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**CONTEMPORARY ISSUES
AND SUSTAINABLE PRACTICES
IN THE BUILT ENVIRONMENT**

EDITORS:

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Olatunde F. ADEDAYO
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INTEGRATING CULTURAL IDENTITY TO BROADCASTING STATION DESIGN IN NORTH CENTRAL NIGERIA: PERCEPTION OF BROADCAST STATION WORKERS

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The Nigerian society has undergone rapid modern development that it has resulted partly in loss of the nation's character and identity and its architecture. The modern trend gradually corrodes the fabric of the Nigerian cultural identity and the sense of oneness from continual demand for foreign and western culture and lifestyle promoted through broadcasting. Culture though not static with its ever changing dynamism can be achieved while upholding the very essence of the national and cultural existence. In Nigeria, television stations were established to promote the arts, culture and traditional architecture of Nigerian society. Yet little is known through their design about their impact in reflecting the purpose of establishment across the nation. The paper explores a new paradigm shift and an approach to broadcasting station design by integrating cultural concepts into its buildings. The objective is to identify Nigeria's cultural and physical characteristics that can be integrated into the architecture of broadcasting stations with a focus on North Central, Nigeria. The methodological approach of the research is predicated on extensive literature review, qualitatively examining sustainable materials for their construction, physical observation of selected Nigeria Television Stations (NTS) design and interviews with NTS workers to get their perception on cultural integration in design of broadcast station. One of the suggestions drawn from this study is the need for a paradigm shift in the current approach to designing broadcasting stations in Nigeria. It concludes that greater priority needs to be devoted to cultural concepts in the architectural design approach to these buildings to reconcile their incompatibility to their immediate environment in which they are located.

Keywords: Broadcasting stations, Cultural concepts, Cultural identity, Sustainability

INTRODUCTION

Today the international broadcasting community is on the verge of a revolution in television content creation and transmission, brought about by a range of stunning digital technologies (Bird, 2002; 2003). These technological advancement and globalization has had and will continue to have far reaching consequences on the television industry in Nigeria and invariably its people's lifestyle, culture and consequently the future of Nigeria. As the world gradually becomes a global village some culture harmonize prevailing culture, others imbibed them while others are lost to other cultures promoted by the media. The television since its inception in 1890 and 1959 in Nigeria has become a powerful tool for promoting culture and national identity. This modernization has resulted partly in loss of the nation's character and identity and its architecture. The modern trend gradually corrodes the fabric of the Nigerian cultural identity and the sense of oneness from continual demand for foreign and western culture promoted broadcasting. In Nigeria, television broadcasting was first established on 31st of October 1959 in Ibadan, by then government of the Western Region Nigerian. The Nigerian Television Authority (N.T.A) provided a far more organized approach to television expansion and utilization in Nigeria because its functions were carefully mapped out by the decree (No. 24 of 1977).

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According to Acholonu (2016) the presence of television in the third world countries has been a Trojan horse, for promoting western culture. Many African countries have seen the need to preserve its culture, and so in broadcasting station, broadcast in local dialect and programs are more culturally inclined. Nigeria is not left behind in this attempt. (Ademola, 2013) National Television station (NTS), and many other broadcasting stations in Nigeria now broadcast programs wearing cultural attires and in local languages. This attempt may preserve the non-material culture but little is done to preserve the material culture in which architecture is a major part of. Architecture has for long been one of the key expressions of the culture and identity of a people.

Globally, culture exists within the society or societies in which man lives. In western society culture is refinement, opera classical music high art and fashion. Meanwhile, in African context, the term culture covers every single endeavor and aspect of the lives of the members of a given society. According to Clarence City Council Cultural History Plan, a(2009-2013), certain parts of the culture are inherited traditions, which forms the very essence of the existence of any society, is referred to as cultural inheritance. In North Central Nigeria there are over ten different culture and tradition, and this cultural diversity according to (Hargrave, 2007), covers the protection and preservation of national heritage and culture; the protection and preservation of local culture; ethnic and linguistic diversity; protection of physically challenged of the society and plurality of voice and opinion.

Broadcasting stations, as afore mentioned, are major instrument for preserving, maintaining, and promoting cultural diversity of the host community, and as such should be community based not only in telecast but its architectural design. Internationally, the design of broadcasting stations, have become means indicate cultural dominance, technological advancement and economic prowess of the host community. Broadcasting stations in its design should typically provide platform for community participation and social interaction. Provide a façade value that appreciates the culture and lifestyle of the community.

Sustainability and Culture

(Brundtland *et al.* 1987) defines sustainable development to mean development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development revolves around three principal issues which are: ecology; economy; and social/cultural aspects. Sustainability can be divided into three areas of focus namely:

1. Social sustainability: involves cultural promotion, access to resources, providing the need of the community, equal opportunity, readiness to resolve conflicts, knowledge management and empowerment of all, freedom, gender equality, healthy neighbourhood and overall human management
2. Economically sustainability: cost effectiveness in building
3. Environmental sustainability: protecting and preserving the environment for future generation. Environmental sustainability of material is measured against the following back drop.
 - i. Life cycle analysis Biodegradable nature of materials
 - ii. method of production, and effect of process on the ecosystem
 - iii. Environmental impact of material during its life span

This research looks more into the cultural preservation which is a major part of social sustainability. (Littig *et al.* 2005) defines social sustainability is a quality of societies. It signifies the nature-society relationships, mediated by work, as well as relationships within the society. Social sustainability is given, if work within a society and the related institutional arrangements satisfy an extended set of human needs and are shaped in a way that nature and its reproductive capabilities are preserved over a long period of time and the normative claims of social justice, human dignity and participation. (Azelsson 2013) defines cultural sustainability as inter- and intra-generational access to cultural resources. Some of the indicators of social cultural sustainability in architecture are

- i. Social interaction: Humans are social animals and the need for social interaction for man cannot be over emphasised, the design of physical spaces for interaction has become a major emphasis for Architects, in a facility design including prisons. The culture traditional architecture of the North Central people of Nigeria

understand this need and so its design was majorly to allow for interaction between immediate family and even the external community. It provided open spaces as meeting areas for adults, children play area, which are all broadcasting medium have been incorporate over ages. (Kefayati *et al.* 2015), socialization feature of architecture space can reduce or increase the level of social interaction among in space, and therefore causes an increase in social capital.

- ii. **Architectural identity:** Despite differences in land, which have affected its shape, architecture has inherently dynamic and progressive features that are called identity. Design of spaces with the identity rooted in the culture and history of the society is the unique architectural feature of each territory (Kefayati *et al.* 2015).
- iii. **Social security:** One of the indicators of cultural social sustainability is to create a sense of security, the circular arrangement of the traditional setting of the North Central tribes is aimed at this. The need to provide the occupant with a sense of security even in an open space is a major factor for designers.
- iv. **Flexibility:** Flexibility involves diversity adaptability and variability. Most of cultural spaces are multifunctional and sustainability is also the ability of spaces to available for change of use or multiple users.
- v. **Social participation:** Participation in customary activities can increase a person's connection to the values and norms of society in this way that the customary values and norms are internalized during the activities. Involvement allows a person a sense of belonging to the society. Broadcasting station which allow for citizens' involvement gives an impression of the voice of the public.

Sustainable Cultural Centred Broadcasting Station Design

According to Worldwatch Institute (1995), building construction consumes 40 percent of the raw stone, gravel, and sand used globally each year, and 25 percent of the virgin wood. Buildings also account for 40 percent of the energy and 16 percent of the water used annually worldwide.

Sustainable design is not limited to simply trying to be more efficient. A new approach offers a clear alternative: an ecologically intelligent framework in which the safe, regenerative productivity of nature provides models for wholly positive human designs. Sustainable design emerged in the late 1980s as an extension and integration of the environmental and energy-efficiency movements. Environmentally conscious designers wanted to more fully integrate their approaches with a wide range of environmental issues, including energy efficiency, indoor air quality, and resource efficiency (Muscoe, 2000).

High-performance buildings, green design practices, and sustainable technologies are becoming increasingly important influences on architectural practices around the world. They are even beginning to influence standards within the construction industry. Encouraged by growing interest and demand on the part of the public and private sectors, multidisciplinary professionals - from architects to environmental managers, from engineers to landscape architects and beyond - are redefining the way we look at design and examining our environmental impacts on the earth with an integrated, holistic approach (Velazquez, 2005). The need to build a socially sustainable cultural-centred broadcasting station should require that station provided a community centred media house.

In the face of globalization and cultural complexities, there has been a threat of the extinction of indigenous cultures all over the world. (Gusha, 1989), In the wake of global modernization, the culture of Nigeria society has become transcultural (imbibing other cultures) which has seen to the gradual ebbing away of cultural origin and concerted efforts are been made at various levels to salvage this situation. The media which undoubtedly is one of the most powerful tools for promoting and maintaining the cultural identity of the people is not left out. But over years this cultural identity has been one sided, and has not found its way in the architectural design of national broadcasting stations which has become a symbols of both cultural and national identity of the people as a tool to promote it. The failure of this has seen to the gradually loss of the material culture and tradition in building design.

To halt the aforementioned trend, this paper explores a new paradigm shift and an approach to broadcasting station design by integrating cultural concepts into the architecture of its

buildings with a focus on the culture of the North Central people of Nigeria. The question this paper seeks to address is “*How can cultural identity of the North Central Nigeria be preserved through architectural approach to broadcasting station design*”? The paper aimed at integrating cultural identity and concept solving social design problems of broadcasting station in North Central Nigeria. Its objectives include:

- i. To identify the cultural and physical characteristics of the architecture in the study area and the design problem in broadcasting station they can be used to solve.
- ii. To determine indigenous sustainable building materials within the study area with a view to integrating in contemporary broadcasting station design.
- iii. To determine the cultural social sustainable design features of the study area with view to incorporating in the design of broadcasting station

Local Sustainable Building Materials and Broadcasting Station Design Problems Solution

1. Earth ‘adobe’ and reverberation: one of the major problems of broadcasting studio is long reverberation and rammed earth which is readily available and environmental sustainable is an excellent sound absorption and reverberation quality. The monolithic mass of rammed earth is an excellent form of sound insulation. According Daza, (2016), measurements done by some researchers found that a rammed earth wall 300mm thickness achieve Sound Transmission Class STC 57dB5) and a rammed earth wall 250mm thickness achieve Sound Transmission Class STC 50dB6, good results for any material.
2. Earth, stone and internal thermal comfort: earth ‘Adobe’ absorbs heat during the day which allows the house to remain cool during the day in the temperate region where the weather is hot during the day, and then release this stored heat during the night period which is usually cold, allowing the interior of the house to remain warm at night. This characteristic is due to the high specific heat capacity of earth which is an important factor that allows this material to reduce the thermal gradient of earthen houses. This is an important property for broadcasting station which requires constant air conditioning for the machines and its workers. Fiber reinforced mud brick houses also have been found to be superior to concrete brick houses in reducing large fluctuations of indoor temperatures during the summer and winter (Martin *et al.*, 2010; Binici *et al.*, 2009).
3. Earth, stone and reduced energy consumption: one of the major factor for sustainability is to reduce energy consumption as it is able to cool during the day. Experience has shown that earth remains a viable material, given costly increases in energy consumption caused by the production of modern building materials (Agarwal, 1981)
4. Earth, stone and fireproof nature: experiments have proven earth and stone to be highly fire resistance.
5. Timber/ wood: Wood is a 100% natural and ecological material. It is recyclable and biodegradable and its life exceeds that of many other materials on the market. Its use helps limit greenhouse gas emissions because it absorbs CO₂. Moreover, wood production requires little energy. Wood is a sustainable and resistant material when used under right condition.

METHODOLOGY

This study engaged a combination of methods. Qualitative data collection method, involving interviews and distribution of questionnaire targeted at stakeholders and indigenes of North Central of Nigeria. The case study broadcasting station comprises of, all the seven state capital NTA stations in the state capitals in the study area purposively selected. Selection were based on the fact that the state capital NTA have more air coverage area, and more staff strength. A review of literature, on the culture, and cultural features adaptable in design of broadcasting station. The sources of literatures include government policy document, journals and published books. The distributed questionnaire consists of, total of 10 questions, targeted at the randomly selected staffs of the national television stations (NTS). The questions were two-choice, five-choice types. The two-choice questions were to indicate

validity and the clarity. While scaled five –choice questions were to measure level of impart. A total of 25 copies of the questionnaire were distributed to staff of NTA stations visited.

Figure 1 shows the study location comprising (seven) 7 stations, as shown on the location map. The majority of the tribes are Hausa, Fulani, Nupe, Tiv, Eggon, Mada, Yoruba, and Gbagyi. spanning from the west of river Niger to river Benue. The prevailing weather are raining season and Harmattan season.



Figure 1: State in North Central Nigeria. Source: nigeriavillagesquare.com.

RESULT AND DISCUSSION

This study discusses culture in the light of social sustainability and some desirable features of culture and characteristics of traditional architecture in the study area. The research reveals that preservation of culture is a social necessity.

Table 1: Importance of cultural preservation in design of broadcasting station

Importance of cultural preservation in	Percentage of particular importance				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Building reflects cultural type of design	5	35	5	50	5
Building façade create visual/physical appeal to study area culture	5	15		40	20
Necessity of reflecting culture tradition and history	45	35	10	10	-
Building pays attends to beliefs/convictions of people	-	30	20	50	-
Building improves quality of life through communal relationship	-	9	19	72	-

According to Table 1, 70% of the respondent agree that culture can be incorporated in the design of station and to preservation. 40% of the respondents agree that attempts are already made to incorporate culture, mostly in the outdoor hut for relaxation and outdoor interviews. Few offices were designed with African culture in mind but not necessarily the host community cultural heritage

Table 2: Cultural features reflected on building design of the broadcasting station.

Cultural features	Number	Percentage (%)
Shape and geometry in accordance culture	10	40
Use of courtyard	20	80
Engravings	-	-
Cultural art works/ sculptures	15	60
Use of traditional building material	10	40

Table 2 shows cultural features used in the broadcasting stations. 5% agree that building is located close to a cultural or historical site of importance (NTA Lokoja studio located on Mount Patti Kogi).

Table 3: Reasons for the absence of cultural approach in the design of broadcasting station

Reasons	Number of respondent	Percentage (%)
High Cost of maintenance	23	92
Special labour which is no long common	14	56
Cultural element viewed as out-dated (modernization)	10	40
Strength of material and life span of material Structural problem	21	84
Limitation in design form	17	68

According to table 3, 92% of the respondents believe the high cost of maintenance is one of the major hindrance to incorporating cultural element in design of broadcasting station. 84% agree that the strength and life span of the materials is also a barrier to the integrating culture in broadcasting station design.

Table 4: Social sustainability indicator of broadcasting stations.

Social indicator	Percentage				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Social interaction	45	30	5	20	-
Social participation	-	38	-	62	-
Belief and identity	-	-	18	67	15
Social trust. and sense of belonging	-	22	41	37	-

Table 4 indicates the stations measured against social sustainability indicators. It indicates that building allows for social interaction between staffs but less with the host community. Only 30% of stations have facilities to allow for community participation and that is only on invite. 30% of the respondent disagree that the station provide any sense of belonging to the host community

CONCLUSION AND RECOMMENDATION

The research shows that culture is an integral part of any society and the media can promote or allow for continue loss of it. Cultural sustainability is necessary to give an identity to a society, the sense of belonging allows the society to be socially sustainable. Culture can be incorporated in the design of a broadcasting station without losing the function it performs to the society rather have it serves as a unifying tool. It is recommended that the national broadcasting stations in North Central Nigeria should be redesign to incorporate the cultural heritage of the people's history, to further identify as the people's broadcasting station.

Sustainable features of the traditional cultural architecture can be incorporated into the design of the broadcasting stations, communal arrangements of building to encourage interaction between staff and visitors, provide galleries spaces of cultural history and provide tour for visitors and use of locally sustainable building materials.

A society is never without culture, but the study has shown that its cultural heritage can be lost. The media as a proven tool for promoting culture must be used on every facet to protect and promote both the physical material and non-material culture of the society. The broadcasting station in Nigeria should make a point of duty to protect and promote the built cultural heritage of the host community. This will help increase its people's unity in the face of cultural and religious diversity in North Central Nigeria. Socio-cultural sustainability can only be achieved when the community, is allow participation and interaction with the local broadcasting station. This will further foster a sense of belonging as the station gives the community an identity by preserving its culture through its design.

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