

Culture Consideration in the Design of Government Housing Estates - A case study of selected estates in Maiduguri, Borno State - Nigeria

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Abstract

A study to investigate the extent to which design and planning have considered culture of the target users was carried out on three selected government-built estates in Maiduguri, north-eastern Nigeria. The estates were: Abbaganaram or 'State' Low-cost, Dikwa Low-cost and 303 Estate. The original designs of these estates were studied and so were the post-occupancy modifications made to them. Although an attempt was made in all the three estates to cater for the value systems of the people through the provision of courtyards, the relationship between the various activity areas with the courtyards rendered the courtyards virtually none functional. So also, majority of the houses have been modified through the provisions of additional facilities in order to accommodate cultural issues of value to the people like polygamy, large extended families, privacy, gender segregation, etc. Thus, recommendations are made to government and estate developers to consider cultural traits in housing design and development.

Key words: Culture, Estates, Design and Planning.

Introduction

Housing is man's total environment that serves the basic purposes of shelter, safety and privacy. It includes the dwelling, the environment around it and the services as well as facilities for healthy living (Olotuah, 2003). Historically, the development of civilisation is woven around the development of shelter as a means of protection. In early times, housing started as cave dwelling. Later, it emerged as built form of varying material specifications that reflected culture and needs (Sani, 2002).

Housing is of course, not an isolated issue, but is inextricably linked to other aspects of daily living, including a general sense of security and well being, and a feeling of independence and control over one's life. Housing is subject to social, environmental, economic and technological factors. Khan (1998) asserted that these factors are form moderators and culture is a determinant factor. Housing symbolises the socio-cultural heritage of a people, and

culture thus exercises an over-riding influence on the type and form of houses evolved (Denyer, 1978). The configuration expressed by buildings in a community is a pointer to their search for cultural identity and self actualisation.

Housing and culture relationship relates to social activities (cooking and childbirth), ceremonial rites, religious beliefs and restrictions, prestige, status and modernity (Rapoport, 1969; Adeyemi, 1994). The strength in this relationship is what signifies the need for accommodation of human value systems in housing design and development decisions. The capture of cultural issues in housing design especially for private-popular housing has been portrayed positively, but less so in the public sector. That is, government housing schemes are often shown to be insensitive to the cultural needs of occupants (Jiboye, 2004). The social life style of the occupant as defined by his cultural environment has been less commonly referred to in delivery

strategies. How is this portrayed and with what implications are issues discussed in this paper based on the outcome of a research on selected Public Housing Schemes (Abbaganaram Low-cost, Dikwa Low-cost and the 303 Estate) in Maiduguri, Borno State, Nigeria.

A Review of Housing Provision in Nigeria

Public housing is either the dwelling houses by government or government agencies, or a dwelling financed by government or both. Nigeria has witnessed three major housing development periods; the pre-colonial, the colonial and the post-colonial periods (Ibagere, 2002). During the pre-colonial period, individuals, families and communities were responsible for their housing. Houses were built by individuals through personal efforts, and communal aid from age group and extended family members. House ownership at this period was regarded as a mark of manhood. The individual provided amply for himself, his immediate family as well as extended family members (Aribigbola, 2000). Design of buildings was simple, and relied on the use of local materials and traditional methods of construction. Each compound consisted of many separate buildings; each room with one specific function: like kitchen, a man's bedroom, a wife's bedroom etc. However, these designs varied all over the country and patterns were influenced by tradition (Denyer, 1978). In addition, all facilities required in the house (kitchen, toilet, store etc) are supplied locally through communal efforts.

Public intervention in housing began during the colonial era. During the period (1900 to 1960), government attention was centred essentially on the provision of housing for expatriate staff and for selected indigenous staff in specialised occupations like the railway workers and the police. This initial effort marked the genesis of the European Residential Areas, now

Government Residential Area (GRAs) in Nigeria. A unique feature of the European Quarters was the elitist concept of planning, in the sense that they were surrounded by golf courses and extensive open spaces meant to separate and protect the Europeans from 'disease bearing natives' who reside in the ghettos of the African towns. Public attention to housing started in 1928 with the creation of the Lagos Executive Development Board (LEDB) in the aftermath of the outbreak of Bubonic plague that ravaged Lagos in the early 1920s (Jinadu, 2007).

Several public housing policies have emerged in an attempt basically to increase the housing stock in the country after the colonial period. There was the 1980 National Housing Policy that emerged out of the 4th National Development Plan period (1980 – 1985) which recognised the state's constitutional obligation to provide suitable and adequate shelter for all citizens. It focused on encouraging private initiatives and activities in the production of housing on government serviced plots by revitalizing financial institutions to ensure accessibility to credit facilities. It discouraged on the other hand, dependency on imported building materials by encouraging the use of local materials. The major achievement during this period was the direct construction of 40, 000 low-income prototype houses at the rate of 2, 000 units per state. The 1991 National Housing Policy (NHP) had the ultimate goal of making Nigerians own or have access to decent housing accommodation at affordable cost by the year 2000. This was hoped to be achieved by promoting active participation in housing delivery by all the three tiers of government and encouraging greater participation of the private sector.

The 1991 NHP reviewed in 2001 and approved in 2006, retained the goal of the previous policy but without time frames for attainment. Improvement of the quality of

rural housing, rural infrastructure and environment alongside making land for housing development easily accessible and affordable were outlined as the ways through which the 2006 NHP goal could be achieved. However, given the obvious limitations of government in meeting the needs of Nigerians for decent, safe and healthy housing at affordable cost, several strategies have recently been adopted through Public-Private-Partnership (PPP) and Build-Operate-Transfer (BOT). Private initiatives and activities have also been greatly encouraged by financial institutions through their direct involvement or ensuring credit facilities for housing production. Hitherto, even with the involvement of relevant and fully registered Nigerian professionals to provide appropriate design and management of public housing delivery, the concepts of Government Residential Areas is still embraced and promoted with greater zeal.

Housing Design and Culture: Good quality housing is the fundamental requirement for self satisfaction which refer to the physical and material aspects of the house. When it incorporates the cultural needs of the user, it could then be referred to as stable for social inclusion. It could also be said to establish a positive correlation between the qualities of life and the comfort, convenience and visual appeal of the house (Sani, 2002). Estate housing, with respect to planning and design has impacts on living standard. Done properly, good housing design can enhance people's lives and transform how they feel and behave (Daramola, 2005). It can revitalize neighbourhoods and cities, uplift and bring hope to the neglected traditional community setups. However, common and justifiable complaint in estate housing schemes is the regimentation and unrelieved repetition of identical arrangements of house types and clusters (Daramola, 2005). Hence, a resolution for the designer is to balance the

desire for the housing community to have collaborative image with the need for each home to establish an individual identity (Jiboye, 2004).

Indigenous Housing Design in Maiduguri: Houses usually express physically, the social structure of the clan or kinship group living in them, that is, the indigenous housing pattern shows the living style of the people. The position of rooms and choice of utilities are personal choices. However, the arrangement of different spaces inside a house and their varying degree of privacy demonstrate the lifestyle pattern of each culture. But generally, the physical layout separates homesteads into wives quarters; children; boys, usually near the entrance; and that of the head, which commands a view from the entrance thus reflecting the Islamic norms of social grouping in a polygamous family. The traditional dwelling that followed through centuries is a single room design, built of simple materials and circular, square or rectangular shapes. Family activities happen on different spaces such as a place for food storage and somewhere to protect animals at night, a place to eat and a place to sit and talk in the day time, an open central courtyard for domestic activities like laundry, for (night) storytelling and, a place to sleep.

With modern developments, Maiduguri has some imposing housing estates, including the newly built 707 Housing Estate, in 2006, close to the Maiduguri International Airport; the 505 Housing Estate also built in 2006 and located along Dikwa road; the 202 and 303 Housing Estates, built in 2000 and 2004 respectively; the Dikwa Low-cost Estate, built in 1983 and located at Ruwan Zafi; and the Abbaganaram Low-cost Estate, built in 1976 and located along sir Kashim road. Others are the Pompomari Estate and Commissioners' Quarters.

Housing Design in the Selected Estates

The Abbaganaram State Low Cost has a number of blocks containing four units per row. Each block has three units of 2-bedroom semi-detached houses. These blocks are located close to one another as appropriate to the neighbourhood culture of the Maiduguri people. The facilities shared by the houses include wall, veranda, roof etc. Each house contains two bedrooms, a living room, and a kitchen with a store. Also provided are toilets and a courtyard. The external veranda welcomes and directs visitors to the living room. The doors to the bedrooms are accessed from the living room. The toilet and kitchen are located at the back of the houses across the courtyard. This arrangement provides no segregation between the family and the guest (male or female) when compared with indigenous housing design requirement.

The Dikwa Low Cost Housing is made of sixty houses in fifteen blocks (four houses in each block). In each block, two houses back another two houses with a common wall demarcating courtyards. The blocks are separated at a distance of about thirty metres. The planning concept of the estate promotes unity and co-existence. A house here contains 2 bedrooms or 3 bedrooms with a living room, a small space for family lounging (lobby), a toilet, a kitchen and a store. All these facilities are under one roof which can be accessed from a common lobby. The kitchen is however accessed from the courtyard. This arrangement provides a little seclusion between the family and visitors. The main entrance to the houses gives a direct access from the outside to the main living room. The courtyard here also provides the much needed space for domestic activities like laundry.

The 303 Housing Estate comprises of a block of four houses of 2 bedrooms; and two blocks of four houses of 1 bedroom surrounding a large open space. The plan

provides the essential facilities required in a house. The houses here have similarities with the Dikwa Low-cost. The difference is that instead of accessing bedrooms from the lobby, the bedrooms are accessed from a veranda as in the case of the 2 bedroom units and from the living room, in the case of the 1 bedroom.

Study Method

Maiduguri town is the capital and the largest commercial centre of Borno state, Nigeria. Borno state is located in the north-eastern part of Nigeria. It has an area of 70,898 km² (Max Lock Group, 1976). The city has an estimated population of 1,197,497 in 2007. Its citizens are mostly Muslim and largely Kanuri. There are also a considerable Christian population and other ethnic groups (Borno State Dairy, 2007).

The data for this research included those obtained from secondary sources through review of literature. Secondly, primary data were obtained through physical surveys, administration of questionnaires, and conduct of interviews. The questionnaire was structured to allow for collection of information on design and user satisfaction issues. The three housing estates were selected to represent time epochs in which public sector housing delivery programme were active. Abbaganaram State Low-cost estate was built in 1976; the Dikwa State Low-cost, in 1983; and the 303 Housing Estate in 2004. All these estates are currently fully occupied.

Assessment of Culture Considerations in the Selected Estates

The extent of culture consideration in the design of the three estates was studied/examined using the following criteria as guides:

- i. Considerations of traditional family size in relation to number of rooms: majority of the Kanuri

- live a polygamous and extended family life.
- ii. Privacy and gender segregation: the Kanuri culture has over the centuries been influenced by Islam which promotes the segregation of females from males and restricts male visitors to the fore part of the house.
- iii. Location and inter-relation of the spaces within the house: the physical layout of the Kanuri home requires defined spaces for domestic activities such as kitchen to be close to the wives' quarters consisting of individual rooms; a fore courtyard to accommodate the house head's horse, as well as, resting/trading

activity; and an inner courtyard central to the wives' bedrooms.

Abaganaram Estate

Family Size of the Respondents: the distribution of the respondents according to family size in this estate revealed that households containing two persons account for 10.0%, while that containing three persons account for 16.7%. The survey also revealed that (greater proportion) 25.0% of the respondent's household size is four persons, while those with the size of five persons account for 20.0% and the respondents with family size of six persons account for 8.3%. The result of the survey also revealed that 20.0% of the respondents have seven and above persons in the household as shown in Table 1.

Table 1: Household size of respondents

Family size	Frequency	Percentage
2	6	10.0
3	10	16.7
4	15	25.0
5	12	20.0
6	5	8.3
7 and Above	12	20.0
Total	60	100.0

Source: Field Survey 2008

Degree of Privacy and Gender Segregation:

Distribution of respondents according to their satisfaction of the level of privacy and gender segregation as created by the design of their houses revealed that 93.3% of them

are not satisfied with the level of privacy and the segregation between males and females offered by the design of their houses while 6.7% of the respondents are satisfied as shown in Table 2.

Table 2: Opinion on the Degree of Privacy and Gender Segregation in the Houses

Opinion	Frequency	Percentage
Satisfied	4	6.7
Not Satisfied	56	93.3
Total	60	100.0

Source: Field Survey 2008

Housing Modification: Distribution of respondents according to housing modification from the original design in the estate revealed that 70.0% of them have modified the design of their houses to suit

their present and foreseeable future requirement, while the remaining 30.0% of the respondents did not modify their houses as shown in table 3.

Table 3: House Modification in the Estate

Housing Modification	Frequency	Percentage
Modified	42	70.0
Not Modified	18	30.0
Total	60	100.0

Source: Field Survey 2008

Types of Modification in the Estate: The type of modification done to the houses of the estate to meet the requirement of the inhabitants varies. Result from the field indicated that 18.3% of the total houses in the estate have a room added to the original design. Modification ranging from addition

of rooms, living room, dining, and toilet to the provision of boys quarters made up the greater proportion of the respondents of about 51.7%. The remaining 30.0% of them did not make any modification to the original design of the houses as indicated in Table 4.

Table 4: Type of Modification in the Estate

Type of Modification	Frequency	Percentage
Addition of room	11	18.3
Other type of modification	31	51.7
No modification	18	30.0
Total	60	100.0

Source: Field Survey 2008

Reasons for Modifications: Various reasons were put forward by respondents for modifying the original design of houses in the estate. Result from the study area indicated that 26.7% of the respondents modified their houses because of the increase of the family size, while 41.6% (greater proportion) of them made modifications due to socio-cultural reasons,

particularly the separation of the female from the male quarters. 20.0% of the respondents however, modified their houses in order to enhance security and privacy of the houses. Only 11.7% of them modified their houses for other reasons such as fashion, taste, improved economy etc as shown in Table 5.

Table 5: Reasons for Modification

Reason	Frequency	Percentage
Socio-cultural	25	41.6
Family size	16	26.7
Security & Privacy	12	20.0
Other	7	11.7
Total	60	100.0

Source: Field Survey 2008

Dikwa Low Cost Housing Estate

Family size of the respondents: The distribution of the respondents according to family size in this estate indicated that households with size of two and three persons account for 13.3% each. Result from the field revealed that greater proportion

(25.0%) of the respondent's household size is four persons, while those with the size of five persons amount to 15.0% and the respondents with family size of six persons account for 12.4%. The result of the survey revealed that 20.0% of the respondents have seven and above persons in their household as shown in Table 6.

Table 6: Household Size of Respondents

Family size	Frequency	Percentage
2	2	13.3
3	2	13.3
4	4	25.0
5	2	15.0
6	2	12.4
7 and Above	3	20.0
Total	15	100.0

Source: Field Survey 2008

Degree of Privacy and Gender Segregation: 13.3% of the respondents expressed their satisfaction on the level of privacy as created by the design of their houses while it

revealed that 86.7% of them are not satisfied with the level of privacy offered by the design of their houses as shown in Table 7.

Table 7: Opinion on the Degree of Privacy and Gender Segregation in the Houses

Opinion	Frequency	Percentage
Satisfied	2	13.3
Not Satisfied	13	86.7
Total	15	100.0

Source: Field Survey 2008

House Modification: Distribution of respondents according to housing modification from the original design in the estate revealed that 73.3% of them have

modified the design of the houses to suit their present and foreseeable future requirement. The remaining 26.7% of the

respondents did not modify their houses as shown in Table 8.

Table 8: House Modification in the Estate

Housing Modification	Frequency	Percentage
Modified	11	73.3
Not Modified	4	26.7
Total	15	100.0

Source: Field Survey 2008

Types of Modification in the Estate: Result from the field indicated that 20.0% of the total houses in the estate had a room added to the original design. Modification ranging from addition of rooms, living room, dining,

toilet and boys' quarters account for the greater proportion of 53.5%. The remaining 26.5% of them did not make any modification to the design of the houses as indicated in Table 9.

Table 9: Type of Modification in the Estate

Type of Modification	Frequency	Percentage
Addition of room	3	20.0
Other type of modification	8	53.3
No modification	4	26.7
Total	15	100.0

Source: Field Survey 2008

Reasons for Modification: Various reasons were put forward by respondents for modifying the original design of the houses in the estate. For instance, 20.0% of the respondents modified their houses because of increase in family size, while a greater proportion of 53.3% of them did so due to

socio-cultural reasons, such as seclusion of wives from guests etc. While 20.0% of the respondents modified the houses in order to enhance security and privacy. Only 6.7% of them modified the houses for other reasons such as fashion, taste, improved economy, etc. as shown in Table 10.

Table 10: Reasons for Modification

Reason	Frequency	Percentage
Socio-cultural	8	53.3
Family size	3	20.0
Security & Privacy	3	20.0
Other	1	6.7
Total	15	100.0

Source: Field Survey 2008

The 303 Housing Estate

Family Size of the Respondents: The distribution of the respondents according to family size in 303 estate revealed that household size of two persons account for 16.0%, while that with three persons account for 24.0%. Result of the survey also revealed that 12.0% of the respondent's household size is four persons, while those

with the family size of five persons amount to 12.0% and the respondents with family size of six persons account for 12.0%. The result of the survey indicated that 24.0% of the respondents have seven and above persons in the household as shown in Table 11.

Table 11: Household Size of Respondents

Family size	Frequency	Percentage
2	4	16.0
3	6	24.0
4	3	12.0
5	3	12.0
6	3	12.0
7 and Above	6	24.0
Total	25	100.0

Source: Field Survey 2008

Degree of Privacy and Gender Segregation: Distribution of respondents by privacy and gender segregation as influenced by the design of their houses revealed that 88.0%

of them are not satisfied with the level of privacy offered by the design of their houses while 12.0% of the respondents are satisfied as shown in Table 12.

Table 12: Opinion on the Degree of Privacy in the Estate

Opinion	Frequency	Percentage
Satisfied	3	6.7
Not Satisfied	22	93.3
Total	25	100.0

Source: Field Survey 2008

House Modifications: Distribution of respondents according to modification from the original design of the houses in the estate revealed that 36.0% have modified the design of their houses to suit their present

and foreseeable future requirement, while the remaining 64.0% of the respondents did not modify their houses as shown in Table 13.

Table 13: Housing Modification in the Estate

Housing Modification	Frequency	Percentage
Modified	9	36.0
Not Modified	16	64.0
Total	25	100.0

Type of Modifications in the Estate: Results from the field indicated that 20.0% of the total houses in the estate had at least a room added to the original design, while 16.0% of the respondents have made modification ranging from addition of rooms, living

room, dining, toilet to boys quarters. The greater proportion of the respondents of 64.0% did not modify the original design of the houses as indicated in Table 14. This is perhaps due to the fact that the estates were made available for occupation recently.

Table 14: Type of Modification in the Estate

Type of Modification	Frequency	Percentage
Addition of room	5	20.0
Other type of modification	4	16.0
No modification	16	64.0
Total	25	100.0

Source: Field Survey 2008

Reasons for Modification: About 32.0% of the respondents modified their houses because of increased family size, while greater proportion of 36.0% of them is due to socio-cultural reasons, particularly the separation of wives from male guests.

Although 20.0% of the respondents modified the houses to enhance security and privacy, only 12.0% of them modified the design for other reason such as fashion, taste, improved economy etc as shown in table 15

Table 15: Reasons for Modification

Reason	Frequency	Percentage
Socio-cultural	9	36.0
Family size	8	32.0
Security & Privacy	5	20.0
Other	3	12.0
Total	25	100.0

Source: Field Survey 2008

Cultural Consideration in the Design of Estates: Summary of Findings

The cultural considerations in the designs are expressed in a number ways. These are:

- All the estates have courtyards, but could not serve their purposes appropriately because the toilets open directly to the courtyards, especially in Abbaganaram Low-cost.
- All the houses in the estates do not consider the family size of the target users and the extended family nature of Africans, in terms of number of rooms. So these necessitated the dire

need for more rooms to accommodate other family members and guests.

- The major revelation of the study is that of privacy and gender segregation where about 91% of the total respondents from all the three estates expressed their dissatisfaction on the degree of privacy and gender segregation consideration in the design of their individual houses. This is displayed in the arrangement of rooms and other facilities in the houses which provide no adequate seclusion between the female and

male members of the family as well as male visitors. This sharply contrasts with the indigenous design, where there is a clear separation between the genders in the house.

- Lastly, the study revealed that 61% of the houses in all the estates were modified to accommodate family members and provide privacy. This indicates displeasure with the original design and how adjustments made addressed cultural need.

Conclusion and Recommendation

Based on the study, it was concluded that culture and tradition of target users of the estates was not fully considered in the design of the houses which posed a lot of problems to the occupants. It is also clear from the empirical evidence that majority of the houses in the estates were modified to meet the socio-cultural needs of the users. Thus, the following policy recommendations are made to improve the situation and guide future design:

- That government when planning and designing estate housing in the future

should put fully into consideration, the culture of the target beneficiaries.

- In the planning and design of the estates, the target users should be involved right from conceptualisation to the implementation. This will help in incorporating users' culture and traditions in development of housing estate.
- The occupants of the estates should be permitted to modify their houses to meet their needs for accommodation and privacy.
- In future estate planning and design, provision should be made for expansion due to the likely increase in family size.

Finally, outside the scope of this study were the reasons for the inadequate considerations of cultures of the beneficiaries of the studied estates. Further study should therefore investigate the likely constraints against full consideration of culture of the target occupants in housing estate design.

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