The Value of Architectural Education in Nigeria: Students' Expectations in Six Schools of Architecture in South-East Nigeria.

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Introduction

Architectural education in Nigeria has not seen many changes in its programmes from the inception of the first school of architecture in 1952 (Adeyemi, 2000; Olotuah & Adesiji, 2005; Uji, 2001). The schools have been under heavy criticism by students and younger graduates for a decade now as a result of access through globalization to information technology and current practices in other parts of the world (Uji, 2001:110). Architectural programmes have become stale. Studio learning culture and its underlying rituals and processes, have not really changed over the past 50 years and this is one of our biggest weaknesses in architectural education (Salama & Wilkinson, 2007:41; Slessor, 2012; Bauchanan, 2012:92). Schools of architecture are struggling to keep up with issues that have transformed architecture practice in other parts of the world (Olotuah, 2000; Nicol & Pilling, 2000). This trend has not only negatively positioned our graduates to gain from the wider knowledge and market offered by globalization in the industry in this 21st Century, but has equally diminished their knowledge (Sa'ad, 2001:2). The rapid changes evolving from virtual studios, international collaborations, BIM, sustainable and green architecture as well as humanitarian architecture has changed architectural education and practice in recent times.

Globally, the rules governing how one becomes skilled and work-ready are changing and architectural education in Nigeria must change with it or risk its relevance in the built environment. The question this paper is asking here is, what does the path to relevance look like and in what direction/s should it be going?

David Nicol and Simon Pilling (2000) write in *Changing Architectural Education Towards a new Professionalism* that recent changes taking place in the society occasioned by advancement in technology and information growth necessitates the education of the architect to be flexible, versatile and restructured towards acquiring relevant skills and knowledge to respond to these changes and continue throughout the life career of the architect (ibid:1). Jeremy Till argues that the changing role of the architect is inevitable in this era where the only constant is change, but cautions as he states:

'*the request for "relevant" forms of new knowledge is therefore distracting, because what is new now is going to be out of date, irrelevant even, by the time our students face the world. Societal, and thus spatial, constructs are emerging with such rapidity that we can no longer educate for fixity […] the radical contingency of architectural practice demands new forms of education, not new forms of knowledge*' (Till, 2005:171).

This is also raising several questions about *how will the architect be educated*? *How will the architect remain relevant in the society where change has continued to sophisticate the demands of contemporary society*? A critic Will Hunter opines that architectural education needs to be responsive to these changes though not by default but rather taking an alternative approach to addressing critical issues in the education of the architect (Hunter 2012:88). First he believes schools of architecture need to operate alternative pedagogical models in the form of Avant-garde, prompting radical innovative ways of teaching and learning that will inform the process of critical thinking and the creative potential of the student-architect, exposing students to real life problems (Hunter, ibid). This might in turn prepare students for professional practice, creating flexibility in architecture through a network of interdisciplinary approaches to solving problems: taking architecture back to society and designing from first principles through understanding the socio-political context of society while encouraging community participation in design decision process as Bryan Bell (2004:13) advocates: positioning students at the centre of their learning, where they decide what and how to learn (Webster, 2004:10).

To gain a deeper insight into these issues, collaborative research was conducted in 2012-2013 in six schools of architecture in South-East Nigeria. Imo State University and Federal University of Technology in Imo State, University of Nigeria and Enugu State University of Technology in Enugu State, Anambra State University of Technology Uli and Abia States University in Abia State. The team sampled five first year master (M.Sc.I) students from each university/department/school, who, having compulsorily completed a one year internship of the National Youth Service Corpse (NYSC) have been exposed to practice.

Research Objectives

The aim of the study was to understand what motivated their undergraduate studies in architecture and what informed their learning. The objectives were as follows: To highlight the attributes that makes the best learning experience for architecture student. To define and differentiate what is understood by 'good learning experiences'. To give an overview of factors that could comprise 'good learning experience' in architectural education.

Method

A structured and standard open-ended questionnaire was employed using Likert scale of range 0 (not at all) to 5 (completely) and also provision for comments with the view to capture their experiences both in their undergraduate years and in the internship programme. The research questionnaire was intended to also allow the respondents to assess their best experiences.

Analysis and Evaluation

The questionnaires were collected and analysed. In many respects the answers are not at all unexpected. All points to flexible student/lecturer relationship, especially in jury sessions. There were, nevertheless, some unexpected aspects, opinions and much valued experience which prepare for interesting reading. It is those experiences that offer food for thought and help us reflect on how to potentially improve the student learning experiences in our programmes once basic quality levels have been achieved. Generalizing from these novel ideas or implementing these 'valued' experiences without further research and reflection will be difficult and is not necessarily advocated. The best learning experiences are after all derived from a very small, self-selected sample of students. Moreover, students' individual experiences differ even in the same university and programmes due to their different backgrounds, preferred learning styles, prior experiences and knowledge, all of which impacts on what an individual value in their learning.

Several factors were identified and grouped into six major themes to influence students' (respondents) education and learning experiences. Thematically they are:

- Practice-based learning
- Existing studio space,
- Studio culture
- Impact of IT and Computer Aided Design
- Visual experience
- Lecturer Enthusiasm and Experience

Practice- Based Learning

In one form or another, most students' responses emphasize the value of practice-based learning - a form of hands-on learning in 3rd year- particularly in the building sites where things are decidedly tangible and real. Since all the schools run a six month Students Industrial Work Experience Scheme (SIWES) attachment at that level, the suggestion is that accessing this in the construction industry will broaden and enhance their confidence in their final year (4th year) degree examination. Being able to apply theoretical knowledge within the workplace is crucial in enabling a student to gain confidence on their own ability. By contrast, the practice-based education that a limited number of students cherish stems from a placement in some firms that have several live projects. The experience is valued not only for the learning but also the contacts they were able to make during this time, which they found useful for their dissertation work and which will probably help them in going back to such firms for a job after graduation. This resonates with the emphasis placed on live projects as a practical tool for understanding professional practice in architecture whose values and rituals equips the would-be architect with skills and knowledge in working with real clients (Sara, 2000:83; Chiles, 2000:99; Brown, 2014:19).

Existing Studio Space, Facility and Population

In Imo State University for an instance, since its establishment in 1992, the total space made available by the university management to conduct studio work in the department of architecture has always been under 250 schemes and has not increased to-date despite the continued growth of the nominal roll of students annually. This is reflected in four out of the six schools' feedback. The feedback reflected that the studio spaces provided are always inadequate, in terms of the quantity, quality and mix. They indicated poor storage facilities for work and personal belongings, inadequate power supply (or non-existent) insufficient pin-up and jury/crit space, poor atmosphere and lack of water supply and toilet facilities are serious setbacks.

At Imo State University, in the last six years, spaces that were meant for thirty students (in this case, 54 skeins) in 3rd year studio are currently occupied by sixty students. The same is applicable in the other studios. This leaves the studios crowded, clumsy and non-interactive. This observation is shared by the other schools. Instructors find it difficult to move around within the studio space to fulfil one-on-one contact interaction that is mandatory for all studio work. Consequently, the staff engage in lecture discussion in place of personal contacts during studio hours, leaving such desired contacts to lecturers' offices or jury sessions. This is the scenario in all the undergraduate levels and in all the schools. A recent final jury conducted in September 2012 in 2nd and 3rd years at Imo State University, evidenced many students that lack confidence and could not orally present their work, indicating the non-participatory status of studio contact. The department currently has a population of 310 students with a staff strength of 14 (9 active design staff), as against requiring 210 students to 30 lecturers,

the available studio space still remaining at 250 screens.

Studio Culture

The six schools of architecture involved in the survey have similar studio cultures with slight differences. Their differences are unique. The discipline of architecture is very diverse in its programmes and teaching methodologies all over the world. Despite this great diversity, there are uniform patterns of behaviour that transcend each programme. Nothing is more revealing of studio culture than the actions of its students to promote this culture. In this case the department of architecture, Imo State University, Owerri.

Students are compelled to work in the design studios to produce their drawing and models. In architecture studio, culturally all students' work are made open to other members of the studio and the entire architecture community. As a consequence, every student can see what every other student is doing and is free to critique and appraise each other's work. Every student witnesses the strategies that others use to develop their design concepts. There is public critique or jury sessions being conducted by the studio instructors for interim jury and the entire staff for departmental jury.

'Thomas Dutton and Kathryn Anthony, have called the consequences of this culture the "hidden curriculum" of studio learning. In simple terms, the hidden curriculum refers to those unstated values, attitudes, and norms that stem from the social relations of the school and classroom as well as the content of the course (Dutton, 1991). Habits and culture are passed on throughout the years, and patterns are built upon generations of students, educators, and practitioners.'

(Koch et al., 2002:4)

When this studio culture is distorted, studio education and value is lost.

Central to the agitations of students is the belief that their education is not equipping them adequately for professional practice, so reiterating the suggestion of Will Hunter, Catherine Slessor, Jeremy Till on the need for alternative pedagogy that is not predicated on fixed knowledge. It is important to note that these alternative pedagogical approaches are already gaining recognition and are being experimented with at the edge of mainstream education while some are already playing out into the mainstream. We align ourselves here with the thoughts of Beatrice Colomina et al (2012:79) who gave an account of how students questioned the value of their education and revolted against certain pedagogies that were incapable of addressing social and political concerns. They assert that in such cases 'Radical Pedagogy' has always been the answer. One would be tempted to ask, what is radical pedagogy? Colomina et al posit that radical pedagogies are those pedagogical experiments in architecture that tend to question mainstream architectural education. Stating further that radical pedagogy goes out of the normative to provide alternatives where they could draw their strength from social, political, and multidisciplinary approaches (Colomina et al, ibid).

Impact of Information Technology (IT) and Computer Aided Design (CAD)

Very few schools have CAD properly enshrined in their curriculum. Four out of the six has only 1-2 unit load of CAD for their program. One has no CAD program at all. Imo State University has 6 unit loads of CAD spread between 2nd to 4th years. CAD was introduced into the curriculum first at 3rd year in 2003. The following year, it was adjusted to run as one unit load in each of the two semesters in 2nd year, same in 3rd year and two single units in the second semester of 4th year. By 2007, CAD had rooted firmly in the department. In 2008, year one master students were allowed to present their final work in CAD. Advancement in information technology is placing new demands on construction industries and architectural practice. Students see these changes as a threat to their education, since the rate at which technology in architecture continues to sophisticate the proliferation of software and virtual environment does not match architectural education, which has remained slow in catching up with developments. Sa'ad cautions that schools of architecture in Nigeria need to respond to these rapid development in information society through proactive curriculum reform (Sa'ad, 2001:6).

Visual Experience (Experiential Learning)

Considering that we are constantly surrounded by buildings and infrastructure, it is surprisingly difficult to witness the actual process of large-scale construction that leads to a building's existence. Corporate buildings and large constructions are usually sited in a mega metropolis like Abuja and Lagos. These are far from this region. In these cities, construction sites are often hidden behind high fences and the general public is kept at a safe distance from most construction sites. Some of the students implied that some aspects in built environment education are difficult to visualize from a mere verbal account in a classroom and are better understood by seeing them first hand. Video slides about building/landscape and construction techniques have been suggested to be useful as educational tools in telling better stories of how construction is evolving in other parts of the world.

Lecturer Enthusiasm and Experience

It is without doubt that a passionate and enthusiastic teacher makes learning more fun in any subject. Not surprisingly, a number of students expressed that they

learn better when the topic is delivered imaginatively, as well as enthusiastically through a relaxed, good tutor-student relationship. We as teachers most probably have experienced this connection from the expression and enthusiasm of students as well. For the students, there appears to be an additional need, albeit related, aspect to teacher enthusiasm: personal experience. Engagement and personal experience in a subject contributes significantly to the tutor's delivery skills. Some students opine that teaching needs to be creative through the passion of the tutor.

The key element in terms of a good learning experience is *how* knowledge is passed on. Taking a clue from Donald Schon's writing in one of his books *Educating The Reflective Practitioner* he presents the apprenticeship model of architectural education to possess a higher relevance to professional knowledge than technical process (Schon, 1987:22). Schon believes that learning in professional fields like architecture involves reflection-in-action which he calls 'practicum' where a student learns by doing through reflection on the tutor's (expert) experience. He cites an example of the student Petra who learnt how to resolve design problem from her tutor Mr. Quist through a joint reflection (Schon, 1985:32-52). However, Schon's Theory of Reflective Practice has received several criticisms, with examples given of other forms of learning beyond taking instructions from the expert tutor. Webster (2008:69), for example, argues that a novice can become an expert, citing examples to include personal and situated learning approaches.

Conclusion: **the Way Forward?**

This survey has revealed several issues students believe should inform their education, nevertheless their accounts also show a true reflection of the existing situation in schools of architecture in Nigeria. Among the issues they identified, many reflected an approach to design education which places the instructor in control of what students should learn (Teacher-Centred-Learning). I believe their concern is genuine as Webster (2008:69-70) argues that Prosser and Trigwell's ethnographic research provides evidence that Teacher-Centred-Learning has become less effective in educational pedagogy in recent times and advocates for a Student-Centred-Learning approach.

Information technology (IT) in architectural education, as they complained, is transforming the way architectural design is taught and learnt moving design studio from drawing board to cyber design studio. The mastery and the use of these tools in design education in Nigeria is relatively slow and not without its non-human challenges like constant electricity, broadband internet connection, and the curriculum. There is an urgent need for universities in Nigeria to be IT compliant while government and the university management should endeavour to upgrade power supply and physical infrastructure which is the backbone to any nation's economic development. The curriculum is attributed to be one of the major factors in the education of the architect that should be constantly reviewed to meet contemporary changes in society. In Nigeria, the curriculum modelled after the Bauhaus and Beaux Arts model has remained moribund and has lost touch with the socio-cultural fabric of Nigeria as a multi-cultural society (Adeyemi, 2000; Uji, 2001). This accounts for why architectural design is taught as an academic discipline which loses sight of the fact that architecture is influenced by social, political and cultural antecedents of society (Olotuah, 2006:86).

Architectural design models have also been faulted to lack the presence of real design issues and real clients, which Sara (2004) believes prepares the architect-student for professional practice in the real world where the process of commissioning involves negotiating and collaborative skills. Students believe that what influences their creativity and critical reasoning includes exposure to places beyond their immediate environment through excursions, attending conferences and visits to renowned cities around the world to provoke their creative abilities.

It is also obvious to observe that the architectural design educational model is anchored on problem-based learning (PBL) tracing it back to the atelier system of the Bauhaus through design competitions (Sara, ibid). Rosie Parnell agrees with Sara but argues further that this approach to education comes with its inherent contradictions and disjunctions if not properly handled (Parnell, 2001). She argues that with the introduction of peer discussion in a PBL design approach, facilitated by the tutor, a student's spatial intelligence and critical reasoning skills in architecture can be enhanced (Parnell ibid).

In conclusion there is need to reposition students' learning approaches such that they take their learning in their own hands. It therefore behoves architectural educators to continually chart for alternative, innovative approaches to design education in order to develop the right disciplinary values towards meeting contemporary societal challenges.

References

Adeyemi, E. A. (2000) Lest we Forget. Keynote address to the 7th Annual General Meeting/National Workshop of the AARCHES, 24 – 27 February 2000, Federal University of Technology, Akure.

Bauchanan, P. (2012). The Big Rethink: Rethinking Architectural Education. Architectural Review: Education Issue, (28th September 2012.

Bell, B. (2004). Design for the 98% without Architect. In: Bell, B (Ed). *Good deeds, good design: community service through architecture*. Princeton Architectural Press.

Brown, J. (2014) Learning theories for live projects. In Harriss, H. & Widder, L. (Ed). Architecture Live Projects Pedagogy into Practice. London & New York: Routledge, pp.18-23.
Chiles, P. (2000) The real client and the unreal project: A diploma case study. In: Nicol, D. & Pilling, S. Changing Architectural Education Towards a New Professionalism. Abingdon, Oxon: Spon Press, pp. 93-99.
Colomina, B. Chio, E. Dalan, I.G. Meister A. M. (2012). Radical Pedagogy in Architectural Education: Education Issue, (28th September 2012).
Cuff, D. (1991) Architecture: the story of practice. Cambridge, Mass; London, MIT Press.
Dutton, T. A. (1991). The hidden curriculum and the design studio. *Voices in Architectural Education: cultural politics and pedagogy'* New York: Bergin and Garvey.
Hunter, W. (2012). Alternative Route for Architecture: Education Issue, (28th September 2012).
Koch, A., Schwennsen, K., Dutton, T. A., & Smith, D. (2002) *The Redesign of Studio Culture*. A report for AIAS Studio Culture Task Force. Washington D.C.: AIAS.
Nicol, D. & Pilling, S. (2000) Architectural education and professionalism: Preparing for the future. In: Nicol, D. & Pilling, S. *Changing Architectural Education Towards a New Professionalism.* Abingdon, Oxon: Spon Press, pp. 1-27.
Olotuah, A. O. (2000) Architect–Educators and the Curriculum in Architecture: Roles and Expectations in the 21st Century. AARCHES J., 1 (5), August, pp. 29–32.
Olotuah, A. O. (2006) At crossroads of architectural education in Nigeria. CEBE Transactions, 3 (2) September 2006, pp. 80-88 (9).
Olotuah, A. O. & Adesiji, O. S. (2005) An Appraisal of Architectural Education in Nigeria. Proceedings of The Built Environment Education Conference, CEBE, London, UK, 5-6 September.
Parnell, R. (2001) It's Good to Talk: Managing Disjunction through Peer Discussion.
Sa'ad, T. H. (2001) The Changing Role of the Architect and Architecture in the Context of the Ever-Changing Technology, Socio-economic and Political Global Environment. In U. O. Nkwogu (Ed.) Architects and Architecture in Nigeria – A Tribute to Prof. E.A Adeyemi. Akure: AARCHES, Shalom Publishers, pp. 1–16.
Salama, A. Wilkinson, N. (2007). Introduction: Theoretical perspectives and Positions. In Salama, A. & Wilkinson, N. (Ed). *Design studio pedagogy: Horizons for the future*. Gateshead, UK: Urban International Press, pp. 41-46.
Sara, R. (2004) Between Studio and Street: The Role of the Live Project in Architectural Education, PhD Thesis, University of Sheffield.
Slessor, C. (2012). Architectural Education: A Call to Arm. Architectural Review: Education Issue, (28th September 2012).
Till, J. (2003). Lost judgement. *EAAE Prize*, *2005*, 164-181.
Uji, A. Z. (2001) Beyond the Critiques of the Curriculum of Architectural Education in Nigeria. In U. O. Nkwogu (Ed.) Architects and Architecture in Nigeria – A Tribute to Prof. E.A Adeyemi. Akure: AARCHES, Shalom Publishers, pp. 109–122.
Webster, H. (2008). Architectural education after Schön: Cracks, blurs, boundaries and beyond. *Journal for Education in the Built Environment*, *3*(2), 63-74.