

DESIGNING TO MEET INDIGENOUS NEEDS: PLACE OF TRADITIONAL STUDIES IN ARCHITECTURAL EDUCATION

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Abstract

One of the roles of architectural design process is the ability to create spaces that meet the users' need. Global regions have their peculiarity in building designs which is influenced by regional conditions; socio-cultural, physical and climatic conditions of the place. This could be seen in countries in Asia, Middle - East countries, Africa, Europe and American. It is exhibited in their building designs, building materials, cost, forms and techniques. It is very imperative to recognize the local and regional forms, especially of domestic buildings, altering with the cultures, the environment and the climate of the area concerned.

In view of this, some courses that deals with traditional architecture and studies were incorporated into the curriculum of architecture schools, but it has been observed that the guiding principles of the curriculum formulation and implementation of these courses have not been properly merged with contemporary architecture courses to reach a meeting point to draw in the desire result of architecture forms that will create design and environments that respond to the needs of users. Using secondary data from literature and curricula of four architectural schools in South-west and Northern Nigeria, this paper examines how adequately the curricula catered for the traditional content of architectural education and its uniqueness to specificity of the environment. It was discovered that aspects of traditional studies were rarely incorporated sufficiently into the curricula of the schools investigated. This paper recommended that curriculum review be done parametrically with special focus on pedagogic dynamics of required traditional architecture courses. It is desired that architectural training would always recognize the place of traditional architecture and teach based on its principles.

Keywords: Traditional Architecture, Courses, User needs, Curriculum, Contemporary Architecture.

1 INTRODUCTION

Architecture is defined as the art and science of building. Different definitions of architecture revolve round the ability to create spaces that meets users need through its arts or science approaches. [1] highlighted 121 different definitions of architecture from different scholars and all definitions centred on the building, design and users' needs. Architectural practice around the world is influenced by the climatic location of the region, the environmental/ physical conditions and the people, through their social-culture differences.

Architecture education is taught in most part of the world through curricular method in schools of architecture, notwithstanding that apprenticeship which has been the earlier method is still being imbibe in the study through mentorship. Draft curriculum of courses is used to enable student to understand and have the knowledge of design construction, building and environmental studies. However, to what extend are courses that have traditional architecture contents included in the school curriculum and in what ways are the courses taught in order to be incorporated or managed with contemporary architecture so as to meet user needs that would input regional identity in design. In view of these, this paper examines the curriculum of four different schools of architecture in different local regions with different climatic conditions, environmental conditions and cultural settings. This is to know the extents to which indigenous traditional architecture courses are incorporated into the curriculum of the school and how it is merged with contemporary architecture and what architecture form is created for users' needs.

2 BACKGROUND TO STUDY

2.1 Architectural curriculum

From the time past, curriculum of architecture has been imposed with British styles of educational practice. Since then, the landscape has been confronted with a great deal of misfits in the education

and practice sectors. In the aspect of the sustainability, scholarly works [2] revealed that the teachings of some aspects of sustainability are not left at the discretion of the lecturers. Particularly, some institutions investigated in the past appeared to have focused only on energy conservation and thermal and acoustic comfort. Building climatology and environmental Sciences courses especially at the undergraduate levels. Issues of the restoration and reuse of buildings were only addressed at postgraduate levels in three of the institutions. Areas of water and material conservation, specification of recyclable/ recycled materials, prevention of waste during construction and avoidance of pollution appear not to have received sufficient attention in the architecture curricula of the institutions.

In the same way, today, one need to consider the extent in which architecture has influenced the process of design in planning for user-clients in different societal categories; individual, group, communities, and nation at large. The neglected participatory role of *Charrette* [3] as an inclusive design, planning and practice tool in the societal development had given room to challenges faced by the client-users (individual, group, community, and citizens), architect-designers, planners and leaders in governance and civic engagement service providers. Among such challenges are: inability to identify the true-specific needs of the concerned people across the age spectrum, anonymity problems of a group of people in the neighbourhood that makes the decision makers to neglect the unique needs and characteristics needed for development in different facets of the economy. Also, its application to client-users, group, organizational and national needs need to be traditionally inclined.

[4] emphasized that for elderly class of the society, as they grow older, they tend to retain competency, dignity in the face of declining health and, in the word of Maslow, 'psychological' and 'physiological' abilities. In between the societal spectrum, there are appreciable figures of people with disabilities, especially physical; to what degree can architectural designers respond to ageing conditions? At the other end of age spectrum, in what ways can the design of built environment support and stimulate children development, especially in cognition, moral, intelligence and sense of responsibility to civic engagement. In view of these observations, this paper posit that curriculum and syllabi of architecture schools need to be dieted [5] with proportional measure of course ingredients that deal with man environment-behaviour studies, since architects are trained to create environments that will respond to the needs of users.

[6] also asserted that a major challenge discovered is that the context-relevance needed to match-up with imminent indigenous (skill-curriculum gap) challenges are missing as ingredients. If knowledge construction is to have any sustainable measure, there is therefore a need for our educational curricula to facilitate the acquisition of traditional knowledge, skills and technology for solving our societal problems. This need is naturally insatiable, but the onus to initiate a change in project-based (architecture and engineering) education is triggered by many factors i.e. the natural resource depletion, climate change, ecological damage, and energy-efficiency. These factors are among the indices for indigenous acceptability and implementation of sustainable projects in professional practice. Repositioning of curriculum to meet human needs can be done through pedagogy; the art or science of teaching, and educational methods. The teaching methods that offer services that meet local needs of culture and climate are simply traditional or indigenous.

However, "Traditional knowledge" and "sustainable development" are misconstrued terms, with widely varying definitions and interpretations. The current professional practices have been slow to respond to the direct needs of the traditional societies of the world, perhaps being gradually preponderated by modern technologies. Critically, little attention has been paid by designers of buildings to the determinant forces such as behavioural, socio-cultural and physical; which in a great deal affect the design, meaning and use of space to different individuals and group of people.

For instance, for the elderly class of the society, as they grow older, they tend to retain competency, dignity in the face of declining health and, in the word of Maslow, 'psychological' and 'physiological' abilities. Therefore, in between the societal spectrum, there are appreciable numbers of people with physical disabilities within the traditional background. Contemporary ideas may find it difficult to question the background needs of the society. But at traditional grass root background on the one end of the societal age spectrum, one can ask questions like 'to what degree can architectural designers respond to ageing conditions? And at the other end, in what ways can the design of built environment support and stimulate children development in cognition, moral, intelligence and sense of responsibility to civic engagement. These are the questions that needed to be answered by the fora of education and practice. It therefore requires that pragmatically traditional approach and traditional technology are applied to meet the real needs of people within the categorized settings of the society.

2.2 Traditional Curriculum of Architecture and Contemporary Practices

Human comfort in any shelter is one necessary assessment of a well-designed building. The situation that make a building habitable and aligning which atmospheric and environmental condition of the place. Climatic and environmental condition differs round the world and there is need for respect for principles of architecture in terms of design form and building construction methods; which traditional content knowledge (TCK) may assist to solve with ease.

More so, Traditional architecture shows a higher level of effectiveness in the knowledge of available local materials, methods and building design that compliment building users lifestyle. Whereas, westernized curricula have placed little or no emphasis on traditional knowledge of local contents in building methods, design and material.

Modern building materials, design methods and technological advancements tends to be limiting traditional architecture contents in both architectural education and practice, notwithstanding that people and environment differs across the world. More so, contemporary architecture has place little attention on the importance of situational experience with climatic and geographic cause and effect of buildings. This is with the use of modern building materials which seems to be used as prototypes of the slogan “one design fit all”, one building material type used in all scenarios. This has led to low performance of many modern buildings having good aesthetics but less functionality, not meeting the users need. Fig 1 and table 1 illustrates climatic condition differences across world regions. A retrace to traditional architecture contents in professional architects could be effective when curriculum of architectural schools has more courses that teach and blend traditional architecture and contemporary architecture to produce professional with adequate knowledge of traditional architecture.

Table 1. Climatic condition of global regions.

Climate	Countries	Thermal characteristic	
Arctic and Subarctic	Parts of America, Canada and Island	Winter	Intense, continuous cold, little solar light or heat, high wind
		summer	Modern temperatures, intense solar radiation
Continental steppe	Eastern Europe, Russia and Central Asia	Winter	Intense, continuous cold, negligible solar heat, high winds
		summer	Long, warm days, cold nights
Desert	Middle eastern countries, parts of North Africa	Little or no seasonal variation, hot day, cold night, intense solar light and heat, very low humidity and little rain	
Tropical rain forest	West Africa and central Africa, India	No seasonal variation, hot day, warm nights, intense solar radiation, high humidity, heavy rainfall	

Source: Fitch and Branch (1960)

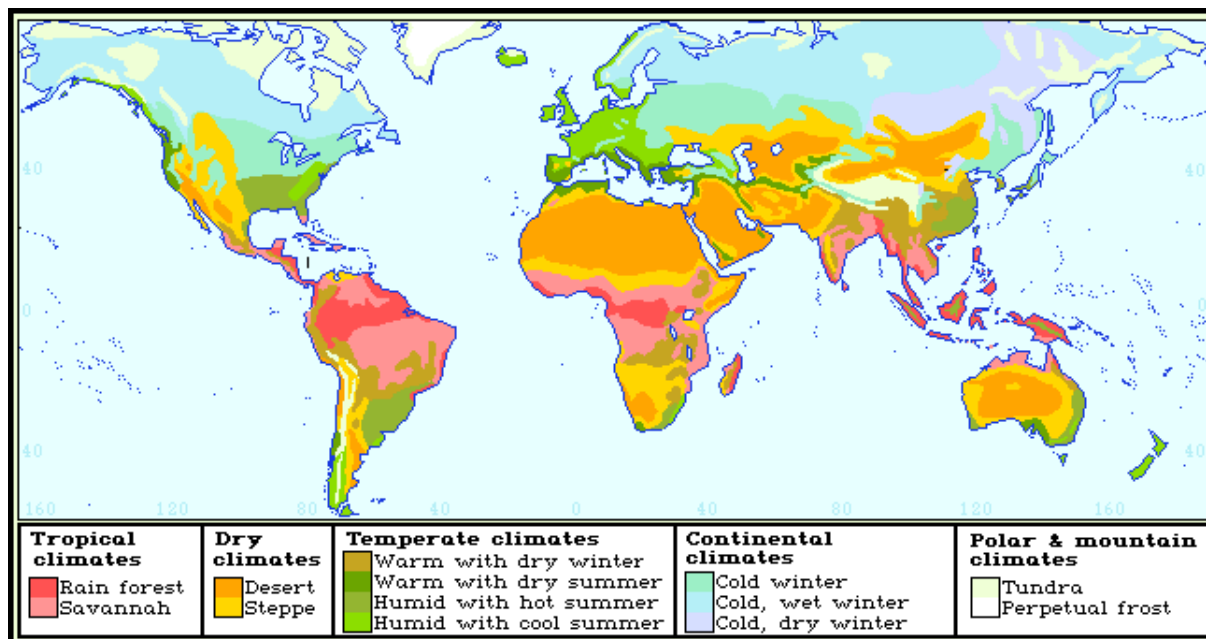


Fig 1: World map of climatic regions.
Sources: S.H. Sharrow (2007), ShallowWorldWide.com.

The role of architects is to create designs of spaces and forms that meet users' needs where one can relax and obtain satisfaction. It also influences consideration of such factors as psychological, behavioral, socio-cultural and physical determine the accommodation of human activities. Therefore, anonymous intuitions mostly used by some designers may not really be able to identify specific needs of human in the conception of space and form. Another pedagogic tenet of the traditional education curricula is the relevant aspects of the hidden curriculum. This serve as guides for the clients and architect-designers to formulate briefs and spell out carefully the needs of the clients. Therefore, architects, engineers and other allied professionals needed to be aware of these factors to have successful designs and execution of programmes.

More so, the educational policy, its implementation, review, development, and the performance in the practicing field need to engage the curriculum of schools as an institutional apparatus. This would improve the skills and welfare of the graduates. The regulatory bodies like the National Political Reform Conference, National University Commission (NUC) Nigeria, Architects Registration Council of Nigeria (ARCON), Nigerian Institute of Architects (NIA) and Nigeria Labor Congress (NLC) needs to organize workshops and conferences to push for a well redesigned, monitored, controlled Traditional Knowledge-Oriented (TK-O) curriculum programmes to proffer indigenous solutions to the society. Also, conscious effort should be made by the stakeholders to agitate for increase in funding of research for traditional aspect of the training as integral part of the general educational policy and planning in the on-going national economic transformation program- 'Change'.

More importantly, the higher education curricula need to train graduates to have certification in with high level professional competency in the areas of craftsmanship, innovation, fabrication, industrial design and manufacturing of well packaged indigenous products. Also, the traditional craftsmanship context relevance needed in this regard are well trained artisans in building industry who can work out details in metal works, sculptures, wood works, ceramics, textile designs, auto mechanics and truck drivers, carpenters, plumbers, electricians, computer, database and Web work technicians, bookkeepers and clerks, foremen, technicians and vocational expertise who engages the trainees in a workshops within the areas of interest which they can develop further.

The untrained individuals in the building industries cause more damages to building, vehicles, and innocent people when they are contracted to societal service [6]. Also, because of acute knowledge emphasis on indigenous knowledge content in the training process, many companies have incurred heavy debts and untold losses. The current preoccupation education in Nigeria reduces economic opportunities of those who are more oriented toward practical work than academic. It is obvious from Nigerian employment landscape that it is not everyone needs a university education. This was the main reason why polytechnic education was introduced to the Nigerian educational landscape. It is

rather unfortunate that many of the so-called “expatriate engineers” who were being paid huge sum of money in dollars to build the houses, roads and bridges in Nigeria are graduates of vocational colleges and polytechnics

3 METHODOLOGY

Four (4) schools of architecture in Nigeria were selected for this analysis. Two (2), namely Ahmadu Bello University (ABU), Zaria and University of Jos (UJ) were selected from the Northern part while Covenant University (CU) and Federal University of Technology (FUTA), Akure were selected from the South-western part of the country. The traditional content of the curricular was qualitatively assessed in relation to the contemporary content. The percentage of the traditional content in relation to the percentage of the total undergraduate courses was also qualitatively assessed.

4 FINDINGS AND DISCUSSION

From the table presented below, the total credit unit of undergraduate courses for Covenant University is 171. Out of the 171 units, 16 had traditional content while the remaining 155 units were contemporary. Interesting, traditional diet was introduced into the curriculum early enough, in year 1.

FUTA has a total of 204 units that run for five years being a University of technology. The traditional aspect is very low compared to the contemporary aspect with 20 units having traditional content. Nonetheless, it is interesting to note that this traditional touch runs through all the levels just like we saw in the case of CU. These courses extend to the area of behavioural architecture (Environment Behaviour Relation studies) as suggested by [4], should be made paramount in the design process.

UNI JOS fares a little better in terms of the ratio of traditional courses to the contemporary diet. A total of 173 units are required as a prerequisite to graduation for an undergraduate. Out of this, 21 units addressed the importance of tradition in the built environment. It is worth noting that an introduction to Nigerian history and culture was promptly addressed in year one as against CU and FUTA that introduced the course in 200 level. It is glaringly observed that the traditional content of UNI JOS diet was systematically incorporated in that it started with the tradition of Nigeria (Nigerian people and culture, GST 103) and later moved to African context (ARC 234). This was extended to the global context in years 3 and 4 (Traditional building and technology, ARC 334, and Traditional building and technology, ARC 431).

A minimum of 150 units or maximum of 160 units is required for graduation in ABU. The importance of traditional architecture was substantially reflected in the curriculum as indicated in the table. Although, contemporary courses were emphasized, the curriculum is rich in traditional diet. For example, ARCH 331 (Hausa/Islamic Architecture) deals with the architecture of the Hausas living in the northern part of the country where the school is situated. It also emphasizes the religion of the people.

Similarly, an elective course, FINA 241, addresses African art in the pre-20th century Nigeria. Of course, this transcends Hausa architecture, it addresses other Nigerian cultures. It is also worth noting that ABU curriculum also made room for oriental architecture (Chinese architecture).

The importance of traditional architecture is not only exhibited in architecture curriculum but extends to the faculty platform where traditional construction methods (BLDG 315) is a compulsory elective course.

Table 2. Percentage of traditional content in the curriculum.

School of Architecture	Total Undergraduate Course Load	Credit Load of Traditional Architecture Courses/percentage	Credit Load of contemporary architecture courses/percentage	Ratio of traditional courses to contemporary
CU	171	16	155	9.4
FUTA	204	20	184	9.8
UNI JOS	173	21	152	12.1
ABU	150	17	133	11.3

5 CONCLUSION

The importance of traditional architecture in the curricula of schools cannot be over-emphasized. The common ground for all the curricula assessed is that they were all deficient in their traditional focus. Emphasis was placed on contemporary architecture while failing to realise the importance of tradition and culture in architectural development. Consequently, there is need for the schools involved and other schools of architecture to carry out regular review of their curricula to beef up issues that have to do with man, his environment and how they relate. An overhaul of the entire architecture curriculum to incorporate more courses geared towards meeting the needs of clients in terms of their behaviour would help improve the quality of graduates.

Although, the traditional domain cannot match the contemporary, the curriculum should reasonably cover traditional and cultural aspects.

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