RESEARCH METHODOLOGY

PROBLEMS ASSOCIATED WITH ARCHITECTURAL RESEARCH IN NIGERIA

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1.0 INTRODUCTION
Architectural education assumed a popular dimension as a result of oil boom of the 1970s when the institutions offering the profession rose from a single college (Ahmadu Bello University) to fifteen schools of architecture (Universities and Polytechnics) where students’ population in each institution rose to about three-hundred (300) in each institution Oruweri (1995).

Since education in any social order arises out of the need to perpetuate that society; provide continuity in its way of thinking; doing and behaving; reinforce its value structure and establish conformity to those norms that it sees as consequential and sustaining.

Architectural education must therefore be able to meet the needs of not only the present but the future. However, there is a strong link between architectural education and its research because education is the basis for research; research is the projection for the architectural education in the future.

Research is of great importance to architectural profession; it is only through research that knowledge is achieved and a basis for improved practice provided. Without the continuing impact of research findings, procedures become stereotyped.

The choice of a suitable problem is one of the most difficult tasks facing the architectural researcher in Nigeria. A beginner in most cases is likely to select a problem that is much too broad in scope. This may however be due to his or her lack of understanding of the nature of research and systematic problem-solving activity. It may also be due to his enthusiastic, but naive desire to solve an important problem quickly and immediately. Yates (1971) affirmed that experienced researchers know that research is often tedious, painfully slow, and rarely spectacular.

Research in architecture must be seen more often as a team endeavour than an individual activity. Researchers working in groups can solve architectural problems in different dimensions, gathering their knowledge and ideas together and sharing the results of their efforts. Foskett (1965) asserted that highly publicized discoveries usually result from the cumulative efforts of many, working as teams over long periods of time. He stressed further to affirm that, they are rarely the product of a single individual working in isolation.
For architectural research to however meet the need for the future; a systematic analysis of the problems confronting it must be stressed while its contribution to the sustainability of the architectural profession is also required. Recommendations to its shortcomings would also be examined.
2.0 ARCHITECTURAL EDUCATION IN NIGERIA: HISTORICAL REVIEW

The establishment of the Nigeria College of Arts, Science and Technology in 1952 led to the birth of architectural education in Nigeria. The college was located at Ibadan, the capital of the then Western Region of Nigeria. It was relocated to Zaria in Northern Nigeria in 1955. The first set of Diploma students graduated in 1961.

In 1962 the college was upgraded to a full-fledged University, named Ahmadu Bello University, Zaria. The course programme was restructured and graduates were awarded the Bachelor of Architecture degree, which had the same link as the earlier Diploma with RIBA. The link with RIBA was maintained till 1968, when the course programme was again restructured, into two-tier, with the offer of the Bachelor of Science (BSc) and Master of Science (MSc) degrees in architecture. The new programme took off in 1969.

The new department became the second school of architecture in Nigeria. In 1970, a third school of architecture was established in the University of Lagos.

At the turn of the century in 1999 the number of degree-awarding institutions in Nigeria had risen to sixteen (ten Federal and six State Universities). There were also nineteen Polytechnics and Colleges of Technology awarding National Diploma (ND) and/or the Higher National Diploma (HND) (Arayela, 2000). Two state universities (Kano and Ogun) and a private institution (Covenant University) have since established three additional degree-awarding schools of architecture (Table 1).
## TABLE 1: Degree-Awarding Schools of Architecture in Nigeria

<table>
<thead>
<tr>
<th>S/N</th>
<th>NAME OF UNIVERSITY</th>
<th>YEAR EST</th>
<th>OWNERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ahmadu Bello University, Zaria</td>
<td>1952</td>
<td>Federal Government</td>
</tr>
<tr>
<td>2.</td>
<td>University of Nigeria, Enugu Campus</td>
<td>1963</td>
<td>Federal Government</td>
</tr>
<tr>
<td>4.</td>
<td>Obafemi Awolowo University (Formerly University of Ife, Ile-Ife)</td>
<td>1977</td>
<td>Federal Government</td>
</tr>
<tr>
<td>5.</td>
<td>University of Jos</td>
<td>1979</td>
<td>Federal Government</td>
</tr>
<tr>
<td>6.</td>
<td>Rivers State University of Science and Technology</td>
<td>1980</td>
<td>State Government</td>
</tr>
<tr>
<td>7.</td>
<td>Ambrose Alli University, Ekpoma</td>
<td>1981</td>
<td>State Government</td>
</tr>
<tr>
<td>8.</td>
<td>Abia State University, Uturu</td>
<td>1982</td>
<td>State Government</td>
</tr>
<tr>
<td>9.</td>
<td>Enugu State University of Science and Technology, Enugu</td>
<td>1985</td>
<td>State Government</td>
</tr>
<tr>
<td>10.</td>
<td>Federal University of Technology, Minna</td>
<td>1985</td>
<td>Federal Government</td>
</tr>
<tr>
<td>11.</td>
<td>Federal University of Technology, Akure</td>
<td>1989</td>
<td>Federal Government</td>
</tr>
<tr>
<td>12.</td>
<td>Federal University of Technology, Yola</td>
<td>1990</td>
<td>Federal Government</td>
</tr>
<tr>
<td>13.</td>
<td>Abubakar Tafawa Balewa University, Bauchi</td>
<td>1992</td>
<td>Federal Government</td>
</tr>
<tr>
<td>15.</td>
<td>Ladoke Akintola University of Technology, Ogbomosho</td>
<td>1993</td>
<td>State Government</td>
</tr>
<tr>
<td>17.</td>
<td>Kano State University, Kano</td>
<td>2002</td>
<td>State Government</td>
</tr>
<tr>
<td>18.</td>
<td>Covenant University, Ota</td>
<td>2002</td>
<td>Private</td>
</tr>
<tr>
<td>19.</td>
<td>Olabisi Onabanjo University, Ago Iwoye</td>
<td>2003</td>
<td>State Government</td>
</tr>
</tbody>
</table>

**Source:** Olotuah, A. O. & Adesiji, O. S. (2005)


2.1 Curriculum of Architectural Education

The quality of the human habitat is central to architecture, and thus the goal of architectural education is to contribute to the attainment of a humane and responsive environment. In this endeavour schools of architecture strive to equip students with the education required to make them contribute to the promotion of an orderly development of the human environment. The programme of study leads to the production of professionals who are sensitive to human needs and aspirations and who have the requisite knowledge and the intellectual and aesthetic skills to evolve expressive design solutions of problems of the built environment. They have the professional skills required for effective shaping, re-ordering and articulation of the built environment.

The goal of architectural education is subsumed in the general concept of education, which is to prepare people to improve and perpetuate their society. This is achieved by taking due cognizance of the society’s political, social and economic circumstances in the design of the educational programme.

Architectural programme in Nigeria was designed, at the onset, to meet the challenges of modern architecture. The programme has faced challenges in the last fifty years for it to be relevant to Nigeria’s national needs and aspirations, as well as meet current technological developments (Olotuah, 2000). Adeyinka (1981) has succinctly shown that education must be consciously enlisted to serve national needs, and indeed education is an instrument of power on which national survival depends.

The objectives of the educational programmes in Nigeria, as stipulated in the 3rd National Development Plan provide a general framework within which architectural education in Nigeria is focused. These include (FGN, 1975):

(i) Reforming the content of general education to make it more responsive to the socio-economic needs of the country;

(ii) Consolidating and developing the nation’s system of higher education in response to the economy’s manpower needs;
Rationalizing the financing of education with a view to making the educational system more adequate and efficient; and  
Making an impact in the area of technological education so as to meet the growing needs of the economy.

The objectives of architectural education in Nigeria to a large extent reflect this national aspiration. These objectives stress the importance of research opportunities appropriate to the development of national resources and technological skills in meeting emerging national demands.

The curriculum contents and specific subjects of study of schools of architecture in Nigeria are selected from the minimum standards stipulated by the country’s National Universities Commission (NUC). There are over a hundred different course titles from which each school of architecture draws its programmes. These courses are however categorized into seven instruction modules namely:

(i) Architectural Design;
(ii) Arts and Drawing;
(iii) Historical and Theoretical Studies;
(iv) Building Systems Technology;
(v) Humanities and Social Studies;
(vi) Environmental Control System; and
(vii) Physical Sciences.

The NUC recommends the spread of these modules and their credit units over a 6-year period within a 2-tier structure. Greater emphasis is placed on the architectural design module than the other modules, and thus more than 40% of the required credits for the degrees are earned in the studio. This is informed by the centrality of the design studio to the entire architectural educational programme. The design studio is the hub and nucleus of the programme since all learning in architecture are geared towards imparting into students skills they require in proffering solutions to problems of the built
environment (Olotuah, 2000). The design studio is aimed at developing in students the awareness and skills they require in identifying architectural function, purpose, and meaning, which are then translated into appropriate designed settings. As the key integrative unit of the architecture programme, the design studio offers the unique opportunity of imparting cultural values into students and expanding the horizon of their world-view (Olotuah, 2002). Students have the opportunity to appreciate the great varieties of Nigerian traditional architecture, and their richness in content and form. Architectural education has thus fostered national unity in spite of the nation’s immense diversity in the cultures of its people.
3.0 ARCHITECTURAL RESEARCHES

Architecture has been variously described as both the art and science of perception. One of the fundamental needs in strengthening architectural education is the development of a more adequate research basis. For a professional venturing into architectural education as a carrier, there is need to deviate from design-based orientation to research based direction in order to be properly grounded in research techniques.

Vielle (1974) sees research as international and systematic activities of search that lead to the conceptualisation, expression, design, and production of something new. Best (1977), in his own viewed research as the “systematic and objective analysis and recording of controlled observations that may lead to the development of generalisations, principles, or theories, resulting in prediction and ultimate control of many events that may be consequences or causes of specific activities”. From these definitions, it will be discovered that architectural research like other research endeavours, is generally directed towards the solution of a problem. It demands accurate observation and description using quantitative, numerical measuring devices and gathering new devices and most precise means of description. It involves gathering new data from primary or first-hand sources or using existing data for a new purpose.

Arayela (2002) explains that students undertaking a research work in architecture often find it very difficult to translate their research findings in the field, to a comfortable perceptive level when expressing such in their write-ups. He however admitted that this could be a difficult task at the initial stage but with adequate and persistence consultations, such problems would eventually be resolved. Architectural research requires real courage, aggressive drive and strong commitment at every stage. Commitment to research is essential for the architect-educator, as knowledge only progresses (Okoh, 1983) “through questioning, refutations and reformulation of theories”. The educator needs to be conversant with current developments in the field of architecture. There is a short supply of architect-educators to implement the curriculum in architecture schools in Nigeria. This, alongside the paucity of facilities, Adeyemi (1996) identifies as the greatest difficulty facing architectural education in the country.
Academia has been unable to attract sufficient manpower to resource its teaching responsibilities because of the relatively poorer remuneration it offers.

### 3.1 Architectural Design Course and Jury Criticism

Architectural design course is an essential tool for researches in architecture, for students undertaking a final project research requires a solid design background to fulfil his or her research. Therefore, for architectural research course to accomplish its desired aim on architectural research, serious studio class needs to be arranged by the course mentors. Design course lectures should be focused on analytical techniques and jury criticism must be conducted in more professional manner to give students equal opportunities (Oruweri 1995) reported that lazy juror expresses likes and dislikes without professional foundation. She reported further that they use jury as platform for rambling on whatever topics fit through their minds. They also present their private and unsubstantiated feelings as scholarly criticism whereas juries must stress ideas, theory and knowledge and pretence of unclear evaluative criteria.

### 3.2 Problems Associated with Architectural Research in Nigeria.

Since researches in architecture form the integral part of the architectural education in the country, one would not be too wrong if his paper concludes that same problems are noticeable in the two terminologies (architectural education and research).

However, architectural researches are confronted with so many problems which start right from the inception of the research to the concluding stage of such project. Some of the problems are however highlighted and discussed below;

**1. SCARCE RESOURCES AND EDUCATORS:** The paucity of facilities and architect-educators to implement the curriculum in architecture schools in the country has been identified as the greatest difficulty faced by architectural education in Nigeria (Adeyemi, 1996). In order for architectural programmes to meet their set objectives, skilful and qualified architects have to be employed to teach. They will also be engaged in research through which they will make original contributions to the development of an improved theoretical basis for architecture. The
curriculum in architecture, though studio-based, should inculcate considerable research input into its postgraduate programme in order to prepare graduate students for a productive academic career.

2. **FUNDING OF RESEARCHES**: Government at all levels (federal, state and local) are not seriously committed to development of research in the country but meanwhile government is the major patron of education in Nigeria. It has to show greater commitment to funding and an improved welfare package for its staff. This goes also for the provision of adequate facilities for the various schools of architecture. The commitment of government in this regard is a function of the society’s orientation and values and cultural priorities attached to education.

3. **IN-ADEQUATE E-LEARNING AND LIBRARY**: E-learning is Electronic learning or e-learning is computer-enhanced learning and it is commonly associated with advanced learning technology (ALT), which deals with both the technologies and associated methodologies in learning using networked and/or multimedia technologies. E-learning makes it possible for the teacher to teach a class from a distance and also for students in various geographical locations as well as teachers to meet in a virtual classroom. Some of the technologies used in e-learning are screen casts, podcasts, web-based teaching materials, collaborative software, learning management software, virtual classrooms, computer aided assessment, educational animation, discussion boards, blogs, wiki, hypermedia, multimedia, email and e-portfolios (Wikipedia, 2007a).

E-learning in architectural education is specific in that knowledge and skills of not only theory but also drawings need to be transmitted using special means. Architectural education is unique because of its peculiar practical nature requiring supervision, interaction and mind rubbing. Thus the digital studio or e-studio is central to e-learning in architectural education.

The interest generated by the possibilities of e-learning in architectural education is increasing with improved funding and better access to facilities and equipment.
E-learning is now considered a viable alternative to traditional methods, but the adoption of this new technology is constrained by several factors. Apart from inadequate funding, unreliable infrastructure and insufficient technical expertise, adapting this imported technology to local realities has proven very challenging (Ogunsote et al, 2007b).

4. **FIELD RESEARCHES**: Field researches are known to be time consuming; they require adequate and thorough analysis in an intelligent manner. In most cases, it deals with large population. Field researches either seek to find answers to relevant questions or confirm or refute an existing theory.

Field researches are conducted in an open air. Usually, it involves both the use of books and relevant texts as well as interaction with people as objects. Taylor (1973) confirmed that it is a very cost intensive type of research in relation to the cost of equipments to be purchased, the cost of travelling and so on. This is simply because it is a mobile and dynamic type of research. It is however more tedious, rigorous and requires more patience, courage and systematic planning. But the public perception of field researches is another hindrance to a successful field research result. For instance, a student of architecture some few years ago, was found taking photographs in a market place at Ibadan in an attempt to enrich his data collection on his thesis, he was molested by the market sellers, mistaking him to be a journalist (Arayela, 2002). His camera was seized but it was later released after identification. Such harassments are capable of discouraging a feeble-minded researcher from carrying out his research particularly on the field.
4.0 CONCLUSIONS
This paper has been able to establish the fact that:
1. There is a strong link between architectural education in Nigeria and its research.
2. Most problems confronting architectural education are often related with that of the architectural research.
3. The associated problems with architectural research however have major contributors such as; architectural educators (supervisors), the researchers (students), government and the members of the public.

5.0 RECOMMENDATIONS
After carefully studied the problems associated with architectural research in Nigeria; the paper now recommend as follows;
1. The government should be more responsible to the funding of researches in the country because it is through research that better policies can be made in an attempt to improve the lots of the citizenry.
2. The architectural educators should always make their classes more interactive so as to exchange ideas with the students because it has great potential of stimulating problems to be solved on the field.
3. The university communities should do more in the area of architectural oriented computer courses, and in the same manner, they should do more in the area of internet connectivity on Nigerian campuses to enhance its accessibility and uses.
4. The design classes in Nigerian tertiary institutions should not only be more practical but should be research oriented, to prepare students ahead of the second tier of their programme (MSc programme)
5. The National University Commission should work in partnership with stakeholders in the education industry, to prepare a new curriculum for an improved research in this technological advanced era.
6.0 REFERENCES


Vielle, J.P (1974): The impact of research on educational change”. International Development Research Centre (IDRC), IDRC-MR 50e, Ottawa, Canada.
