Architecture at the edge of practice: A pedagogical approach to social architectural education

Nkemakonam P. Okofu[1]

[1]Sheffield School of Architecture, University of Sheffield, UK

ABSTRACT: This paper explores the concept of practice at the edge of architecture as a learning matrix which reveals the tension lying beneath the surface of social architecture practice. A concept that operates beyond the iconic, the office architectural practice to a more ethical resilient, vernacular, bottom-up approach to future practice.

Further to explore how practice at the edge of architecture influences a pedagogical model for social architecture practice and education. A detailed reflection on students' and tutors' field experience in a recent community study of Okuku community in South-East Nigeria by groups of third year architecture students using an integrated design (IDS) approach. This approach to architecture design pedagogy immerses the students into the community as a way of understanding the needs and prospects of the community. Employing participatory action learning approach co-creates and co-produces multiple-authorships as intervention strategy that attempts to provide solutions within the same context.

KEYWORDS: Pedagogy, Practice, Resilient, Social Practice, Community

INTRODUCTION

There is a growing criticism that schools of architecture are rarely preparing students to the contemporary challenges of social architecture practice. The criticism accentuates the point that architecture as a profession has over time distanced itself from engaging in social issues even those within the ambit of its professional engagements[1]. The debate is currently centred on how best to educate the next generating of architects who will not be equipped with the needed tools and skills to address social, political and environmental challenges but be influenced by them.

The 'radical contingency of architectural practice' demands new form of pedagogy not new form of knowledge as new knowledge becomes obsolete over a short period of time while innovative pedagogy explores new and alternative ways of solving problem[2].

This paper explores critical reflections on students' and tutors' experiences working in rural communities within the contested territories of the global South through an action-leaning (AL) approach as a part of Integrated Design Studio (IDS) model undertaking by students of architecture in Imo State University, Owerri-Nigeria. IDM is a form of live project model; the idea of this model is predicated on the philosophy and objective of the department of architecture Imo State University to produce future Architects capable of understanding societal need for shelter, and translating this need into climatologically appropriate environments which should be able to satisfy the social, cultural and economic aspirations of society in the local, national and regional context[3].

The school seeks to achieve this objective through carefully graded modules (reinforced by appropriate lecture courses) which are based on thorough study of communities. Through critical observation, surveying, documentation, analysis and synthesis of their needs in terms of planning, design and construction, special attention being paid to graphic, oral and technological proficiencies[4].

1.0 PRACTICE AT THE EDGE OF ARCHITECTURE (EDGE PRACTICE)

The role of the architect is changing and a recent report on *'The Future for Architects'* by Building Future Think Series[5] opines that specialization has become the hallmark of the new roles involving strategic and global interdisciplinary consultancies, risk management, BIM experts, spatial agency, and project management amongst many (Jamieson 2011:12).

The contingency of architecture practice in attaining to the complexities of the contemporary society calls for a new form of practice not bound by institutional hegemony of mainstream practice (Hyde 2012). Rory Hyde opines that a new form of practice is emerging at the edge of traditional practice that show uncommon potentials for future practice as he states:

> There are designers around the world eagerly carving outing opportunities for new kinds of engagement, new kinds of collaboration, new kinds of practice and new kinds of design outcomes; overturning the inherited assumptions of the design professions (Hyde 2012:20).

'Practice at the edge of architecture' is a term the author uses here to describe emerging practices that sit beyond the boundaries of mainstream practice that involves the participation of both architects and non-architects. This term was influenced by Dan Hill in his contribution to 'Future Practice: conversation at edge of architecture' (Hill, 2012). However, what has been largely overlooked is the value each player brings into the design process, which is the key to a more balanced resilience in social architectural practice.

This form of practice tends to synthesize a sense of community and mediation that lies beneath the threshold of a single professional discipline. This practice promotes interdisciplinary collaboration, entrepreneurship, strategic thinking, community enabling, spatial agency, and place-making amongst others. Beyond the accompanied diverse skills and knowledge in edge practice, it is also underpinned by following discourses: *'Architecture is too important to be left to architects*.' (De Carlo, 1970; Blundell Jones, Petrescu, Till, 2005); '*Architecture is far more than the work of architects*.' (Hill 2003).

It is within this point that this paper situates and explores 'practice at the edge of architecture' as a learning matrix that seeks to respond to the complexities of social challenges within the contested territories of the Global South in the form of a community intervention. The idea behind this approach to practice and learning suggest that architecture practice could be more socially-minded while engaging people in that context towards solving problems without necessarily playing by the rules of professional ethics. Hence edge practice does not only provide alternative to mainstream practice but reveals the tensions that lie beneath the surface of architectural practice through spatial agencies, and seek a more ethical, bottom-up, vernacular-based and locally resilient approach to future practice.

Nicholas Ray raises an ethical question about the work of the architect whose concerns and interest are built around aesthetics and building appearance than the social and environment concerns. As quoted by Ray:

> 'For too long architectural discourse has been limited largely to a question of aesthetics itself, as though architecture were some autonomous art form which stand outside the constraints of capitalist production.' (Ray 2005).

The notion of 'practice at the edge of architecture' agrees with the philosophy of Cedric Price who opines that not every process of architecture leads to a building as a product[6]. The above premise situates edge practice as a form of intervention whose pedagogy is structured towards inculcating into students the values for community and civic action in providing solutions to problems. The role of the architect becomes a mediator or spatial agent who assists communities to evolving. It is important to state that those operating inside the edge are the architects while those outside the edge are non-architects, other professionals, civic society, and community members[7]. The questions that this form of pedagogical practice raises are what should students learn and which skills are increasingly important to have in order to rise to the many challenges social architects face in practice? These questions became the underlying principles of IDS pedagogy.

2.0 INTEGRATED DESIGN STUDIO PEDAGOGY

The department of Architecture Imo State University Owerri-Nigeria has since its inception in 1992 operated Integrated Design Studio model in teaching and learning architectural design at the core of its curriculum structure. The department seeks to produce architects whose role in this transition requires the right attitude of mind which recognizes design as a holistic developmental process requiring integration of several disciplines and sympathetic understanding of the needs of the society[7]. The above philosophy of the school is linked with the general objective of education of the federal republic of Nigeria that states:

- Reforming the content of general education to make it more responsive to the Socio-economic needs of the country;
- Consolidating and developing the nation's system of higher education in response to the economy and manpower needs. (FGN 1975).

The scope of IDS community study is graded into rural, semi-urban, and urban communities involving students inYr.3, Yr.4 and MSc1 respectively. Most examples and inspirations are drawn from Rural Studio University of Auburn (USA), Live Project University of Sheffield, (UK).

2.1. Methodological approach to integrated design studio (IDS) pedagogy

IDS-pedagogy was remodelled recently by a research team in the department led by the author. IDS is driven on the premise of 'experiential and situated learning; which is substantially appreciated when learning is done in real time in real context (Lave and Wenger, 1991; Sara, 2004). The design module for IDM is mapped into five stages namely:

- Documentation

- Analysis/Synthesis
- Planning and Proposal (land-use and master plan)
- and Demonstration/Construction

Students are taken on a three weeks tutorial lectures and seminars showing the basic processes of conducting the fieldwork exercise, methods of data collection and presentation, ethical procedures in dealing with members of the community, mapping of possible strategies to reflect ideas each member brings into the group project, updating existing map(s) of the study area. A formal reconnaissance of the study area is done with tutors and the students in an arranged meeting with the community representatives. A community is selected for study by the tutors based on population, evidence of informal settlement, lack of government presence, low standard of living, absents of basic and social infrastructure.

The study last for one academic year of two non-contiguous semesters, but within the first semester students are expected to document and analyse their finding while synthesis, proposal and demonstration is done in the second semester. At the end of 4 weeks students are expected back in the studio to document and analyse all the data collected through observation, interviews, questionnaire, photographs, mapping local concerns.

Figure 1: Okuku communit study through ids (2012) -source (integrated design studio 2012, 3rd year undergraduate students).

Fig. 1 shows the state of existing facilities in Okuku community where students identified the poor state of roads, dilapidated school facilities and the nature of open spaces while opportunities like arable farmland, settlement patterns,

2.2. Group project: Okuku community study

Okuku is a rural community in Owerri-West local government area of Imo State in South-East Nigeria with a population of 3,124 inhabitants in 2012, and a distance of 2.5km away from the capital (Owerri) yet far from development[8]. The community was inaccessible to the outside world due to the effect of erosion and flooding.

2.3. Study objective

The study was set to explore how architecture can create social intervention in an informal settlement through multiple authorships and co-production of knowledge.

2.4. Group task

A total of thirty students registered for the IDS community project were zoned into five groups saddled with following task.

Group 1: Physical Context- This group's task involved locating the community within the regional context using maps, climatic conditions (temperature, humidity, rainfall, wind direction), topography and drainage systems, erosion issues, geology (soil types, soil bearing capacity), vegetation cover and their characteristics, fauna (animals and pests). Most of the data the group deals with are obtained through referencing existing literature while base maps are updated through observation and reconnaissance.

Group 2: Social Cultural and Economic Context- This group documented issues on historical origin of the community, cultural practices, settlement patterns, demographic data (age/sex, labour force, household sizes). Bye-laws, employment/occupational classifications, industrial base (types of industries, small/medium scale), services, agricultural activities etc.

Group 3: Housing- The task includes understanding and observing settlement patterns, housing policies, housing stock, housing demand/supply, housing typology, condition of buildings, building services, open spaces, land tenure system, household size, building conservation/preservation.
Group 4: Social Infrastructure- students in this group classify and document the hierarchy of schools (nursery, primary, secondary, vocational/technical) their locations, population, staff strength, area served, churches/mosques/town hall, health centres, leisure (sources of entertainment and recreation, festivals, swimming, football, lawn tennis).

Group 5: Physical Infrastructures- Modes of transportation, road network system, traffic volumes, public parking spaces, classification of vehicles in respect to road carriages, water supply and demand (sources of water), energy (types of energy, different sources of energy, demand and supply of energy), communication (means of communication, -telecommunication), firefighting measures, sanitation system, refuse disposal methods, existing land use pattern, physical constraints (flooding, erosion prone areas, rivers/lakes, overhead high tension cable), opportunities (waterfall, fertile soil, cultural heritage sites) that can be developed.

2.5. Project phases

Phase I- fieldwork (physical, economic, and social survey). Every group defines the study area, collect and document data.

Phase II- Analysis/synthesis of data: Students are expected to state the goals and objectives of the study, further researches are done to establish the basic standards and tools for analysis, where the data collected are weighed against minimum standards from literature.

Phase III- Planning and programming: Analysis/synthesis are articulated to build up a conceptual scenario towards realizing the set goals and objectives of the project and as such the students' philosophy and conceptual structured plan are concretized in real terms through building up flow charts, bubble diagrams, space matrixes, tables that will form the proposed action plan.

Phase IV-Design Project: The design proposal is made after careful analysis and synthesis through planning programming that highlights the basic needs of the study area and possible architectural design solutions graphically demonstrated in the master plan proposal.
The study outcomes, students' and tutors' reflective experiences will be discussed under the themes below.

2.6. Documentation and analysis

Documentation as Ukanwa defines it in relation to architectural design as:

> "The collection of relevant data in respect of any given program and consequent presentation of such data in the acceptable architectural means of communication." (Ukanwa, 2004:19).

Analysis: The documented problems in the form of data are further broken down into their various parts to make sense of each element as they are appraised to ascertain their conformity, non-conformity, deviation, potentials, and challenges based on acceptable standards, rules, laws and policies (Ukanwa, 2004).
Based on the reports of the groups the following social and environmental challenges were identified:
Lack of access roads, lack of adequate primary health centre, existing primary was oversubscribed with paucity of adequate facilities, lack of basic social amenities (electricity, pipe-borne water), poor building orientation, low roof pitches, devastating effect of erosion among others.

> My experience living and learning in an informal settlement through this community study created in me a sense of responsibility and the tenacity to be part of a solution haven't experienced the depth of problems in their real state that are challenging communities. This experience is better achieved when you immerse yourself as part of the community (from a Yr.3 IDS student's reflection, 2012).

The student groups analysed and synthesized the earlier documented observable challenges in the form of data that was presented to the community to enhance a better understanding of the challenges, prospects and possible solution.

2.7. Planning and proposal

Collaboratively, the students outlined the following planning strategies:

- The need to build a primary health centre that is capable of providing the basic healthcare needs of the community.
- Analysis shows that most roads in the community were oriented against the contours which subject the roads to constant wear by run-off water causing flooding. A re-alignment of the roads in the direction of flow was suggested.
- A new primary school to be built while the existing facility will be upgraded new primary school and the upgrade of the existing facilities as they are being over-subscribed in terms of human and material resources. This was done from analytical point of view that in the next 10 years the population of people within primary school age currently at 341 will be 513 and as such 172 pupils will be displaced or denied access to school within the period in view.

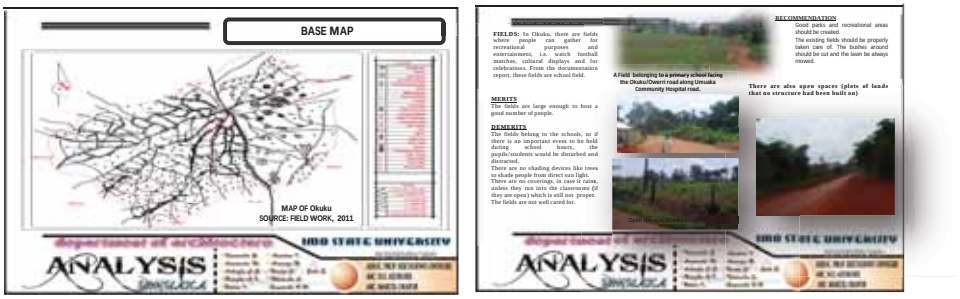

Figure 2: Students documentation/analysis report. (source: okuku community ids group fieldwork, 2012).

4.0 OPPORTUNITIES/ LEARNING OUTCOMES

The students observed the presence of a continuous flowing water body in the form of a stream at the lower end of the community which they proposed could be potentially developed into a waterfront resort that can serve as some form of tourist site.

The students analysed the existing land-use pattern and observed 2/3rd of the land mass predominantly used for agricultural activities and further investigation reviewed that the community's major occupation is farming. They propose for some form of mechanized agricultural activities for investors.

The settlement pattern tends to support a communal settlement morphology where people live in clusters and have common open spaces used for multi-functions (meetings/communal activities, recreation, cooking and storage units). The housing group proposed a low-income house type informed by the settlement pattern and cultural identity that will be built with local available building materials.

The idea behind this model is to develop students' critical thinking and creative ability to conceive and test design ideas in real time with real problems through a co-production of knowledge with the community. This unique pedagogical opportunity inherent in IDS model is argued to weigh beyond those simulated in the design studio. The project was not aimed at design-build model but rather provides a tangible working solution for the community and a tool for learning within the context of informal rural settlements. As part of work in progress the author is currently working on obstacle to social architecture which is hope will provide a framework for sourcing funds that will enable IDS research network execute future proposals.

5.0 REFLECTION

Building relationship with people you work with, taking responsibility and making decision that might even lead to failure is crucial for a learning process (Achipovaite, 2014:128).

5.1. Students' reflections

Students' reflecting on their experiences in the community study using IDS model shows how students became much aware of how their environment can influence their thought process as they became part of the community. Adopting ethnography enriched the quality of factual data students obtained in the process of immersing themselves as part of the community which built trust and confidence on the part of the community.

> As we engaged more in the study the more we understood the problems and conceived great ideas within the context, the fast our preconceived ideas get eroded or better shaped while our thinking becomes more clearer (from a Yr.3 IDS student's reflection, 2012).

The group work developed the students' collaborative skills as they understand and see how other member of the group view and approach problems. Working collectively as a team reflects activities that occur in practice.

Students are in control of their learning while taking important decisions in the project. This approach supports Webster case for students centred learning as against tutor centred learning pedagogy which she argues allow the students to dictate how and what inform their learning in the 21st century (Webster, 2004).

The impact of working with the local community members exposed the students to immense wealth of local knowledge in terms of understanding local building techniques, crafts, sustainable local materials, local tacit knowledge of climate and seasons as it relates to agricultural activities etc.

> The memories of contested spaces and tentative interventions provided within the same context remained mapped in my mind; this is a valuable asset that will be used for future scenario. This became my most memorable experience of the fieldwork (from a Yr.3 IDS student's reflection, 2012).
>
> My hunch for community design project grew stronger after watching a presentation by the tutor of a typical community intervention project in a riverine slum community in Makoko Lagos-Nigeria by architect Kunle Adeyemi of NLE' who designed the Lagos Floating School. It became clear that

architecture in the midst of ecological, social and environmental challenges facing communities can provide intervention as a sustainable bridge (from a Yr.3 IDS student's reflection, 2012).

5.2. Tutors' reflections

Part of what we learnt from this approach to learning was first, the accelerated rate at which students understood and attempted to proffer solutions based on a clear sense of sight, this affirms to what Skotte emphasizes about experiential learning 'the way we learn is not by being told but by being part of' (Skotte, 2011:42). While facilitating this learning process, students' reflection on their experience become more like a teaching aid for subsequent fieldwork and also serves as some form of feedback towards improving the model. Students' assuming the role of professionals also challenges them beyond their own actions to being aware of the ethical and professional implications of their engagements and also developing a tradition of becoming social architect (Archipovaite, 2014).

6.0 CHALLENGES OF IDS APPROACH TO LEARNING

Over the years IDS and similar approaches to learning have being proved to be a viable tool for learning and intervention within informal settlements in the global south but funding support is being a great challenge to adopting this approach in a wider scale. Greater part of the design proposals have only ended up as academic documents and action- working documents for the communities without being constructed. The structure of academic calendar of the university challenges the sustainability of IDS as students are also made to offer other theoretical modules while reducing the amount of time dedicated to the fieldwork. High rate of insecurity in Nigeria in the form of kidnapping, religious crises, youthful unrest, terrorism attack in recent times are on the rise.

CONCLUSION

Ukanwa argued earlier that integrated design studio (IDS) model equips students with the ability to identify architectural design job opportunities in the communities and create architectural design projects therefrom rather than waiting in the office for client's commissioning[9].

Practice at the edge of architecture draws the notion that architecture (in the form of spatial agency) could mediate those forces that condition architecture practice in a more culturally and socially resilient way and stimulates intangible future values in community practice. Edge practice creates potential for interdisciplinary practice, engaging beyond a single disciplinary practice to a more resilient hybrid practice. IDSM brings democratization into the social relationship between members involved in the process to create some form of fluidity in the power dynamics where students, tutors (facilitators), and community members who get involved in taking decisions concerning them. IDSM is research oriented and promotes research-in practice that is currently at the fore front of architects' professional body in the United Kingdom[10].

This approach to practice in no doubt develops students' skills and knowledge in project planning, analysis, communication, architect-client relations, and environmental consciousness. IDS-model creates a spring board to future research since it approach to data collection involves a methodological process of documentation, analysis/ synthesis in creating a coherent proposal which is not only a contribution to knowledge but a social intervention.

REFERENCES

Archipovaite, E. 2014. From studio to the field: learning and teaching in context. AAE 2014 conference Proceedings, University of Sheffield, UK, pp. 126-129.

Blundell-Jones, P., Petrescu, D., & Till, J. (Eds.). 2005. *Architecture and participation*. Taylor & Francis.

De Carlos, G. 1970. Architecture's public. *Journal of Environment* (3).

Federal Government of Nigeria, FGN 1975: *Third National Development Plan, 1975-1980*, Vol. 1, The Central Planning Office, Federal Ministry of Economic Development, Lagos.

Hill, D. 2012. *Future Practice: conversation at the edge of architecture*. New York: Routledge.

Hill, J. 2003. *Actions of architecture: architects and creative users*. Routledge.

Hyde, R. 2012. *Future Practice: conversation at the edge of architecture.* New York: Routledge

Jamieson, C. 2011. Future for Architects. Building |Futures, [online] available at http://www.buildingfutures.org.uk/ (assessed 6th March 2014).

Lave, J., & Wenger, E. 1991. *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Ray, N. (Ed.). 2005. *Architecture and its ethical dilemmas*. Taylor & Francis.

Sara, R. 2004. *Between Studio and Street: The Role of the Live Project in Architectural Education*, PhD thesis University of Sheffield.

Skotte, H. 2014. Teaching to Learn- learning to teach learning experience from reality of an ever-changing world. In *Alternative development: unveiling marginalization, voicing change*, Brun C., Jones M. Blaikie P. Farnham: Ashgate.

Ukanwa, O. E. 2004. Integrated Studio method as a sustainable architectural module: procedures, prospects, and problems. *Journal of Association of architectural educators in Nigeria (AARCHES),* vol.3 no.1, pp. 17-22.

Webster, H. 2004. The design Diary: promoting reflective practice in the design studio. Paper presented at the EAAE transactions on architectural education. Architectural design: monitoring architectural design, Greece.

ENDNOTES

1. Crawford, Margaret. Can Architects be Socially Responsible? In Ghirardo, D (Ed.). A *Social Out of Site Criticism of Architecture*. Seattle, USA: Bay Press. 1991. pp. 27-45.
2. Till, Jeremy. Lost Judgement. In: E. Harder, ed. *EAAE Prize 2003-2005 Writings in architectural education*. Copenhagen: EAAE. 2005. pp.164-183, [online] available at: http://www.eaae.be/old/web_data/documents/ (accessed 6th September 2014).
3. Architectural Design II Programme (Arc.311) of the Department of Architecture, Imo State University Owerri. 2011/2012 academic session.
4. See 3 above.
5. Building Future Think Series published a research conducted in 2011 to inquire about the changing roles of the architect and explore the future trend in the profession with the research question of what will those trained in architecture be called in the next 20 years? see details on http://www.buildingfutures.org.uk/projects/building-futures/.
6. Cedric Price (1934-2003) was an architect whose philosophy and ideology questions how architecture was being associated with building as an end product and used ‘as a means of consolidating power’ but he was of the opinion that architecture should be conceived as some form of interventions, flexible and adaptable. See Price, Cedric. *Cedric Price*. [London]: [Architectural Association]. 1984.
7. Hill, Dan. Forward. In: Hyde, R., *Future Practice: conversations from the edge of architecture.* New York: Routledge. 2012. pp. 7-15.
8. IDS-Project (Yr.3 Department of architecture, IMSU-Oweri): Okuku community study. 2012
9. Ukanwa, Emma. Integrated Studio method as a sustainable architectural module: procedures, prospects, and problems. *Journal of Association of architectural educators in Nigeria (AARCHES),* Vol.3 no.1. 2004. pp. 17-22.