

# RESEARCH AND THE FUTURE OF ARCHITECTURE EDUCATION IN EAST AFRICA

## Introduction

Research in architecture education in East Africa has for the most part been presented in what can best be described as a “silo” approach, presented in a stand alone “Research Methodology” courses that are separate from perceived core of architecture, the design studio. Research was (and is) not regarded as part of architecture, thus having a separate life outside the ‘design process’. Architecture education in this context became the in the all too familiar situation in much of Africa, “the presentation, the transmission of packaged, or pre-digested, information – education as instruction administered to the ‘ignorant’ by experts” (Mills and Lipman, 1994: 214), and largely unchallenged by the receivers of the knowledge, and taken to be apolitical, thus universally relevant (Owolabi, 2007). For faculty in the [Named School] at [Named University], this approach was not judged to be the most appropriate for architecture education for future professionals.

## Background

Changes in 2008 to the architecture programme at the [Named University] provided an opportunity to review the place of research as a component of architecture education. It was evident that architecture education in the twenty-first century could not be approached the same as it was when it was first introduced to the region in the 1950s. This has largely followed the Beaux-Arts model.

## Not a Paradigm Shift

Incorporating research into architecture education is not new, existing as part of architecture from the nineteenth century (Stevens, 1996). It became a fundamental part of architecture education in many countries of the British Commonwealth after the 1958 Oxford Conference which ushered into architecture education a research culture, a confirmation of architecture education within the university setting, and an acknowledgement of the broader goals of architecture

education (Blythe, 1997). The transition to the Master of Architecture professional qualification in North America during the 1970s and in the rest of the world during the last decade have been particularly influential in ensuring research was a significant component of architecture education.

## Changing Architecture Education

The changes proposed to the programme were significant for they presented a radically different model for architecture education. It included: changing the pedagogy, to Problem Based Learning (PBL); Introducing integrated teaching and learning; and, an increased focus on research in teaching. The changes were to ensure the programme was meeting the needs of architecture and architecture education for the future. A key motivator was the need to offer a competitive programme, as other architecture programmes in the region were relatively similar.

**“you do not know how good your mother’s cooking is until you have been next door.” African Proverb**

## Catalyst for Change

Architecture and architecture education in the context of East Africa is one of question and discovery. Every action one takes as an architect in the educational context is critically scrutinised and with limited best practice examples will form the basis for student projects: use of materials, choice of fenestration, precedents etc. This was a consequence of their past educational experiences. It was therefore important that even the most basic design and construction practices were evaluated, opening up endless research possibilities where limited emphasis had been placed before. The nature of research itself was opened up as its value could only be appreciated by looking from a different perspective, as an African proverb states, “you do not know how good your mother’s cooking is until you have been next door.” Taking students on an overseas trip to Asia was an important step in planting the seeds of research (See Figure 1).

## Implementing Research Based Architecture Education

The premise for the change was that the absence of research in architecture education hampered the growth of architecture, despite the importance of Africa in the development of the Tropical Architecture canon of architecture discourse (Le Roux, 2004). A review of architecture programmes in the region reveals stand alone research courses that espouse largely social science research methods and methodologies, due largely to these course being taught by Humanities and Social Science faculty. In one case the sole research based course was only audited, ensuring the course was not regarded as important by students (or faculty).

## Approach

Integrating research into the curriculum involved a number of steps: First, Identified the nature of teaching and learning in the existing programme and course in all year levels. This included the pedagogy, knowledge inputs and assignments undertaken by students among other things. Parallel to this was an identification of research aspects desired in the context of built environment education, and architecture education in particular. These findings gave an appreciation of the nature of the programme and the existing level of research taking place.

This information served as a basis for determining in conjunction with the published architecture education performance criteria for the commonwealth Association of Architects (CAA) the internationally recognised validating authority for professional architecture programmes in East Africa. The goal was to match knowledge inputs with the development of skills as part of the learning outcomes, embedding research as part of the teaching and learning, and forming part of the assessment process.

A matrix of research elements relative to individual courses was developed based loosely on that provided by Groat and Wang (2002). The matrix identified how much each course unit engaged students in particular research areas, and how much each course emphasised the different research areas identified with the following letters: L=Low; M=Medium; H=High. A similar matrix was developed for assignments, with different research outputs identified for emphasis at different stages of the programme.

While the research components applied to the various courses and ensured exposure to a variety of research methods and techniques,



Figure 1: Inaugural overseas trip to South East Asia, February 2010

a specific research based course ENDS-3601 Advanced Studies in Design was developed as part of the undergraduate programme that focussing on higher level application of research on specific research problems based on faculty research interests. This approach has led to diversity in student research projects and outcomes, as evidenced in examples of student research titles:

- Solar Energy as an alternative source of energy for university student housing (2011)
- Investigating the physical and mechanical properties of Bamboo: *Oxytenanthera Abyssinica* (2011)
- Architecture of a post-colonial community: A critical reflection on the architecture of the former Belgian colonial town of Butare (now Huye), Rwanda (2011)

## Challenges

Transforming architecture education to be more research oriented has been a significant challenge. There have been challenges in incorporating research into the programme, ranging from the expectations of students and the availability of resources to faculty engagement in research. Significant changes included: reorganising teaching allocations, and adjustments to remuneration of Sessional Faculty, which were originally based on a model that did not recognise the different inputs for studio, tutorials or lectures (Olweny, 2011).

Further, students generally expect to be given all the knowledge and information to make them experts in their fields (Olweny and Nshemereirwe, 2006), a legacy of teacher centred teaching at lower levels of education. Overcoming this will require significant effort during the initial phases of architecture education.

A long held belief has been that anyone with a degree was able to teach. However, what was taught tended to come direct from text books, or worse, from notes garnered from past lectures and rarely updated, referred to as ‘Yellow notes’ which “... became yellow and dirty after many years of use ...” (Amutambi, 2012).

## Conclusion

While the transition has not been without its challenges, the outcomes appear to be in line with the what was anticipated. An overall improvement in student design work related to a better appreciation of the origin of design ideas rather than rehashing of old information with

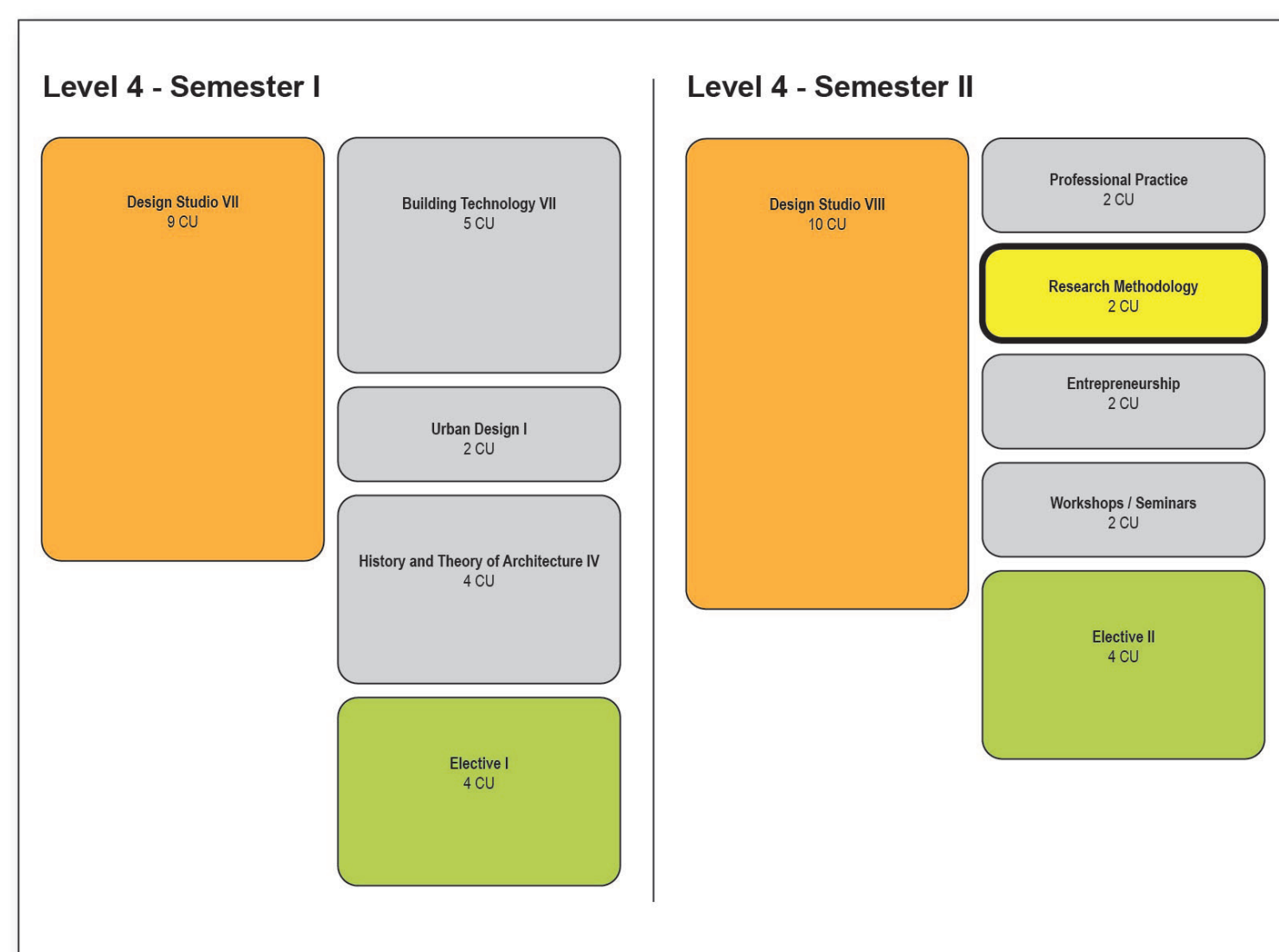


Figure 2: Typical placement of research within courses - as stand alone ‘Research Methodology’ courses

	YEAR I											
	ENDS-1101	ENDS-1121	ENDS-1222	ENDS-1131	ENDS-1222	ENDS-1151	ENDS-1222	ENDS-1240	ENDS-1241	PRE-1101	ENG-1101	LIT-1201
RESEARCH	1.0	4.0	4.0	4.0	4.0	4.5	4.5	3.0	4.0	2.0	2.0	2.0
Interpretative / Critical Evaluation	L	H	H	H	H	M	M	M	L	H	L	L
Documentation / Communication	M	L	H	M	M	L	L	L	L	L	H	L
Data Collection	L	M	M	L	L	L	L	L	L	L	L	L
Experimentation / Simulation	H	L	L	M	M	L	L	H	H	L	L	L
Information Literacy	L	M	M	L	L	M	M	L	L	L	M	M

Figure 3: Research and teaching matrix - Year one

limited appreciation of source or contextual application. Certainly much more work is needed to ensure the process carries on into the future. Student feed back through the Student Evaluations of Teaching and Learning (SELTs) suggest an acceptance of this approach despite its obvious challenges. The programme is continuously being evaluated and changes made in response to ongoing need.

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**“... you got a masters degree, that means you can teach.” Beverley - Renaissance Man (1994)**

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Figure 4: Research based output - Urban regeneration project