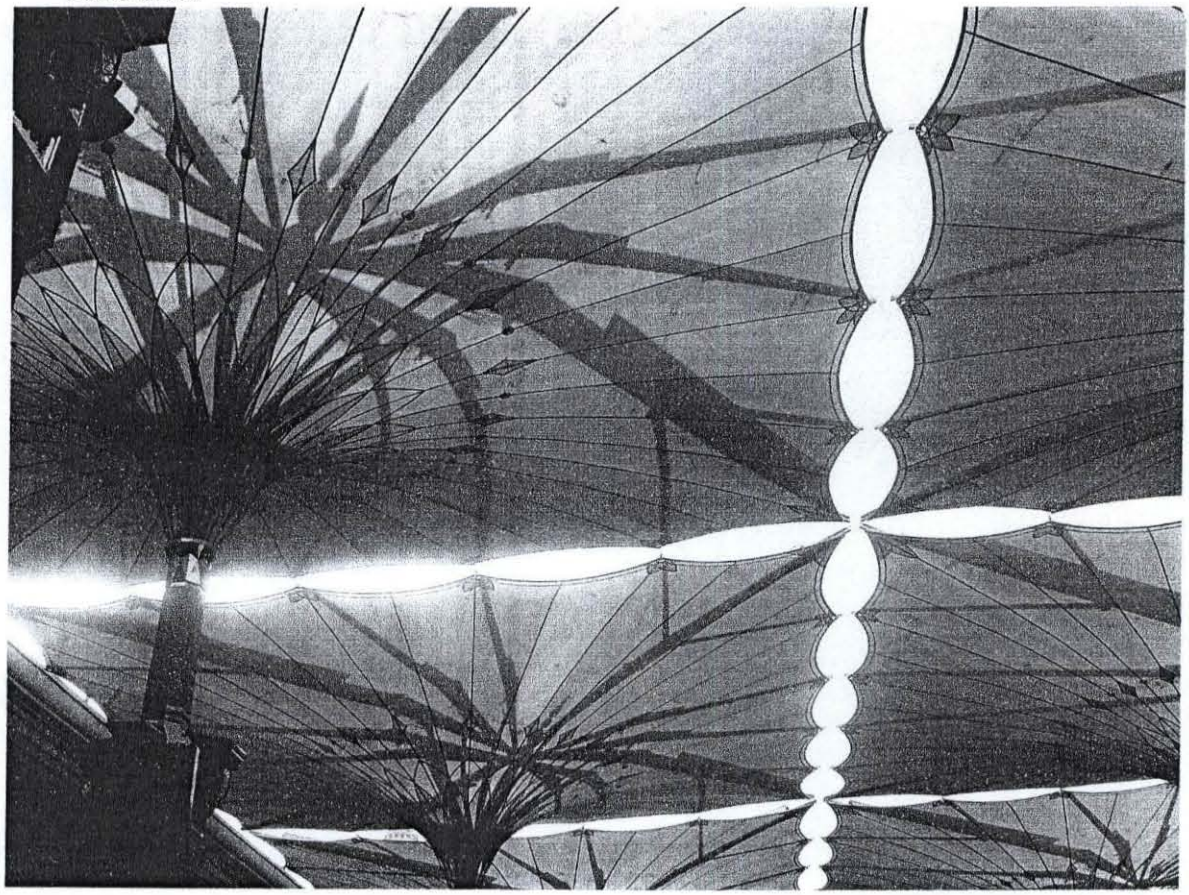
The walls were built of sun-baked bricks and roofs formed of inter woven palm branches coated with mud.

Plate 2.6.0 showing views of Mosque of Medina



Courtyard of Mosque of Medina

Plate 2.6.1

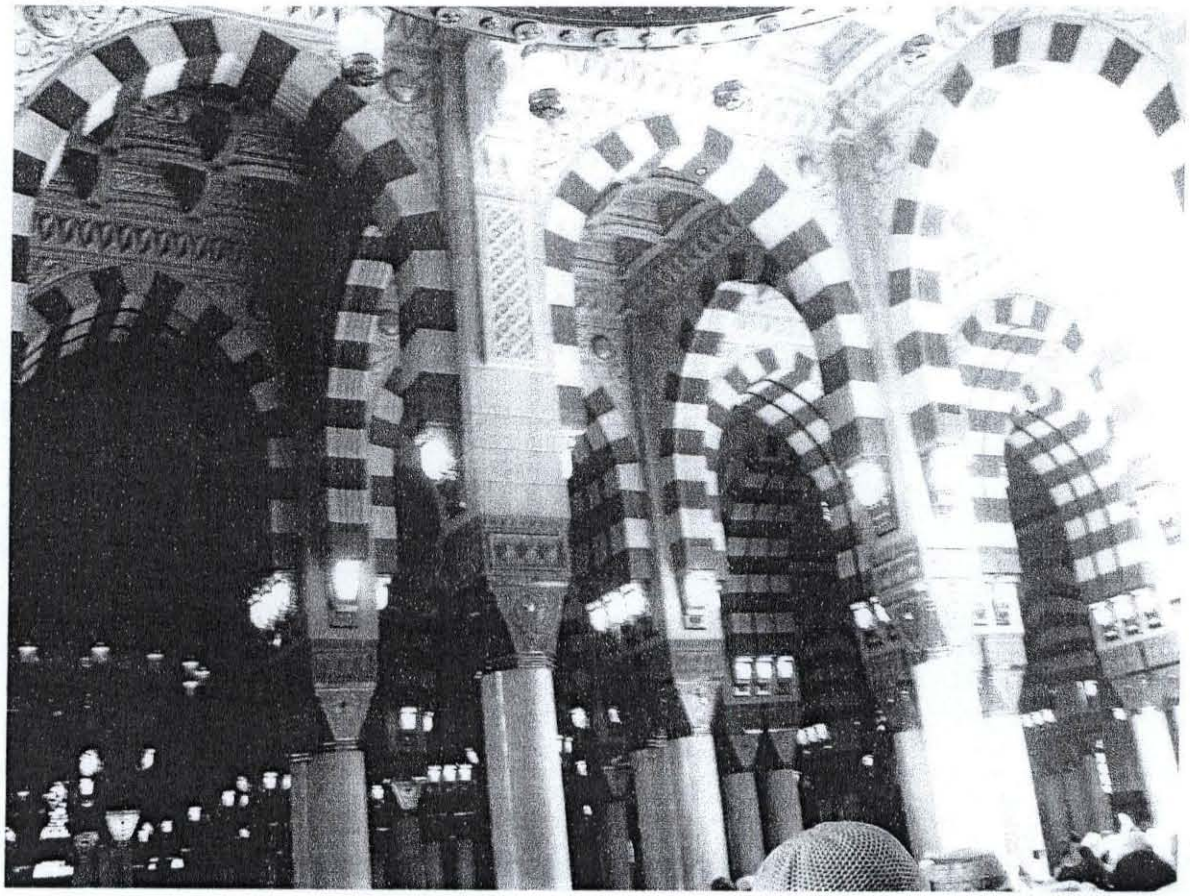


Retractable Umbrella like shading in Mosque of Medina courtyard

Plate 2.7.0 showing views of Mosque of Medina

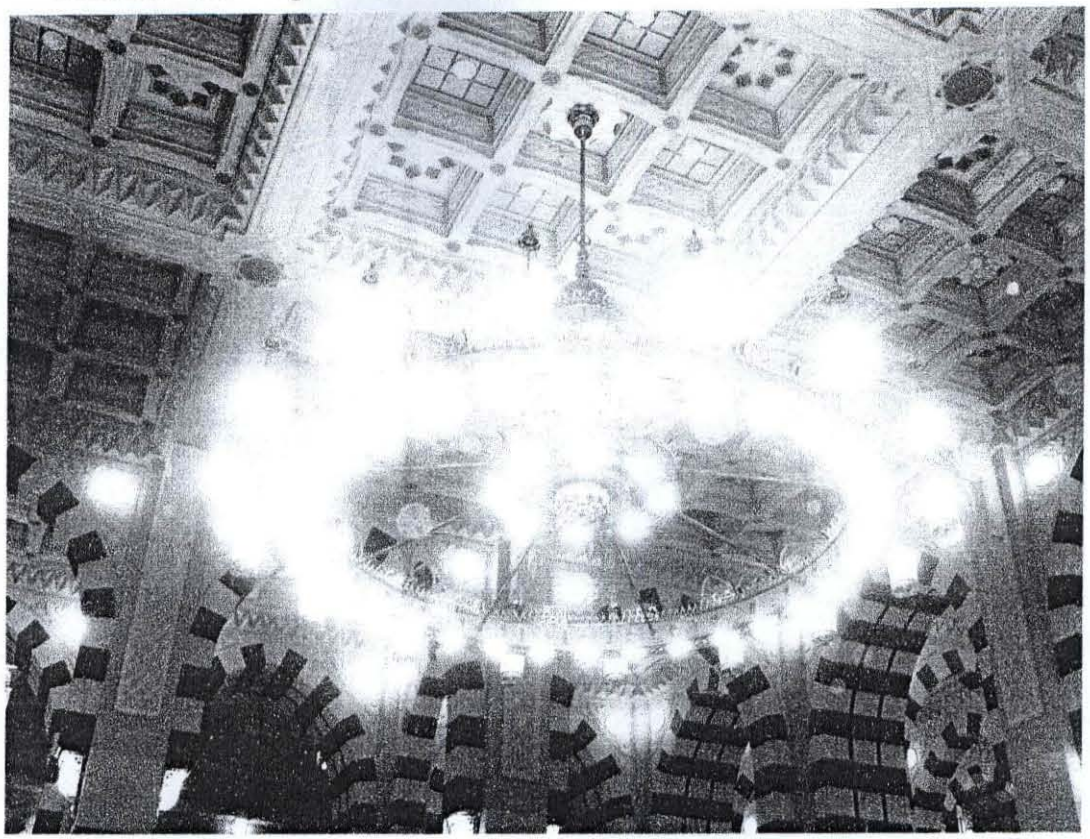
Interior View of Mosque of Medina

Plate 2.7.1



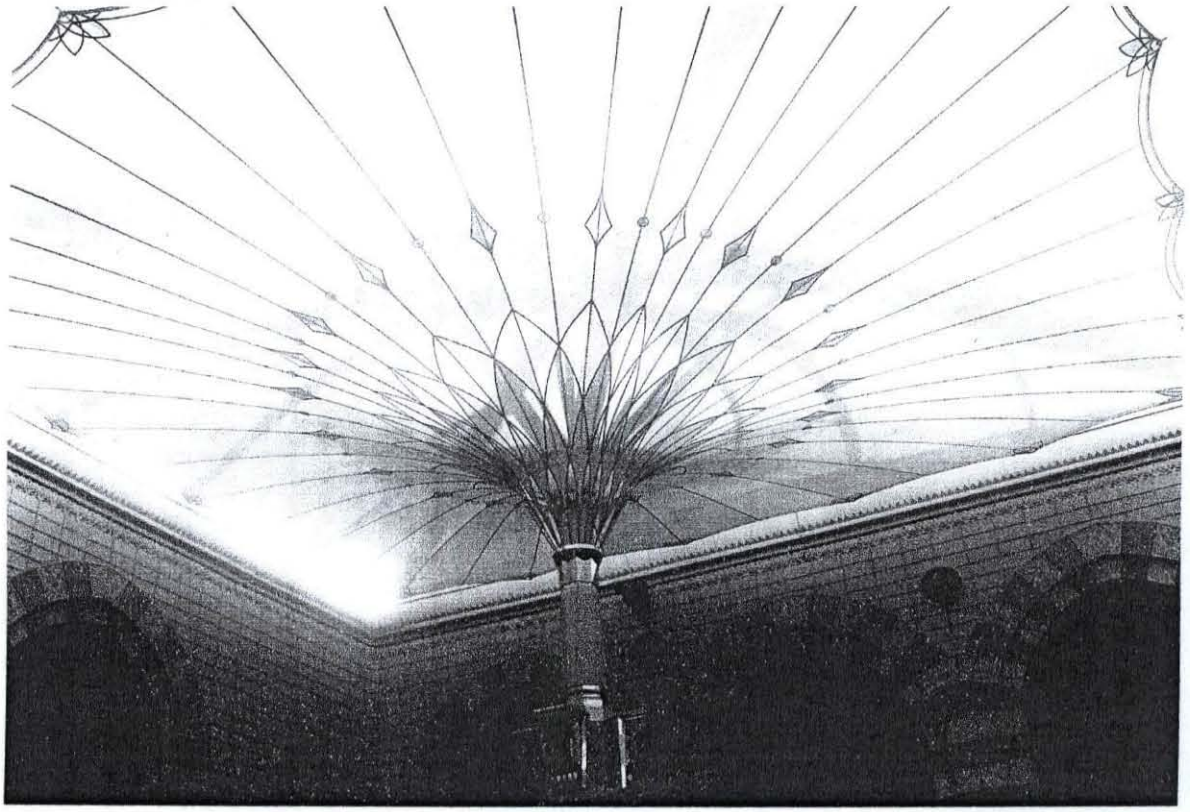
Interior View of Mosque of Medina

Plate 2.8.0 showing views of Mosque of Medina



Interior View of Mosque of Medina courtyard

Plate 2.8.1



Retractable Umbrella like shading in Mosque of Medina courtyard

2.5.0 **The Mosque of Mecca**

During the time of the Prophet *(p.b.u.h)* the mosque consisted of merely four dry stone walls about the height of a man, without a roof. Later during reconstruction of the Ka'aba, the sacred structure was protected by two coverings – one of wool, the other silk. The Calliph Umar had a round new structure formed bounded by four walls.

Ka'aba is square – about 28 cubics high, about 54 palms long and 48 palms wide. Ka'aba was 15m in height, 12m in length, and 10m bredth. The walls were 5 palm thick and constructed of stone courses accurately laid. The black stone which was believed to have been dropped on earth by God for Adam to sit on was built up in the outside angle on the east. The walls were lined half-way with partly coloured marbles in the interior. The upper half was covered plates of silver gilt. Marble was used for the pavement.

Supporting the ceiling were three pillars of wood standing on the axis of the building which had a covering of coloured silk.

The exterior was draped with veils of green silk mixed with cotton warp with a red silk band bearing inscriptions. Five windows of stained glass lighted the interior. Two entrances lead to a chapel looking towards east with a height of 11 palms from the ground. The other entrance was at the north angle leading to the terraced roof of the building.

The Ka'aba stood in the middle of the quadrangle supposed to be the mosque. Inscriptions were displayed referring to works carried out in the mosque by order of Caliph Mahdi in 783. There were 7 minarets, four of which stood at the four corners, built of stone with carvings surrounded by lattice work of wood carved

with great skill encircled by a balcony protected by a parapet. The minaret became cylindrical with a facing of fine baked bricks arranged in patterns.

Plate 2.9.0 showing Ka'aba Mosque of Makkah

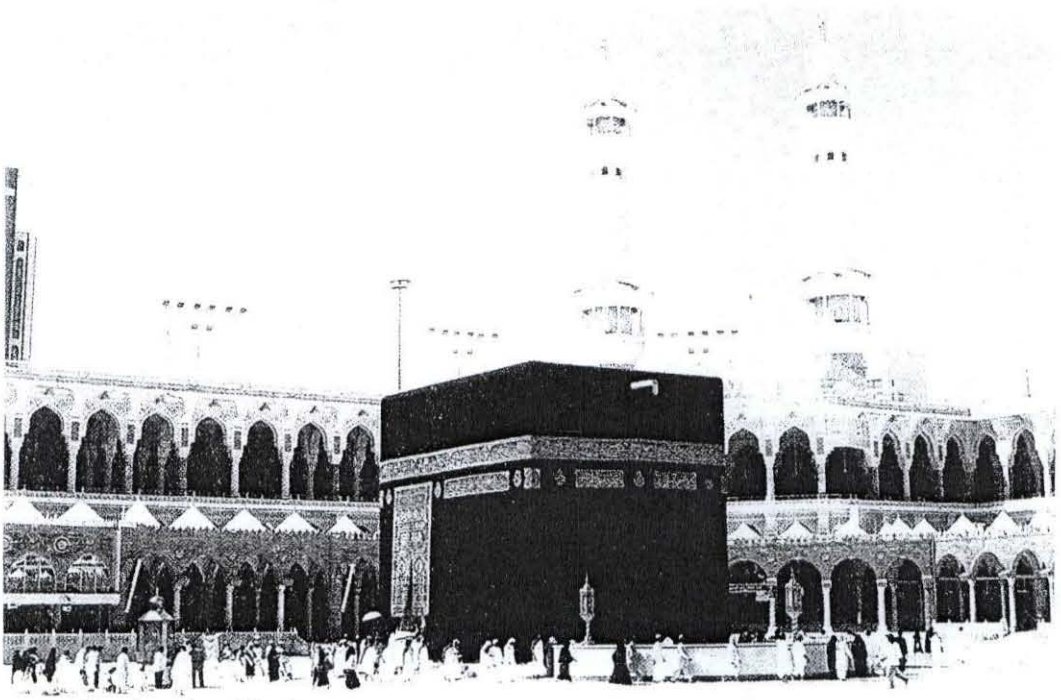
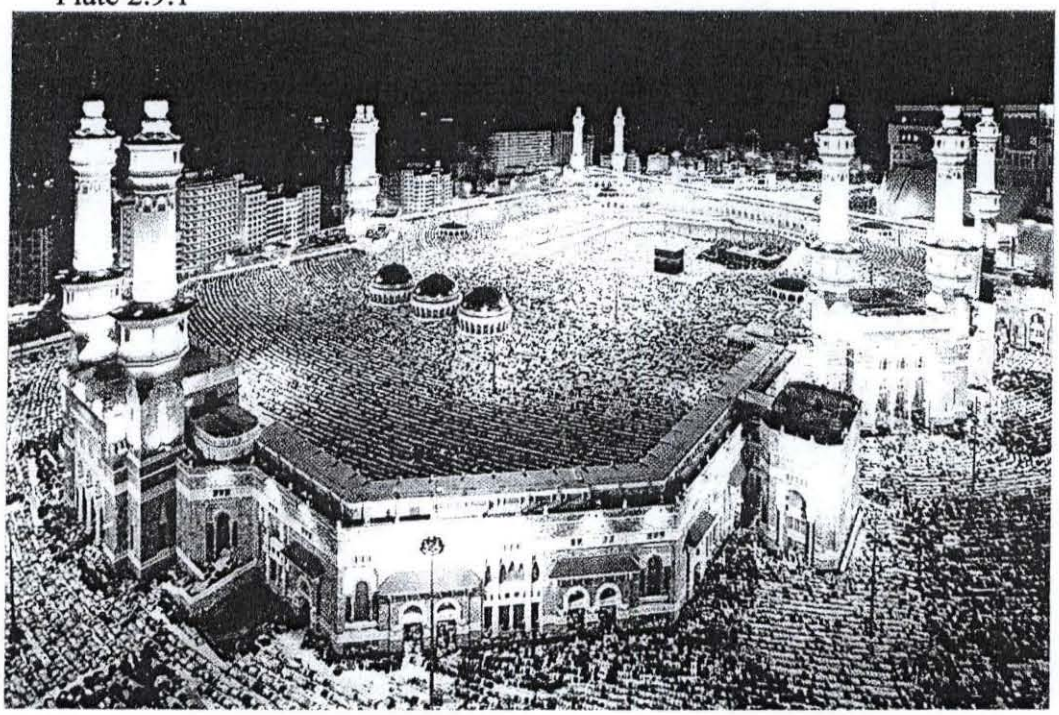


Fig showing Kaaba mosque.

Plate 2.9.1



Aerial view of ka'aba Mosque of Meccah

2.5.0 **Deductions**

There is need for government to establish at least one integrated Islamic school in each local government area of a state to serve as a model. The general populace needs to be sensitized and convinced, as this is the only way which the future of '*Almajirai'* can be bettered.

A study needs to be conducted to determine the location, strength and size of facilities required by these integrated schools.

A general and thorough training of proprietors and teachers of these schools need to be conducted periodically to maintain a high standard in these schools.

The introduction of vocational education to provide skills related to occupations such as carpentry, welding, farming, leather works, can be utilised for self-sufficiency of pupils after studies.

Harmony between Hausa and Islamic architecture involves the combination of such elements that would blend the two architectural styles and produce a visually exciting and pleasant view.

The structure so produced would provide a combination of Architectural styles which would bring about a balance and an the adherence to Hausa culture with an integration of Islamic elements providing a harmonious environment. The Hausa architecture has in many ways been influenced by Islam and consequently its architecture. An integration already exists of the different elements of both architectural styles co-existing on one structure with perfect harmony and in symmetry. A great deal of aesthetics is achieved by a combination of these architectural styles – vis-à-vis – Hausa and Islamic architecture.

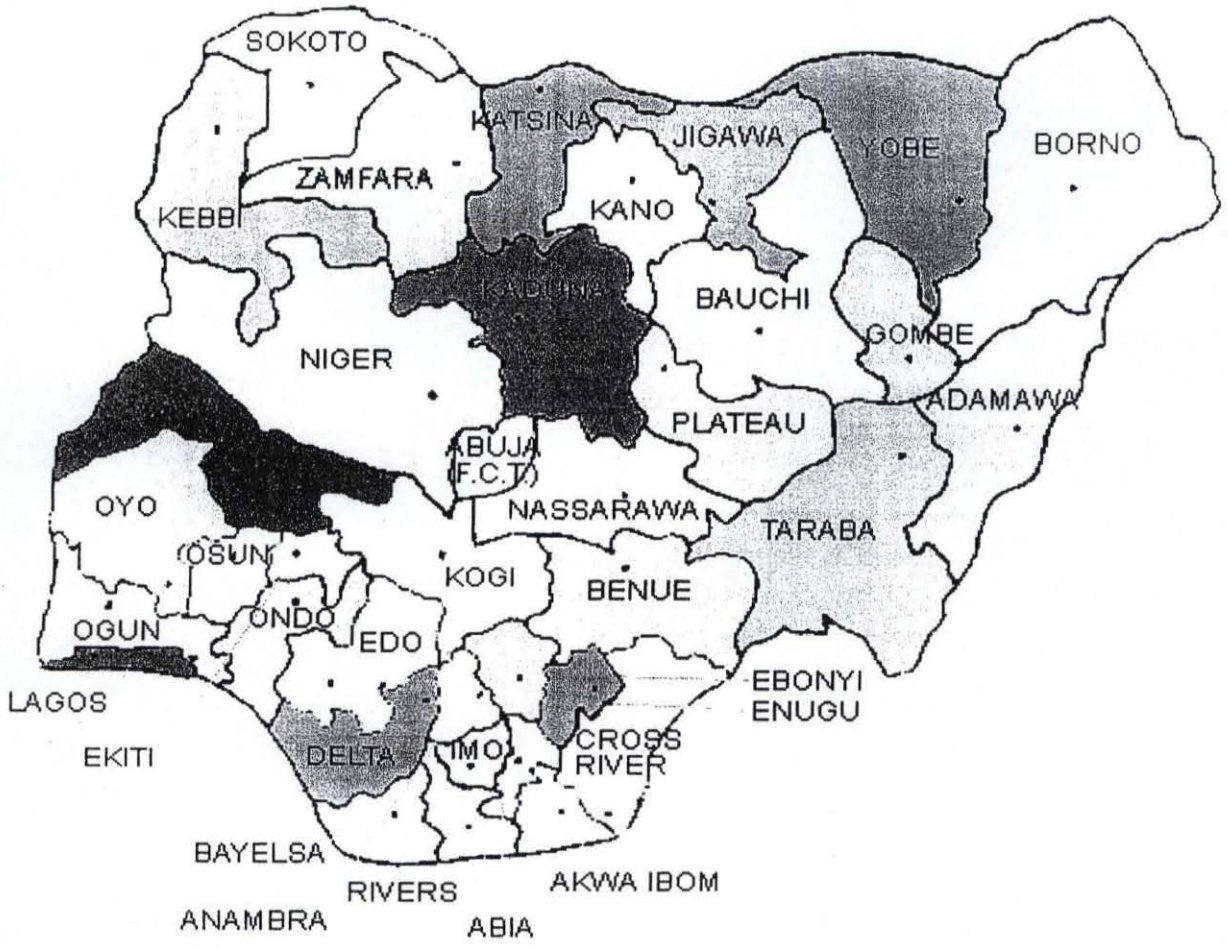
CHAPTER THREE

MATERIALS AND METHODS

3.1 The Study Area: Kano State.

Kano lies along longitudes 7^0 and 40^0E and 10^0 and 35^0E. Its location away from the sea determines its climatic conditions, which is primarily hot and dry most of the year. The site is located near the outskirts of Kano, in Tarauni, Farm Center to be precise. It lies adjacent to cinema, along NIDB road.

Plate 3.0 showing Map of Nigeria



Map of Nigeria showing the 36 state and the FCT

3.1.1 The proposed site

Kano falls mostly within the Sudan vegetation, the southern parts of the province however are within the Northern Guinea vegetation belts (Kano State Ministry of Works and Housing).

Kano lies along longitudes 7^0 and 40^0E and 10^0 and 35^0E. Its location away from the sea determines its climatic conditions, which is primarily hot and dry most of the year. The site is located near the outskirts of Kano, in Tarauni, Farm Center to be precise. It lies adjacent to cinema, along NIDB road.

Plate 3.1.0 showing views of Proposed site

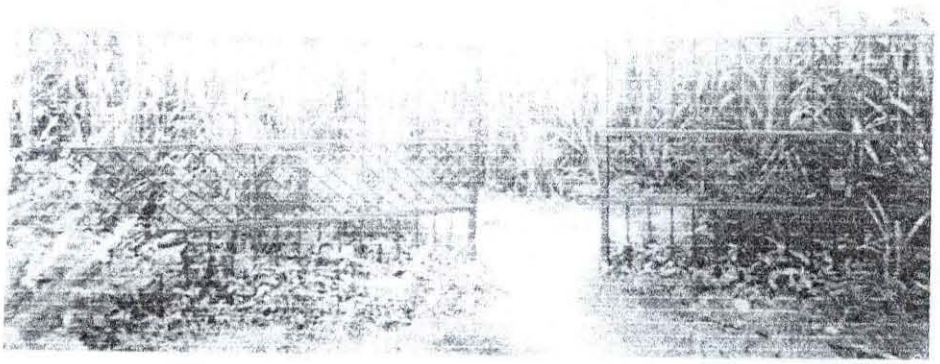
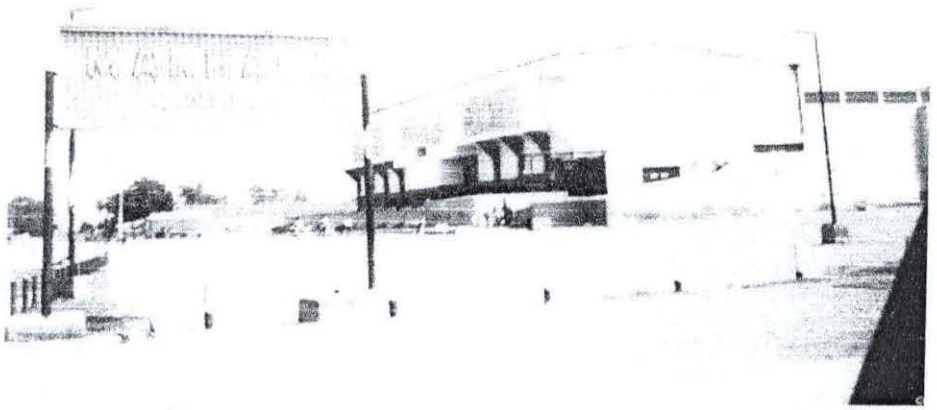


Plate 3.1.1 **Picture showing entrance to Proposed site**



Picture showing Marhaba Cinema bordering the Northern Part of the Site

3.2 Research Method

Descriptive survey method was used in carrying out research for the purpose of this project.

3.2.1 Method of Data Collection

Method of data collection includes:

- The carrying out of case studies to know the scope and limitation of the study area as well as a general appraisal of the design.
- Personal and oral interviews with Specialists and stakeholders in the *'Tsangaya'* school system to gauge the extent of the problems of the *"Almajirai"* system and assess their opinions on how best to tackle the problem. Interviews were also conducted with the head of the *"Tsangaya"* project, Federal Ministry of Environment and Natural Resources, Kano.
- Data was sourced also by direct observation and literature review, which included published and unpublished works. The Internet was also sourced for data.

3.3 Introduction to Case Studies

The case studies presented in this thesis are related to Islamic and Hausa architecture, as a whole and are arranged according to the various categories they fall under. Thus, while studying these institutions and their facilities, the researcher also attempts to classify them under which architecture they fall under.

3.3.1 Case Study One

Attahiru Bafarawa Qur'anic Research Institute, Sokoto

The institute was established on 9th November 2001, with the sole aim of providing good and conducive atmosphere for learning with a high level of religious consciousness and good reciters and memorizers of the glorious Qur'an.

Site Situation

The institute is located along Birnin-Kebbi Road, renamed Sheik Abdur Rahman Sudais road after the Imam of the Holy Ka'aba.

Materials and Construction System

i) **Major Materials:** Concrete, sandcrete blocks, long span aluminium sheeting, glass planes.

ii) **Structural System:** Concrete block floors and walls, timber frame roof.

iii) **Mechanical System:** Power supply from National Grid. However, there is a stand-by diesel powered generator.

Merits

i) Proper segregation of males and females

ii) Adequate space for future development

iii) Incorporation of Islamic elements such as domes and arches

Demerits

i) Poor construction of buildings

ii) Absence of a reflection of Hausa architecture

iii) No proper allocation of parking space for each facility.

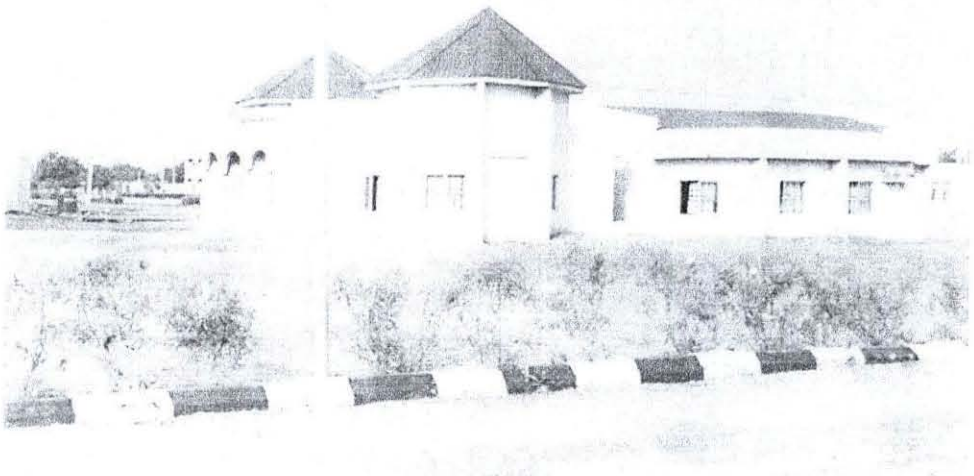
Synopsis

The centre is in sympathy with Islamic architecture as there is adequate use of Islamic elements on the structures.

Facilities

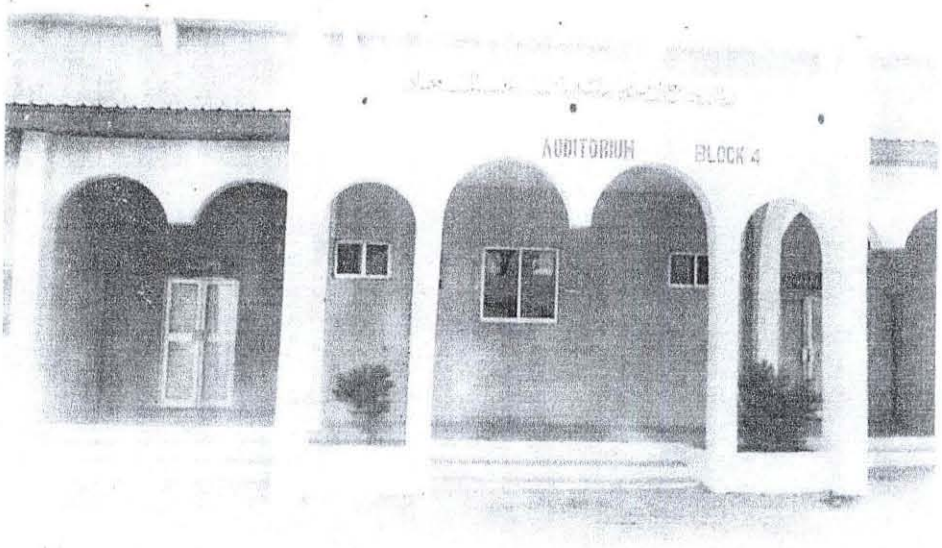
Administrative block, library, auditorium, labouratories, computer centre, classrooms, hostels, cafeteria, staff quarters. Below is the site plan for this institution.

Plate 3.2.0



Library Building Attahiru Bafarawa Qur'anic Research Institute, Sokoto

Plate 3.2.1



Auditorium Building Attahiru Bafarawa Qur'anic Research Institute, Sokoto

3.3.2 Case Study Two

Ibrahim Hassan Gwarzo Islamic School, Kano

It was founded in 1989 and named after the late Grand Khadi of Kano state, Dr. Hassan Ibrahim Gwarzo who died in 1990. The school aims at producing students per excellence: well cultured Islamically well versed and learned in the teachings of Islam and the Qur'an.

Site Situation

The school is set at a suburb in Kano in Sallare/babbangiji Kano municipal, Kano state.

Materials and Construction Systems

i) **Major Materials:** Sandcrete blocks

ii) **Structural System:** Frame construction in dining hall

iii) **Mechanical System:** Power supply from National Grid with a stand-by generator.

Merits:

i) Proper segregation of males and females

ii) Good ventilation in library

iii) Provision of a vocation centres as bakery and poultry farm

iv) The kitchen is spick and span very clean.

Demerits

i) No proper provision for planning of site.

ii) No laid down site plan. Buildings were constructed as their need necessitated, thus site plan is haphazard.

iii) Hostels are too congested, accommodation is poor.

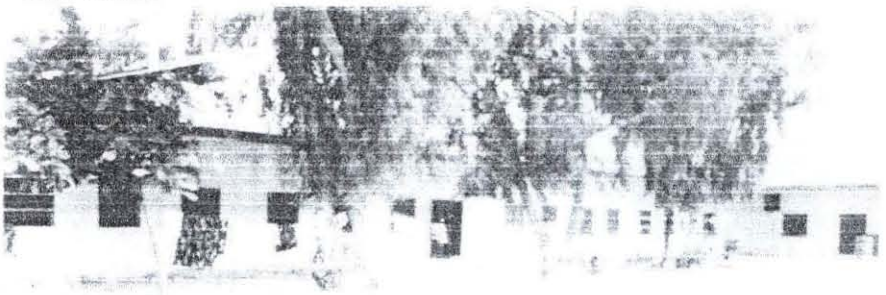
Synopsis

The schools adheres to the Hausa architectural ways as buildings are erected as their need arose, as such planning is poor.

Facilities

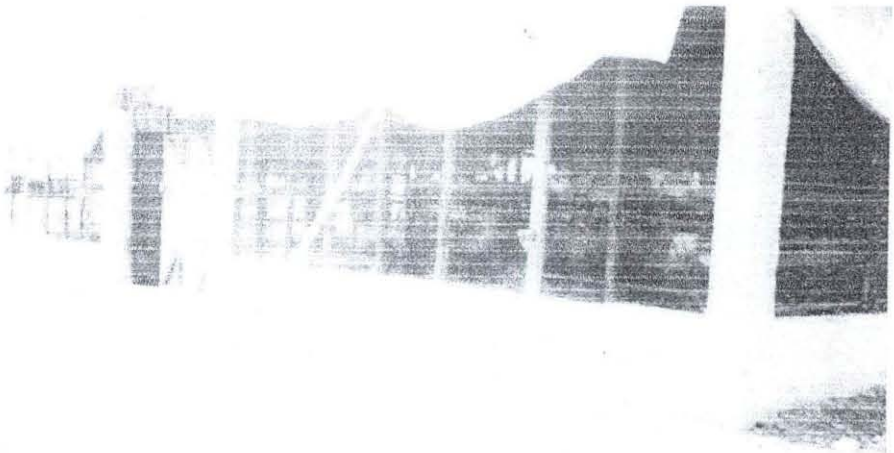
Administrative block, cowpen, bakery, classrooms, hostels, staff rooms, kitchen, dining hall, laboratories, library, poultry house, computer rooms, sports field, mosque.

Plate 3.3.0



Girls Hostel Hassan Gwarzo Islamic School, Kano

Plate 3.3.1



Chicken Farm at Hassan Gwarzo Islamic School, Kano

3.3.3 Case Study Three

Fou'ad Lababidi Islamic School, Abuja

The school was founded by a Lebanese whom the school is named after. It was created to provide Islamic education alongside the western education. However, it does not provide boarding facilities, as such only pupils from within Abuja F.C.T and environs may attend daily.

Site Situation

It is located within Abuja municipal in Wuse, Zone 3.

It lies adjacent to a popular food joint called 'Tantalizers'.

Materials and Construction System

Major Materials: Concrete, sandcrete blocks, long span aluminum roofing sheets, glass, interlocking tiles.

Structural System: Reinforced concrete beams and columns.

Mechanical Systems: Power supply from National Grid and a stand-by generator set.

Merits

i) It is well located and easily accessible by within Abuja.

ii) It has a parking lot duly provided which is adequate.

iii) A very large mosque to contain all students and more.

iv) Adequate number of classrooms are provided for pupils.

Demerits

i) It has no boarding facilities, as such, cannot cater for pupils outside of Abuja.

ii) It contains very few facilities as it is a 'day' oriented school.

iii) Contains no sparking facilities as extracurricular activities for pupils.

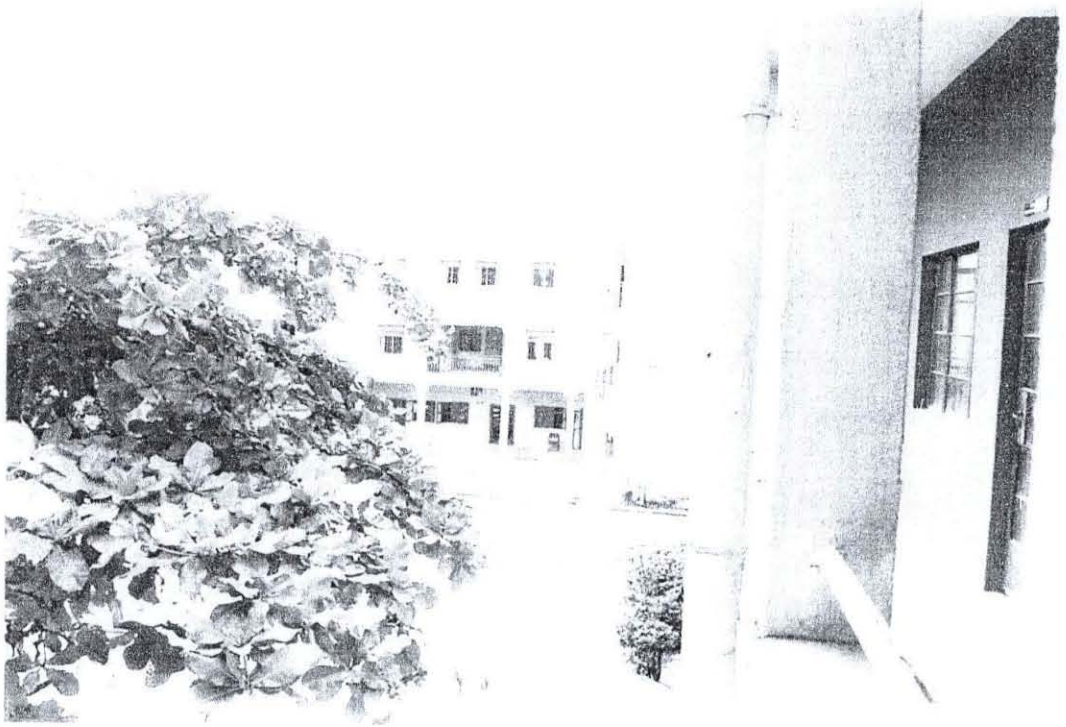
Synopsis

It adheres to Islamic architectural models. Furthermore, it acts as an ideal model school but one which lacks boarding facilities.

Plate 3.4.0

Mosque at Labidi Islamic School, Abuja

Plate 3.4.1



Classroom blocks at Labidi Islamic School, Abuja

3.3.4. Case Study Four

New Horizons College, Minna, Niger State

Off old airport/post office road, Ilmi Avenue, Minna. Population: 417

The Institute is established with the major goals of high academic excellence, broad general and Islamic knowledge and high Islamic Mora ethos.

Site Situation

The institute is located along Ilmi Avenue Off Old Airport/Post Office Road, Minna, Niger State.

Materials and Construction System:-

i) **Major Materials:** Concrete. Sandcrete blocks, long span allumi[illegible]um sheeting, glass panes.

ii) **Structure System:** Concrete block floors and walls, timber frame roof.

iii) **Mechanical System:** Power supply from National Grid. However, there is stand-by-diesel powered generator.

Merits:

i) Proper segregation of male and female

ii) Adequate Provision of Infrastructure for conducive learning

iii) Good and functional site planning with a clear distinction of zones based on noise levels.

Demerits:

i) No provision for staff quarters

Facilities

Administrative block, classroom block. Library. Separate Dining Room for boys and girls. Laboratories, computer lab. Hostels. Girls' and boys' separate Mosques.

Home Economics lab, Tafsir hall, Basketball Court, Football filed, 2 Volley Ball Courts 2 Badminton Courts, Lawn tennis Court, 4 Table Tennis tablets college Shop, Generator House.

Plate 3.4.0

Girls Hostel view showing pond filled with gold fish at New Horizon College Minna

Plate 3.4.1

Administrative and Classroom Block at New Horizon College Minna

3.3.5 Case Study Five

Islamic Saudi Academy, Alexandria, U.S.A

This Islamic institute provides basic Islamic education alongside western model of education.

Site Situation

It is located at 'Alexandria, U.S.A. and was established in 1984 as a bilingual English – Arabic School with two campuses divided into boys and girls school.

Merits

i) The School offers extra curricular activities and provides facilities for them such as a sports field.

ii) The School contains a large library and adequate science laboratories

Demerits

i) There are no boarding facilities is available in the School premises

ii) It caters only to those who could afford

3.4 Data Collection

3.4.1 Topography

The site is relatively flat, with a gentle slope. Small pieces of rock are found along the southern part of the site. Weathered rocks and sandy drift constitute the two main soil forming materials but differentiation in soil types depend largely on the arrangement.

The soil is brownish red in colour and the texture comprises sandy soil, clay and loan overlying iron stone. These soils are cultivated. The ferruginous tropical soils formed on crystalline acid rocks occupy about two-fifth of the state to the south, southwest and southeast.

The presence of these soils greatly reflect the influence of parent materials. Intensive use of the soils and addition of manure and chemical fertilizers have altered their colour intensity.

3.4.2 Vegetation

The natural vegetation consists of the Sudan and the Guinea Savannah – both having been replaced by secondary vegetation. Four-fifth of the state is now composed of formed parkland, dotted with patches of shrub savannah. The Falgore Game Reserve typifies the savannah woodland, which is the second largest zone. There are few forest plantations of exotic trees.

As earlier stated, the region lies within the Sudan belt, but its vegetation has been completely modified as a result of several centuries of human occupation.

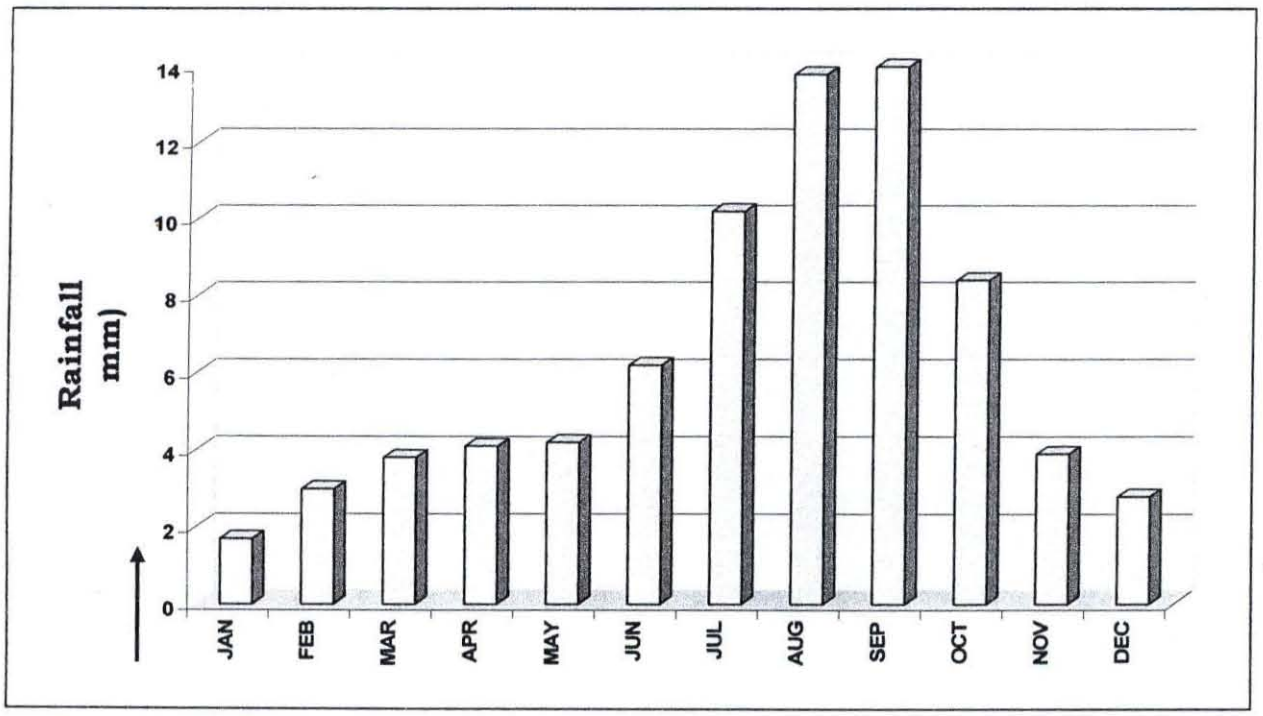
3.4.3 **Climatic Conditions**

3.4.4 **Rainfall**

Mean annual rainfall ranges from over 1000mm in the extreme south to a little less than 800mm in the extreme north. The rains last for three to five months. The first rains come early in May and cropping follows almost at once. This is the most critical period in the farming calendar because if it does not rain again within the next week, the seeds are wasted and the crops must be resown. There have been occasions when the second showers have been delayed for more than three weeks, and in bad years, sowing may be repeated three or four times.

One of the effects of irregular nature of early rains is in some years there is much demand for labour during rainy season since groundnuts, guinea corn, beans and sweet potatoes all have to be planted within a period of four to six weeks.

Fig. 3.4



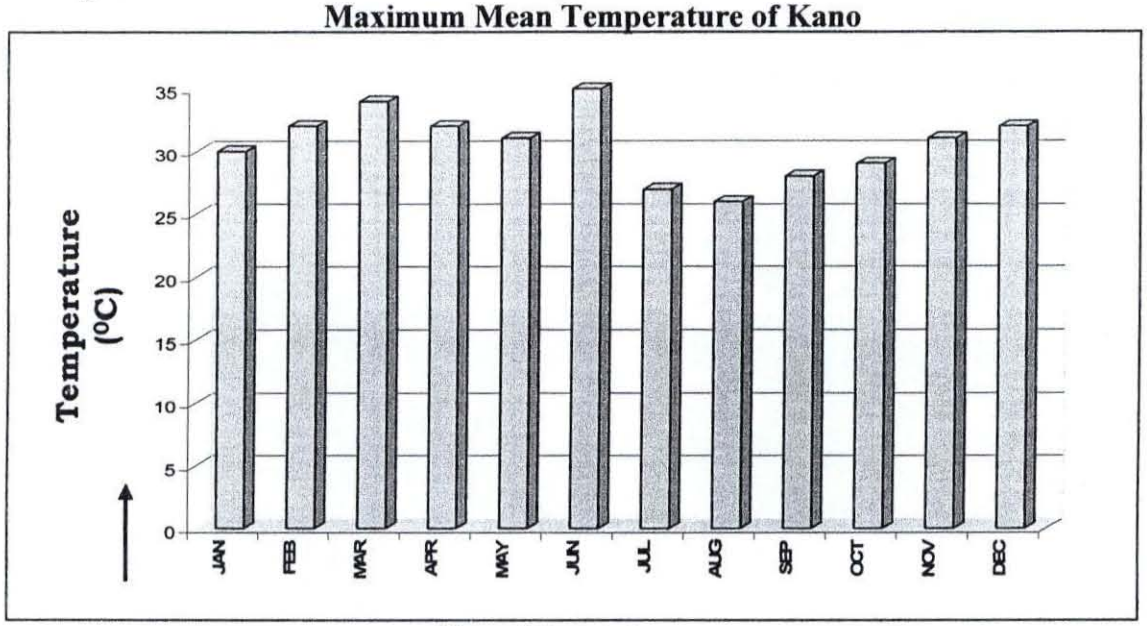
Source: Ministry of Works and Housing, Kano State
(1998 - 2008)

3.4.5 **Temperature**

Maximum temperatures of about 43^0c are common and minimum of about 26^0c. Mean temperature ranges from 26^0c to 33^0c. There are four seasons which include – A dry and cool season, "kaka" (mid – November – February) marked by cool and dry weather plus occasional dusty haze; the dry and hot season, "bazaar" (March – Mid-May) when temperatures climb to 40^0; a transition period between the harmattan and the wet season.

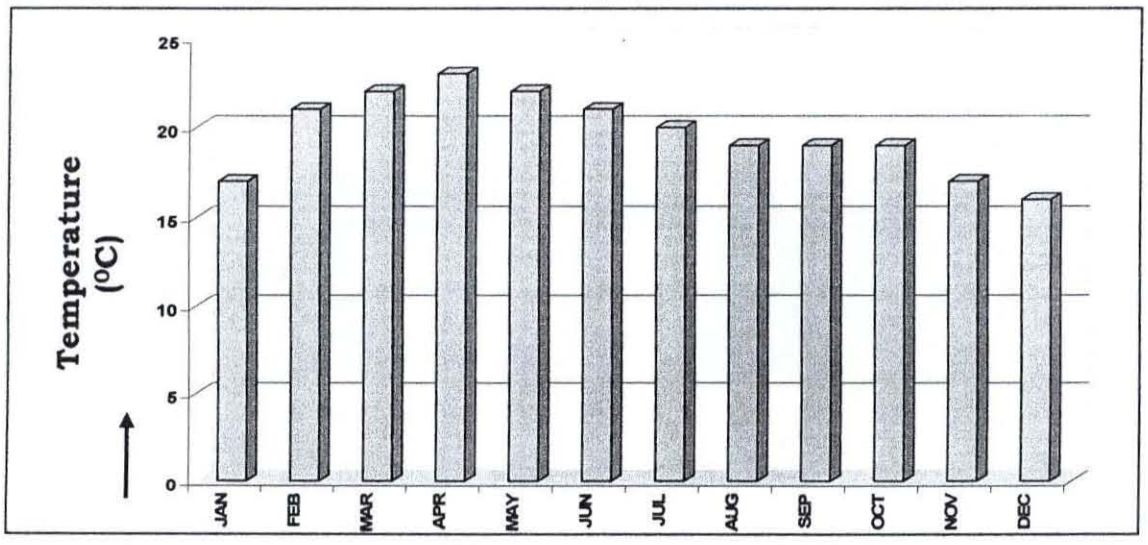
Fig. 3.5

Maximum Mean Temperature of Kano



Source: Ministry of Works and Housing, Kano State
(1998 – 2008)

Fig.3.6 **Minimum Mean Temperature of Kano**

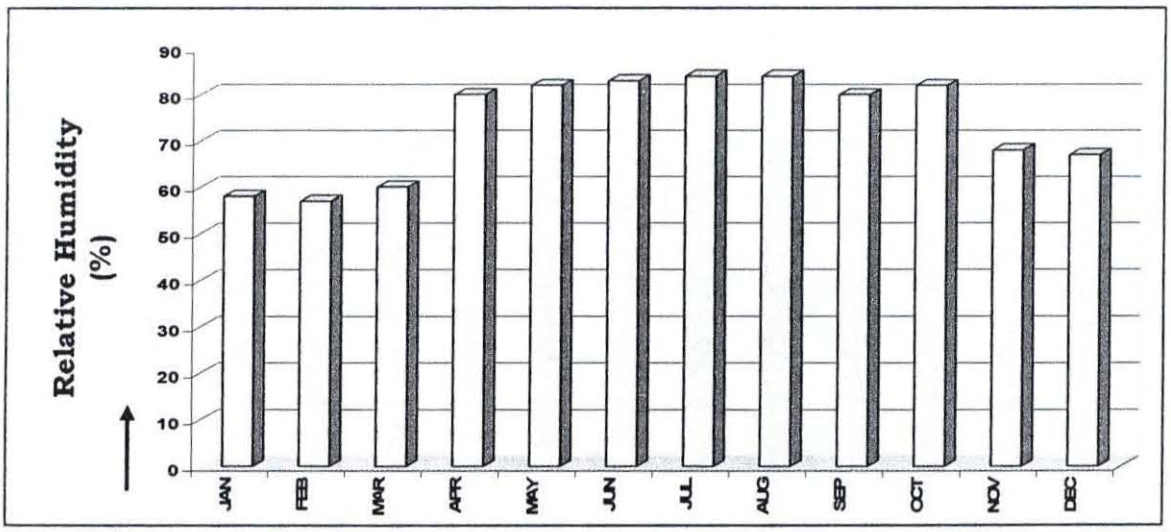


Source: Ministry of Works and Housing, Kano State
(1998 – 2008)

3.4.6 **Humidity**

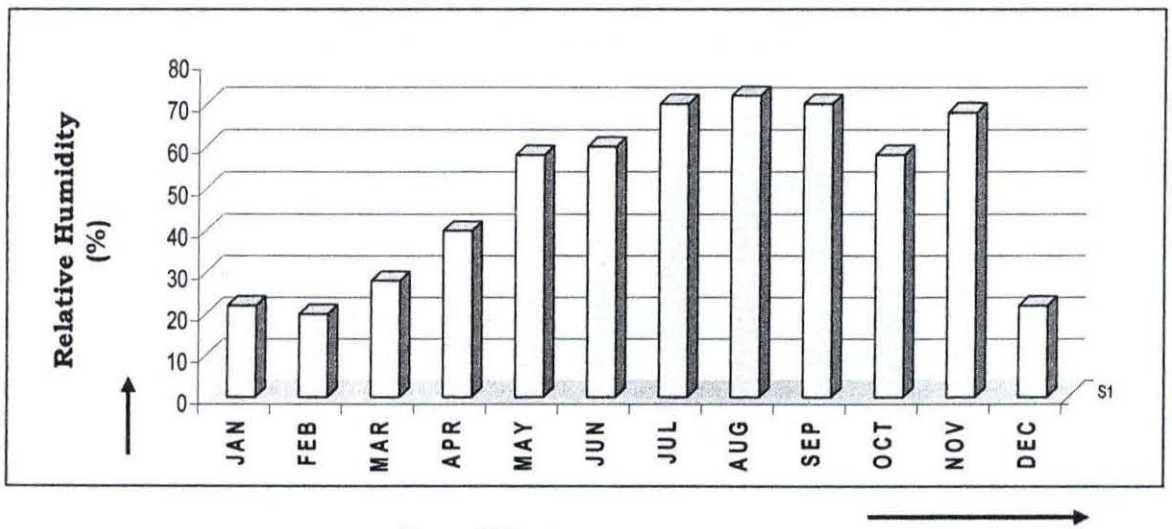
Humidity is as low as 20% in the dry season and as high as 95% in the wet season.

Fig. 3.7 **Maximum Relative Humidity of Kano(%)**



Source: Ministry of Works and Housing, Kano State
(1998 - 2008)

Fig. 3.8 **Minimum Relative Humidity of Kano**



Source: Ministry of Works and Housing, Kano State
(1998 - 2008)

3.4.7 **Sunshine**

The sun is the source of solar radiation heat gain and also a source of natural lighting. The sun rises from the East at about 6.45am and overhead at 12 noon and sets at around 6:15Pm.

3.4.8 **Economy and Commerce**

Kano state has the advantage of being a commercial center due to its location and its rich agricultural and industrial products.

The policy of economic development of Kano state is aimed at achieving a sustained increase in industrial growth through identifying and utilizing to the maximum available potential materials and fostering interaction between industrial agricultural and other social and economic sectors. Policy is also aimed at dispersal of industrial and commercial resource centers in rural and semi-rural areas.

In Kano metropolis, development and expansion of some areas has commenced which include, Sharada Industrial Estate (Phase I – III), Challawa Industrial Estate (Phase I – III) and the Hadejia Zaria and Katsina roads and industrial areas.

Kano has a whole range of services which include banks and financial institutions; building, civil engineering and construction companies; business management, bore-hole drilling and water consultants; Cargo and Freight services, coastal services to mention but some.

Professional services existing in Kano include chartered accountancy, clearing contractors and environmentalist, clearing and forwarding agents, estate agency

and property value, insurance brokerage firms, legal practitioners, packaging and containers, security services and transport and haulage companies. These services plus a vast pool of low and middle level manpower produced annually from higher institutions in Kano are major back-ups for industrial development. Kano has a large market and is well located and connected with the rest of the country and the outside world for material and product movements. Kano state has a virile Chamber of Commerce, Industry, Mines and Agriculture (KACCIMA).

Kano traditional industries include leather works and cotton textiles, tie and dye and embroidery.

3.4.9 Demographic Data

Kano state has a population of 5,632,040 in 1991. The sex ratio is slightly male skewed (50.7%) due largely to a high proportion of male immigrants to Kano metropolis where the difference is as high as 27%. In most rural local government areas, the sex composition is female skewed. However, primary and secondary school enrolments with myriads of "Almajiri" suggests a bottom heavy structure.

Kano has a remarkable concentration of rural population. The gross population density is 270sqkm ranging from as low as 82 in Tudunwada/Doguwa with extensive game reserves to 856 in Ungogo and over 8,000 in the metropolis. In broad terms, density declines away from the metropolis.

3.5 Site Inventory and Description

The site has an existing fence and gates measuring about 5m. However, the site chosen is used for occasional cultivation through illegal as the site belongs to the Kano state government.

The site has very few trees and a few rocks. It slopes gently towards the southern part of the site. The site measures about 810m by 680m, and setback of about 10m from farm road. Main entrance to the site is through farm road. Few trees exist however on the site, as such there is need for trees to be planted along the boundary of site to act as a buffer zone and noise filter with a dash of shade provision.

Electricity power lines pass across the site.

3.5.1 **Location of Site**

The site is located within Kano metropolis in Tarauni local government area. It lies along Farm road on the North and to the South by Marhaba Cinema, a land mark.

On the eastern boundary are recently completed shops along NIDB road. The site is located at the quiet outskirts of kano.

3.5.2 **Topography of the Site**

The site is fairly undulating plain, this gives it almost a flat surface.

3.5.3 **Soil Geology of the Site**

The geology of the soil determines the type of building it could support and the nature of foundation to be incorporated to withstand the structure. The soil consists of coarse sand.

3.5.4 **Vegetation**

The type of vegetation found on the site is typical Sudan vegetation but the vegetation of this area has been modified by human activities such as farming.

3.5.5 Transportation and Traffic Flow

Kano was occupied by the British in 1904. This effectively changed the direction of trade and communication. Kano became accessible by road in 1906 by rail in 1981 and by air in the late 1940's. There are direct road transport services to several state capitals and Abuja (FCT) and to all local government headquarters in the state. Kano is a major railway terminus. It has an extension to Nguru. Kano has been a gateway to Nigeria by air from Europe and the Middle East.

This however is being threatened by Abuja, the Nation's capital, which is drawing international flights from other parts. On the domestic route, are direct and connecting flights to several Nigerian cities such as PortHarcourt, Lagos, Enugu.

3.5.6 Existing Land Use and Future Trends

The land use decree of 1978 has made the federal government the sole owner of land but entrusted it to the state. The essence of this decree is to make acquisition of land from the people easier for government.

3.5.7 Access and Circulation

The site is on Farm road, at Tarauni local government area of Kano state. Another secondary trunk route is the Nigerian Industrial Development Bank (NIDB) road.

3.5.8 Utilities

The site for Model Islamic School, Kano can easily be provided with electricity due to existing Power Holding Company of Nigeria (PHCN) poles not far from the fence. Provision of water can be made in the process of construction. Boreholes taps will ensure a constant supply of water as Kano state has a general problem of water shortage.

Nigerian Telecommunications Limited (NITEL) phone lines can be connected. The presence of GSM masts around the layout provide clear service for GSM phones usage.

3.5.9 Scenery and Man-Made Features

The site is located at the outskirts suburbs of Kano as such it is quiet with a wide expanse of roads and well kept shrubs with good landscaping. The site gently slopes to the south, providing a natural drainage. Man-made features found on the site include the fence surrounding the site, and the farming activity taking place on the site. Stacks of dried corn are lain across the wall facing the farm road, near gates of about 5m.

3.6 Deductions

The sheer amount of "*Almajiri*" boys roaming round Kano city begging for alms makes it a necessity to find them a better place for studying and learning the noble teachings of the Holy Prophet Muhammed.

The site so chosen for the project is in Tarauni, however, other such buildings may be erected in every local government area of the state.

At the onset of this project, many places such as Zaria,Kaduna, Katsina were considered as choice of site, but Kano, amongst them all stood out because of the sheer number of "*Almajiri*" residing there and because of the location of Kano state – being the centre of commerce in Nigeria and the largest city amongst the choice.

The choice of the site for location of a Model Islamic School in Kano has been well thought of and is most suitable as such a provision has been made by the Kano state and is in the cards to provide a school for "Almajiri" students to go and learn. It could be easily accessed by vehicular and pedestrian traffic.

Advantages of a strong and vibrant economy, great land mass and conformity of this project to an existing system (albeit inefficient) which this project hopes to solve, accrue in Kano state. The relative accessibility from all parts of the country will facilitate the easy dissemination and distribution of educational materials and knowledge by teachers commonly called "Mallams".

The client is the Kano state government, thus the state shall finance the project and head its administration and act an advisory role. Non governmental organizations whose expertise and financial contributions would provide support for the development of education are very much welcome.

CHAPTER FOUR

THE DESIGN

DESIGN REPORT

The brief for this project has been formulated from existing Model Islamic Schools and some additional facilities have been introduced complementing the pre-existing facilities to contribute to the overall development of skilled and educated graduates. Such additional facilities include the provision of a vocation centre and introduction of a sport complex.

The brief is thus for a Model Islamic School adequately provides a complete and a well rounded education.

4.1 Design Brief

The following have been proposed for the intention of project proposal.

i) Administrative unit

ii) Classroom block

iii) Hostel accommodation

iv) Mosque

v) Vocation centre

vi) Dining hall

vii) Library

viii) Clinic

ix) Staff quarters

x) Sports field.

4.2 Space Requirements

Owing to the nature and character of the site, an organic type of planning was selected, one which appears to flow with the topography of the site. A basic use of simplistic shapes is retained and uniformity is achieved by use of one type of building material compressed earth blocks for all the buildings.

4.2.1 Design Considerations and Scheme

Certain considerations had to be made on both structural and functional design of a Model Islamic School.

4.2.3 Administrative Offices

These are services required for the smooth and efficient functioning of all the different facilities and structures of the school. they are divided into two types viz: management and administration.

4.2.4 Management

a) Head master's office

b) Assistant Headmaster's office

c) Secretary of school's office

d) Visitor's reception with a waiting area

e) Board room

4.2.5 Administration

This takes care of day running of the institution. It involves:

a) Accounts department including salary section

b) Audit department

c) Personnel department including welfare

4.2.6 **Information Services**

This includes the library facility providing information and advisory service, publications, publicity, exhibitions of products from vocation centre.

4.2.7 **Learning Centre**

This comprises of a classroom block, laboratories, computer room and a central core reading area.

4.2.8 **Mosque**

It involves a place for congregational prayers to be offered by pupils and teachers alike.

4.2.9 **Vocation Centre**

This involves facilities as carpentry, leatherworks, computer centre, welding workshop and a bakery.

4.3 **Site Planning Layout**

One of the most important aspects involved in the planning of a school involve the segregation of public, or noisy zone, semi noisy and quiet zones. As the backbone of every school, the learning area comprising of classroom blocks and reading area were given special attention. The basic system of *"Almajirai"* school system was retained with a thatch covered lit platform in the courtyard providing illumination which replaces the bonfire system of reading of which the *"Almajiri"* is used to.

An approach to the site planning for effective functional and activity relationships of the site for this institution was through a need for noise levels and hierarchy of privacy, as such a devised approach of core systems was employed.

i) **Outer Core:** This represents public areas consisting of administrative offices.

ii) **Central Core:** Representing semi-public areas consisting of the learning centre – classrooms, library and ancillary facilities such as health service, dining hall and assembly hall, vocation centre, Mosque.

iii) **Inner Core:** Made of two areas – this involves students' hostels and staff quarters' accommodations.

4.3.1 Schedule of Accommodation

Table 4.0

S/No	Function	No of Units	Floor area of each unit (m^2)	Total Floor Area
1.	Administrative offices			
	a. Headmaster's office	1	27	27
	b. Assist. Headmaster office	1	27	27
	c. School secretary's office	1	26	26
	d. Secretaries' room	1	26	26
	e. Patron's office	1	24	24
	f. Non-academic staff room	1	27	27
	g. Drivers room	1	24	24
	h. Accountant's office	1	27	27
	i. Deputy Accountant's office	1	27	27
	j. Finance and audit office	1	24	24
	k. Personnel and welfare office	1	24	24
	l. Library	1	27	27
	m. Director's office	1	27	27
	n. Patron Vocation Centre	1	24	24
	o. Stair well	1	25.16	25.16
	p. Security area	1	24	24
	q. Reception	1	12.6	12.6
	r. Toilets/conveniences	8	3.75	60
	s. Maintenance	1	24	24
	t. Eatery	2	16	32

S/No	Function	No of Units	Floor area of each unit (m^2)	Total Floor Area
	c. Bakery			
	i. Production Hall	1	56	56
	ii. Kiln oven	1	24	24
	iii. Store	1	18	18
	d. Computer/Information Center			
	i. Computer Rooms	1	90	90
	ii. Office	1	36	36
	e. Catering department			
	i. Kitchen	1	48	48
	ii. Servery	1	12	12
	iii. Cold store	1	24	24
	iv. Dry store	1	21	21
	f. Woodwork/Carpentry			
	i. Main workshop	1	84	84
	ii. Out-store	1	36	36
	iii. Store	1	20	20
	iv. Office	1	24	24
	v. Exhibition room	1	21	21

S/No	Function	No of Units	Floor area of each unit (m^2)	Total Floor Area
	g. Welding Workshop			
	i. Main workshop	2	56	112
	ii. Office	1	24	24
	iii. Toilet	1	4.5	4.5
	iv. Out-store	1	40	40
	v. Exhibition room	1	36	36
	h. Snacks/Refreshment bar	1	35	35
	i. Toilets/Conveniences	4	4.5	17.28
	j. Atrium	1	91.64	91.64
4	Mosque			
	a. Main praying hall	1	11.52	11.52
	b. Minarets	4	20	80
	c. Toilets	8	5.4	43.2
	d. Ablution area	1	16	16
	e. Store	1	56	56
	f. Entrance	1	10	10
	g. Minbar	1	36	36
	h. Shoes rooms/cloak room	1	54	108

S/No	Function	No of Units	Floor area of each unit (m^2)	Total Floor Area
	Staff quarters	12		
	Library	1		
	Sports field	1		
	Dining hall	1		
	Clinic	1		
	Security posts	2		

4.4 Concept and Design

The design concept originated from the basic condition of unity in Islam. The extensive use of Islamic forms on the elevations stemming from an adherence to the Hausa culture on the plans merges two cultures acting in harmony to achieve a functional structure depicting the Hausa culture in an Islamic environment.

The use of the star and moon was made of in the design of the vocation centre reflecting the Islamic religion as a basis for this project.

The classroom block was developed with the Hausa culture of learning in mind, as such the structure of the learning process is retained, as pupils still gather at the courtyard for evening recitals around a well-lit round platform. Use was made of Islamic arches all round the structures.

4.5 Materials and Construction Methods

General

The major materials to be used for construction have low or medium energy rating.

access to go there. The provision of a security check post at the gates provide adequate security. Access control is ensured through site planning.

4.7.9 Refuse Disposal

An incinerator shall be provided to dispose of refuse and recyclable plastics shall be removed from refuse and recycled.

4.8 Services

4.8.1 Acoustics

Sand management shall be given adequate consideration. The prayer hall is designed to about 0.75 sec in reverberation time. The hall is treated with finishing materials to absorb echo and the use of trees around the site act as a buffer zone, absorbing the noise.

4.8.2 Fire Safety

Safety of structure, persons, and contents shall be achieved by use of adequate escape means during emergency; positioning of fire hydrants around the buildings and placement of smoke alarms.

4.8.3 Community

The direct beneficiaries of this school are the "*Almajirai*" in particular, and the whole community in general.

4.8.4 Maintenance

All plumbing works in kitchen, toilets, changing and janitors' rooms shall be connected inside ducts with servicing outlet for repairs and regular maintenance.

Electrical cables shall be connected inside truncated walls with plastic compartments at strategic points.

Street lighting cables will be laid underground which will reduce possibility of power failure due to damage of cables.

Use of computer in maintenance planning shall be employed and a maintenance manager employed.

4.8.5 **Solar Control**

Passive solar control, which aims at providing a comfortable indoor climate in building, was adapted. It was achieved by orientation of buildings, reduction of solar gain by use of thatch on roofs, sun-shading devices such as overhangs, thermal insulation, and evaporation through vegetation sprinkling.

CHAPTER FIVE

Conclusion.

A single and most important basis and foundation of a society is how well (or not) educated it is. The '*Almajiri*' child as a Nigerian child, has rights as other children to good health, growth and development – part of which is the proper education of the '*Almajiri*' child. If this education is the right every child and if Universal Basic Education (UBE) is to succeed, then certainly, the '*Almajiri*' child needs to be embraced into the fabric of learning of our society to ensure an equal opportunity and brighter future for them.

There has over the years been an increased interest in mobilizing the stakeholders to the benefit of integration of the Western education alongside the Islamic Qur'anic education to empower the child for a better future. The issues of integrating *Qur'anic* schools into conventional ones is not new. It was contained in the Federal Government National Policy on Education of 1977.

The impetus for this project was spurred on by the deep sadness felt for the '*Almajiri*' child begging on the streets for a Naira or two to keep going. The model Islamic School would provide a haven, a school, a home and a place to accommodate, teach and train the child to become a better person to the society. The choice of integrating the Hausa and Islamic Architectural styles came naturally as Islam and Qur'an is what is basically taught and Hausa is the environment to which t is being taught.

A fusion of the two Architectural styles provides a metaphoric and doubly exciting harmonious blend of the two cultures and their Architectural characteristics and

elements such include the use of arches, domes and an adherence to the Hausa culture at the planning stage .

An effort in this submission was made at blending the Hausa and the Islamic Architecture in one module to produce an aesthetically pleasing, functionally balanced structure for housing pupils. The use of locally made compressed bricks blocks was employed and veering towards organic architecture employed.

Integration of the Hausa with the Islamic architecture has been an interesting and rewarding attempt to the researcher. If at the end of this thesis or because of it, others are spurred to contribute to the development and education of our children then the researcher would be honoured to have engaged in such a research.

5.1 Recommendations

The future of any nation depends on its children, the future of its children depend on their education. It is a fact that for any meaningful development to take place, there has to be a concerted effort by the nation to accord priority to educating its citizenry, especially the youth, .and not just any education ,it has to be a qualitative and comprehensive educational approach.

The proposed Model Islamic Primary School would have a Nine- year primary school system as exists now. The first section would have an intensive course of recitation and memorization of the Holy Qur'an. An introduction of the Western education curricular would be gradually added with an emphasis on spoken and written English language.

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