

Investigating the Processes of Socialisation in Architectural Education: Through Experiences in East Africa

Doctor of Philosophy

in the Welsh School of Architecture,
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July 2015

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Summary

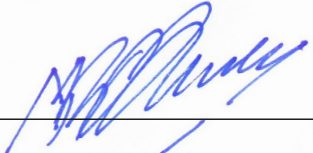
This thesis investigates socialisation in architectural education in East Africa. It was hypothesised that socialisation formed an integral part of professional education, through which students acquired undocumented, but nonetheless important aspects of the profession, building both values, and a cultural ethos in the process. Socialisation in the context of architectural education, thus takes on added significance, given the longevity of the educational process, as well as the close association between faculty and students. The outcomes of the educational process thus evoked questions of the transformative nature of the process, and how this was effected.

Undertaken as an ethnographic study, the research investigated elements of socialisation within five established architecture schools across East Africa. Framed in the context of a learnscape of architectural education, the study examined influences on architectural education in three key areas: Pre-socialisation; Institutional socialisation; and, educational socialisation. A mixed method approach was used, addressing the contextual diversity presented by the setting of East Africa. The mixed method approach made use of document analysis, a questionnaire study, focus group discussions, and participant observations, as data gathering instruments. The variety of methods, along with the multitude of study sites, ensured data triangulation as a key element in validation of the findings.

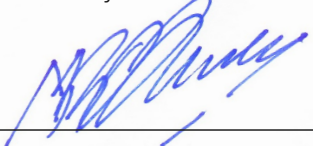
The study revealed socialisation as being an important and integral component of architectural education, existing at all stages of the educational process. Prior to entry into architectural education, pre-socialisation served to inform student ideas and values related to the profession, often based on uninformed perspectives. Institutional influence, presented a traditional educational approach, creating culture shock for incoming students through a misalignment of values between students and architectural education. The contrasting expectations of student and faculty, and the attendant influence on socialisation, were overtly evident in the educational realm. This was highlighted by approaches to contemporary issues in architectural education, and the nature of educational activities within the schools. Through this research, socialisation was found to be an integral part of architectural education. Far from being a mere puzzling phenomenon, ignored and taken for granted, socialisation forms a fundamental part of architectural education, which forms a critical part of the education of architects.

Declaration and Statements

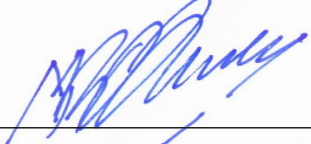
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Acknowledgements

I would like to extend my gratitude to my supervisors for this research, Andrew Roberts and Wayne Foster for their support and guidance.

I would also like to thank all those who gave comments and suggestions during various stages of this research, Antony Radford, Jouni Kaipia, and most significantly, my mum, Pheobe Olweny.

I would also like to thank all the students and faculty who participated in the focus group discussions, as well as those who were part of the observation studies that were carried out over the course this research. Without them this study would not have been possible.

Finally, thanks to my family, colleagues, and friends for their support, patience and encouragement during the many years this research work has taken.

Acronyms

AU	Ardhi University
BIM	Building Information Modelling
CAA	Commonwealth Association of Architects
CAD	Computer Aided Drafting
CPD	Continuing Professional Development
EAIA	East African Institute of Architects
JKUAT	Jomo Kenyatta University of Agriculture and Technology
RIBA	Royal Institute of British Architects
SELT	Student Evaluation of Learning and Teaching
SSR	Student Staff Ratio
UMU	Uganda Martyrs University
UoN	University of Nairobi
UR	University of Rwanda

Introduction

Good education forms the basis of the quality of future designers. The nature of this education, the manner on which knowledge and skills are imparted and understanding of the discipline acquired, is decisive for the quality of our built environment.

(Ton Idsinga, 1997, p4)¹



1.0 Introduction

This thesis explores socialisation in architectural education, an often understated but core element in the education of architects. Despite its significance, however, introducing students to the cultural ethos of architecture as a discipline and a profession; the nature, and processes of socialisation within architectural education are still largely unfamiliar to many, described by Stevens (1995, p. 105) as a “puzzling phenomenon.” While details of the explicit curricula are somewhat clear, and for which information is easily accessible, less obvious are how students take on particular professional traits essential to being an effective participant in the profession. Of interest therefore, are the nature and underpinnings of socialisation within architectural education, which are scrutinised in this research.

“Architects don’t design bridges!” This statement, uttered in 2008 by a senior architect in East Africa, suggests somewhat elucidate boundaries of the roles and responsibilities of architects, forming an intriguing backdrop to this discourse on architectural education. Further, as part of an online discussion of the roles and responsibilities of architects relating to health and safety, one discussant, suggested that the role of an architect does not extend into the realm of health and safety, stating categorically, “I don’t remember ever being taught to be in-charge of health and safety on site in all my architecture courses.” These two statements, and numerous others, highlight the disparity between stated goals of architectural education and its discernible outcomes, influenced by and affecting architectural education itself. In this context, and linked to student engagement with the

educational process, a key question arises related to the formulation of such ideas, and the impact this has on professional education. The association between opinions on architecture, and architectural education is thus an important consideration hinting at the relevance of the educational process, as a decisive factor, described by Weaver, O'Reilly and Caddick (2000, p. 267) as contributing to a somewhat 'hit-and-miss' approach to teaching. A key question therefore, relates to whether emerging opportunities or preconceived ideas and perceptions by the architectural fraternity, transmitted deliberately or covertly through the education system, are what define the boundaries of architectural education.

Within the boundaries of architectural education, the affective aspects of architecture - linked to both experience and values, which are neither explicitly taught or learned - are thus relegated to secondary status or even ignored. Pondering these issues with reference to the architect's role in the current milieu; with ever evolving methods of procurement, materials and methods of construction, and even new design tools and processes, a status quo approach which serves to perpetuate a particular view or brand of architecture is certainly inappropriate. Significantly, is it acceptable to dismiss contemporary concerns in architectural practice simply because they were not part of ones own education? Taking an analogy from the medical field, is it proper for a medical doctor to inform a patient that a disease cannot be diagnosed or treated because the medical curriculum did not cover it? Indeed, as questioned by Tierney (1997) "[...] are we socialising people to a cultural ethos that we no longer desire [...]?" (p. 3) Certainly, there are aspects of curricula that are difficult to convey or garner solely through books or lectures, acquired through experience and immersion in specific activities. Rehman, Nietert, Cope and Kilpatrick (2005), showcase this with reference to suitable attire for medical practitioners, indicating that "[...] general internists [should] consider wearing more formal attire with a white coat during patient care encounters, because it may favorably influence trust and confidence-building in the medical encounter" (p. 1285). Dancer (2013), goes further, suggesting "doctors are members of a distinguished profession and should dress accordingly" (p. 1). In both examples, it is evident that nontechnical factors are as important as embedded knowledge in professional engagement, and therefore should be given greater attention as part of the educational process.

Elements as described in the previous paragraph, form the fundamental qualities of professions such as: law, medicine and architecture, and are intricately linked with the educational curriculum, although not necessarily visible as part of the explicit curriculum (Barnett, Becher, & Cork, 1987; Clouder, 2003; Graham & McKenzie, 1995). It is possible to study about a profession, but it is the participation in the

practices of that profession, simulated or otherwise that develops professionals. Those qualities, regarded as important for the integrity of a profession, are passed on to students as part of the educational process, and are what distinguish practitioners from non-practitioners. This process is somewhat of a mystery, leading Banham to state, “Anthropologists have already gone a long way in penetrating the inner workings of societies far more remote than the tribe of architecture” (1996, p. 299). It is therefore suggested that those unstated aspects of professional education may be more pervasive, effective, and dominant than the explicit curriculum (Bloom, 1972, p. 343). We thus reflect on the following excerpt from Fisher, who provides the underlying tone of this thesis:

To remain silent about the values represented in what we do, either out of mistaken belief that professionals must remain ethically neutral or out of a romantic dismissal of all normative values, is to eliminate one of the main reasons for the profession’s very existence (2000, p. 1).

The values passed on through education become central to the notion of being a professional, recognising “[...] that knowledge is not neutral, and is informed by ideological consideration(s)” (Bloom, 1972, p. 343). This reflects established canons in education, underscoring how the educational process plays a significant role in the development and moulding of professionals. Education itself does not exist in a vacuum, but is linked to tradition and culture, mediators that define humanity through its socially constructed actions and practices within which symbolic power operates (Jenks, 2005, p. 6; Stevens, 1995, p. 107). For Bourdieu (1986) symbolic power is a form of *Cultural Capital*, which is at times embedded within educational systems. He identified three distinct forms of Cultural Capital: *Institutionalised* - possession of knowledge; *Objectified* - possession of goods and artefacts; and, *Embodied* - linked to attitudes, taste, preference and behaviour. There are suggestions that within professional education, Cultural Capital significantly affects the educational process, more so in architectural education, where the relationship between students and academic faculty is privileged, encapsulated most overtly in the design studio, which serves as a primary conduit for transmission of architectural cultural capital (Stevens, 1998; Strickfaden & Heylighen, 2010; A. Ward, 1996).

Becoming a ‘professional’ is thus not merely taught, but also garnered through interaction with academics - themselves professionals - and ones peers. Thus, the setting of architectural education provides a backdrop for the inculcation of architectural culture through a process of ‘Socialisation’, defined by Bragg as being:

[...] that process by which individuals acquire the values, attitudes, norms, knowledge, and skills needed to perform their roles acceptably in the group or groups in which they are, or seek to be, members (1976, p. 6).

Professional education is thus a powerful form of socialisation, through which individuals begin to live and act as professionals. Socialisation itself represents those aspects of professional education not explicitly stated in the curriculum, but nevertheless are important for effective participation as a member of a particular profession. It is therefore acknowledged that there are some aspects of education better 'discovered', or 'caught' rather than 'taught' (Kibor, Okesson, & Okesson, 2010, p. 6). This conversely provides links to the origins of a profession, as explored by Boyer and Mitgang who state, "[...] this sense of kinship with centuries of traditions, thoughts, and personalities is, in fact, the true tie that binds those who practice architecture with those who teach it and study it" (1996, p. 4).

Returning to the two statements in the opening paragraph: "*Architects do not design bridges!*" and, "*I don't remember ever being taught to be in-charge of health and safety on site in all my architecture courses.*" Such statements, and others like them reveal what could be regarded as 'established' ideas of what constitutes architecture. Ever-present images of bridges designed by renown architects, Santiago Calatrava and Sir Norman Foster among numerous others, indicate that the former statement may have less to do with ignorance, than with opinions developed as a consequence of education. However, how and why such attitudes form, and why they are long lived is thus of interest, more so as architectural education is regarded as having a dual purpose: to educate students in the diverse aspects of the discipline of architecture; and to serve as a foundation for the practice of architecture. Socialisation therefore becomes a key factor in what students learn about architecture, and how this becomes part of their engagement in professional practice.

The often unstated aspects of professional education are of interest in this research, seeking to uncover; What they are, how they occur, and what effect this has on architectural education and practice. Without any standard pedagogy or curriculum - although the design studio does present as a dominant approach - the intangible elements of education, become important conduits for the transmission of both established as well as unverified ideas about architecture. Thus, appreciating this aspect of architectural education becomes an important part of understanding architecture as a profession.

1.1 Locating the Research

Much of the current debate on architectural education, can be traced back to the formalisation of architectural education within universities at the turn of the twentieth century. This discourse has included; the rationale for the shift from a largely

apprenticeship model of architectural education, to the formalised university based model; resistance to this move, and consequential deviations that have emerged since. Most notable in this resistance is the Architectural Association (AA); founded in 1842 by young architects, disgruntled with the push to formalise architectural education, and to this day is one of the few architecture schools independent of a university. In the USA, where there is no mandate for architecture programmes to be situated within a university setting, only a few independent schools exist; they are however on the increase, and include: the Cranbrook Academy in Michigan (1904), the Frank Lloyd Wright School (1932), with campuses in Arizona, and Wisconsin; and the Southern California Institute of Architecture (SCI-Arc), in California (1972) - set up by instructors who were disenchanted with the rigidity of university based schools in the Los Angeles area (Kroloff, 1996). Another 'alternative' school, is The Cooper Union for the Advancement of Science and Art (commonly known just as The Cooper Union), established in 1859, based on the premise that higher education should be accessible to all who qualified, regardless of race, religion, sex, wealth, or social status, serving to break the traditional class based nature of architectural education at the time. More recently, in 1994, *Archeworks*, a multidisciplinary design based school was set up in Illinois, to move from what the founders, Eva Maddox and Stanley Tigerman termed, 'disciplinary chauvinism' (Kroloff, 1996).

For the most part, concerns of the alternative schools, was less about knowledge systems, also known as *codified knowledge* (Eraut, 2000, p. 113), but for the tacit aspects of architectural education, the performative aspects of the profession. This, presents a conflict between the needs of architectural education, and those of architectural practice, summed up by Carter as follows:

[education] is essentially about universals, that is, what is true generally of schools, teachers, students, learning, and so forth. Practice, on the other hand, is concrete, immediate, particular, and local (Carter, 1995, p. 326).

For architectural education, the academic environment in which it operates "[...] requires trying to resolve conflicting demands of university, external validators and an increasingly hybrid student body [...]" (Henderson, 2000, p. 252). This inherently complex situation, requires the resolution of conventional educational approaches found within a university setting, and professional education. This is through a dichotomous relationship that emphasises the complex nature of architectural education as noted by Goldhoorn:

[...] notwithstanding pedagogical idealism, architectural education amounts to being thrown in at the deep end of a pool brimming with unknown and ever changing perils requiring unspecified skills and ingenuity; only a few cunning and imaginative swimmers will manage to stay afloat (1997, p. 43).

Libeskind (1995, p. 89) goes on to emphasise that, “[...] schools [of architecture] were set up to challenge the wisdom of the world and its corruption rather than to reinforce it [...].” In this context, the ongoing search for new avenues for those seeking entry to the profession, has seen the founding of the London School of Architecture, as an alternative route to the professional qualification in the United Kingdom. Set up as a practice based alternative to the existing Part II curriculum, the programme seeks to offer a cost and time effective route to professional qualification, and is set for its first intake in 2015 (The London School of Architecture, 2014).

These ‘alternative’ routes suggest that architectural education is more than just the acquisition of knowledge and skills, but is also about taking on less overt aspects of the profession. These are often not explicitly stated as part of the curriculum; more so given the lack of recognition of architectural education as a cultural phenomenon (Stevens, 1998, p. 68). It is here that this research seeks to contribute to architectural education discourse, looking to uncover elements associated with the implicit aspects of architectural education. This is significant as a substantial proportion of learning does not take place in formally constituted settings (Eraut, 2000, p. 114). This issue has been explored in European and Pseudo-European contexts, from which formal architectural education emerged, however, this is not been the case in realms such as the post colonial context of East Africa in which this study is situated.

Recent concerns for the quality of graduates and the nature of architectural education itself, have led to a critical evaluation of the educational process, in publications such as Cuff (1991), Boyer and Mitgang (1996), Nicol and Pilling (2000b), and Ostwald and Williams (2008). While these were general explorations of architectural education, Stevens (1998) deliberated on social aspects, and was particularly critical of the direction contemporary architectural education was taking, which he saw as geared increasingly to reproducing itself, and in so doing contributing to the perceived irrelevance of the profession. This position, initially considered radical, has served to focus attention on socialisation processes within architectural education, and the resultant influences on students.

In much of sub-Saharan Africa, where institutionalisation of architectural education, occurred only in the last 60 years, discourse on architectural education has been rather muted, a consequence of geo-political fragmentation of the continent. Nevertheless, a 1984 conference initiated by the fledgling African Union of Architects (AUA), set out to deliberate on several issues, among which was architectural education (Olotuah, 2006). A key aim of this conference, held in

Nairobi, Kenya, under the theme *The Appropriate Direction of Architectural Education in the African Region of the British Commonwealth*, were summed up in the opening remarks by the Conference Chair, William H. Ssentooogo:

The seminar presents a unique opportunity to appraise the relevance, adequacy and suitability of existing training facilities and to define the role of the architect and the need for improving the quality of architectural education on which the product of our endeavours largely depends. Participants will also be able to define the characteristics of training institutions appropriate to African conditions and needs [...] (Ssentooogo, quoted in Özkan, 1984).

Two follow-up conferences; in April 1988, and March 1991, both partly sponsored by the CAA, sought to respond to the perceived dilemma of architectural education - regarded as the inability of architectural education to ready graduates for practice in the rapidly urbanising, and rapidly developing societies of Africa (Odeleye, 1991). Two issues dominated these conferences: concern for lack of contextual responses in the region; and, lack of practice ready graduates, associated with a belief that architectural education was neglecting the traditional role of the architect. Emphasis on the perceived chasm between architecture practice and architectural education, somewhat mirrored debate in other parts of the world, although reference to university education as 'training', does bring forth a peculiar prejudice inherent within professional education in Africa.

Contemporary discourse on architectural education in the context of Africa, has been somewhat limited; a study by Zerouala (1986) in Algeria, and another by Saidi (2005) in South Africa, remain among a handful of notable and accessible studies on architectural education undertaken across Africa. Zerouala (1986) explored historical factors that influenced the development of architectural education in Algeria, while in the context of South Africa, and looking for an alternative curriculum model, Saidi (2005) was responding to a call to rethink South Africa's education system; which for architectural education was regarded as elitist, attracting few students from minority groups, and thus failing to capitalise on its socio-political role in society (See also Hindle & Rwelamila, 1998; Mills & Lipman, 1994; Young-Pugh, 2005).

In East Africa, discourse on architectural education has been less ambitious; Birabi (2000) undertook a study of architectural education and the relationship between fine art and architecture, in response to what he perceived as the dichotomy of architecture and engineering education. He argued that the perception of architecture as a third rate career choice, well below *arts* and *sciences*, was a primary reason to situate the first Ugandan architecture school in an engineering faculty, instead of being associated with fine art. This, according to Birabi (2000),

was a consequence of “[...] a failure to recognize fine art as an integral part of its curriculum.” Ironically, a quarter century later, the School of Industrial and Fine Art has been incorporated into a new College of Engineering, Design, Art and Technology, along with architecture planning and engineering, although it is not clear if this influenced the architecture curriculum in any way. One recent study by Oyaro (2011) reviewed the architecture curriculum in one school of architecture in Kenya, highlight several shortcomings in architectural education in the region, including: static crowded curricula, a teacher centred approach, and a substantial hidden curriculum that present a challenge for students and instructors. Another by Olweny (2013a), looked at the implementation of ESD within schools of architecture across the region.

1.2 Socialisation Theory

According to Webster, it is possible to “conceive of architectural education as a set of contingencies: regulations, spatial organizations, pedagogic encounters, etc., that work on students over a period of time to socialise and acculturate them into ‘architects’” (2007, p. 21). These occurrences serve to frame architectural education as not only a product of its knowledge and skills, but also of the social nuances that exist within its broader socio-cultural setting, but are often difficult to quantify (Stevens, 1998, p. 196). Weidman, Twale, and Stein (2001) provide an outline of socialisation, identifying four key stages of socialisation: Anticipatory; Formal; Informal; and Personal stages, affecting how students perceive, and respond to the educational context. These four stages can be reclassified into three wider categories that relate to the educational process: Pre-Socialisation (Anticipatory Stage); Educational Socialisation (Formal and Informal Stages); and, Socialised (Personal Stage). Each category delves deeper into the nuances of the profession, but do not explicitly indicate how and where influences on socialisation come from, or in which context it happens, thus an in depth evaluation of the educational process becomes necessary. This evaluation is grounded in the concept of the *hidden curriculum*, initially identified by Durkheim (1961) in the context of the acquisition of morals, and subsequently explored by Jackson (1968), who described the multitude of factors sometimes outside the immediate control of the various players in education, nevertheless having an impact on the success or failure of students.

A critique of the *hidden curriculum* by Gordon (1982, pp. 188-189) provided three broad definitions of the hidden curriculum: the *Outcomes definition*; *Environmental definition*; and, the *Latent influence definition*. Specific aspects of each are described and contrasted with those of the formal curriculum, as seen in Table 1.1.

Table 1.1: Aspects of the Hidden Curriculum (Gordon, 1982)

	Formal Curriculum	Hidden Curriculum
Outcomes Definition	Academic Learning. Related to the (Knowledge)	Non-Academic Learning (Attitudes / Values / Disposition / Social Skills)
Environmental Definition	Cognitive Environment	Physical and Social Environment
Latent Influence Definition	Conscious and Deliberate Influence	Unconscious and Unplanned Influence

In the context of professional education, the hidden curriculum often exists as a simultaneous, or parallel process to the established formal canon within architectural education (Brown & Moreau, 2002), comprising “[...] learning states of a setting which are either unintended or intended but not openly acknowledged to the learners in the setting [...]” (Martin, 1976, p. 144). Drawing on Gordon’s work, Dutton (1987) and Ward (1990) adopted the hidden curriculum in their reviews of architectural education, using it as a means to quantify the socialisation that occurs. In these studies, the hidden curriculum was intertwined with the nature of architecture as a profession, operating in parallel, or as a simultaneous process to the formal or explicit curriculum (Brown & Moreau, 2002).

Discourse related to the nuances of architectural education exposed incidents of informal learning linked to the hidden curriculum, such as: Anthony (1991) on design juries and design crits; Cuff (1991) on the culture of architecture and the transition from lay-person to qualified architect; Robinson (2001) on the nature of architectural knowledge; and, Webster (2004) on relationships between instructors and students. These could be construed as elements of socialisation in the educational setting, and present architectural education as an intrinsically socio-cultural phenomenon, influenced by time and place, and a balancing act between competing groups (Navarro-Astor & Caven, 2012). The processes involved having the effect of creating a lack of diversity within the profession, not so much related to the tangible output of the process, but more to its underlying nuances, which on the whole have changed little since it was formalised into the university setting over a century ago. Of interest therefore, are the activities and processes that create this lack of diversity within architectural education, which serve to transform students during their education. Key components identified in previous studies as being part of this process and which aid the transformation of individuals, can be presented as part of the *Architectural Education Learnscape*, as presented in Figure 1.1.

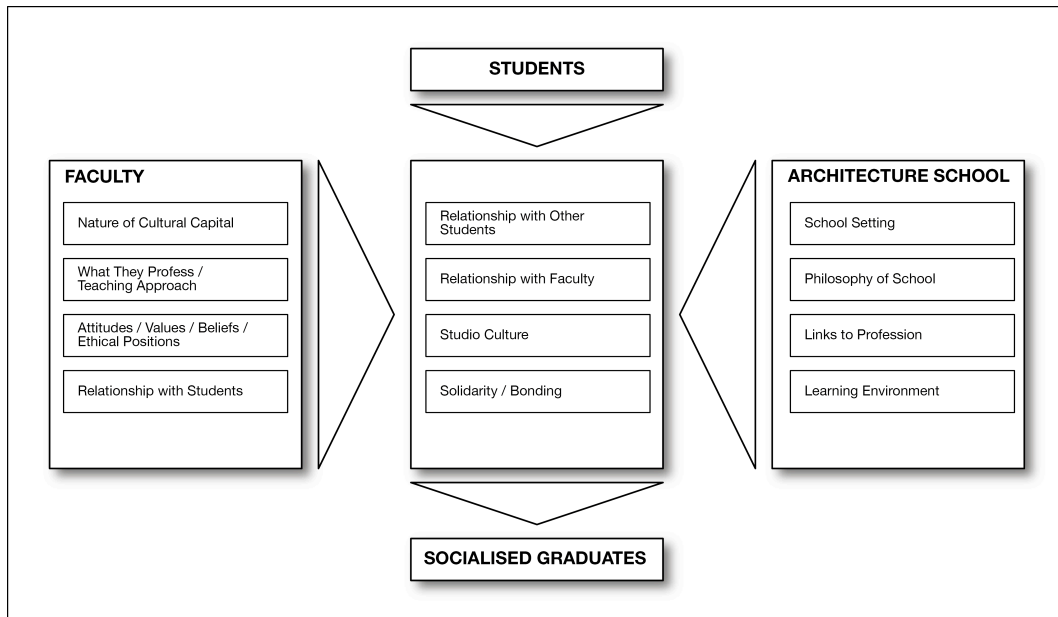


Figure 1.1: Socialisation Learnscape of Architectural Education (Adapted from Ostwald & Williams, 2008)

The term *Learnscape* originated in the context of physical learning environments, describing “places where learning has been designed in ways that enhance the interaction with an environment” (NSW Department of Education and Training, 1998). In the current study, the term fittingly describes the socio-cultural setting within which socialisation takes place, influencing, and being influenced by the learning environment, and by the various stakeholders. *Educational Learnsapes* form a backdrop for socialisation, providing an outline of the influences on architecture professional education in formal university environments.

What is not immediately clear, however, is what occurs within the educational system to produce the socialised graduates; a largely invisible process, as presented through the diagrammatic inputs-outputs representation of teaching and learning seen in Figure 1.2. This inputs-outputs model, suggests an unmediated relationship between the various educational inputs, and the outcomes (or products) of the educational process, the graduates. What takes place within the programme is hidden; the workings of the transitional process from novice to graduate available only to those within the system itself, described by Banham as being ‘a black box’, whose inner workings are particularly elusive. He goes on to express his frustration with this unknown world of architectural education, stating that, “anthropologists have already gone a long way in penetrating the inner workings of societies far more remote than the tribe of architecture” (1996, p. 299).

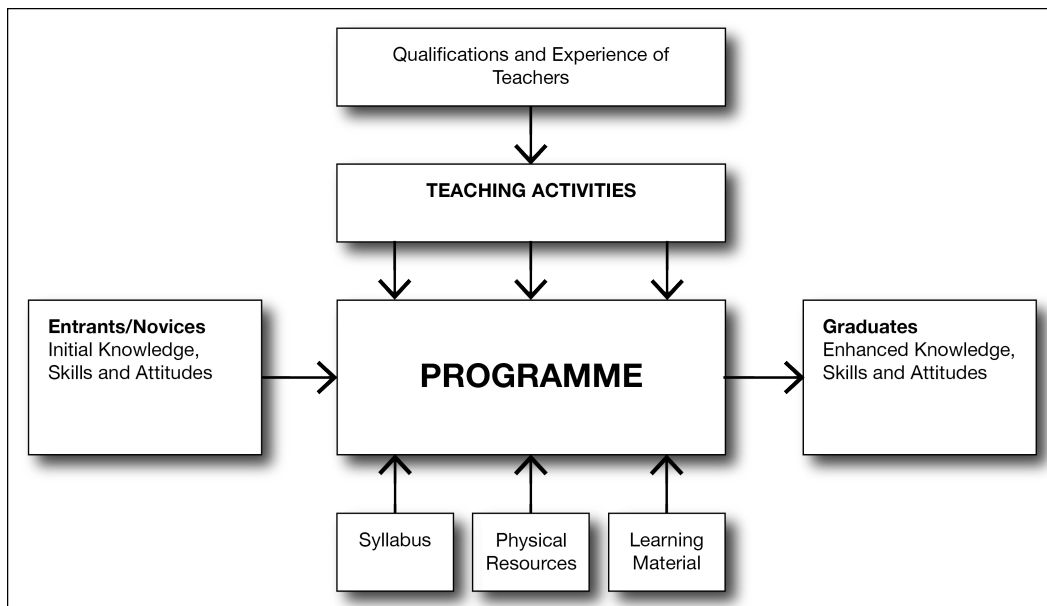


Figure 1.2: Inputs-Outputs View of Education (Adapted from Fox, 1984, p. 134)

Exploring the activities that take place within the educational realm, Briggs (1985) derived a model of teaching and learning, as a means to understand the relationship between students and instructors within the educational setting. Initially presented as the 3P Model of Student Learning, and geared to understanding the influence of personal and situational factors on learning. The model identified three key stages in the educational process: *Presage* - which foreshadows the educational process; *Process* - where learning occurs, but influenced by dispositions of students, their expectations of the process, as well as their motivations; and lastly, the *Product* - which are the outcomes of the learning process (See Figure 1.3). Within the 3P Model related to learning, it was postulated that:

students' perceptions of the teaching and learning context are seen to be an interaction between their prior experiences of teaching and learning and the teaching and learning context itself (Trigwell & Prosser, 1997, p. 241).

The model does acknowledge the importance of the learning context, as well as the occurrences within the learning context as having an influence on outcomes. Important also is the acknowledgement of the interrelationship between the different stages, with feedback elements between the various stages, indicating that education is not a one way throughput, but a reflective process, or more specifically, a “continuously interacting system” (Trigwell & Prosser, 1997, p. 242) in which knowledge built up, or constructed by building connections, through interaction with people having different ideas.

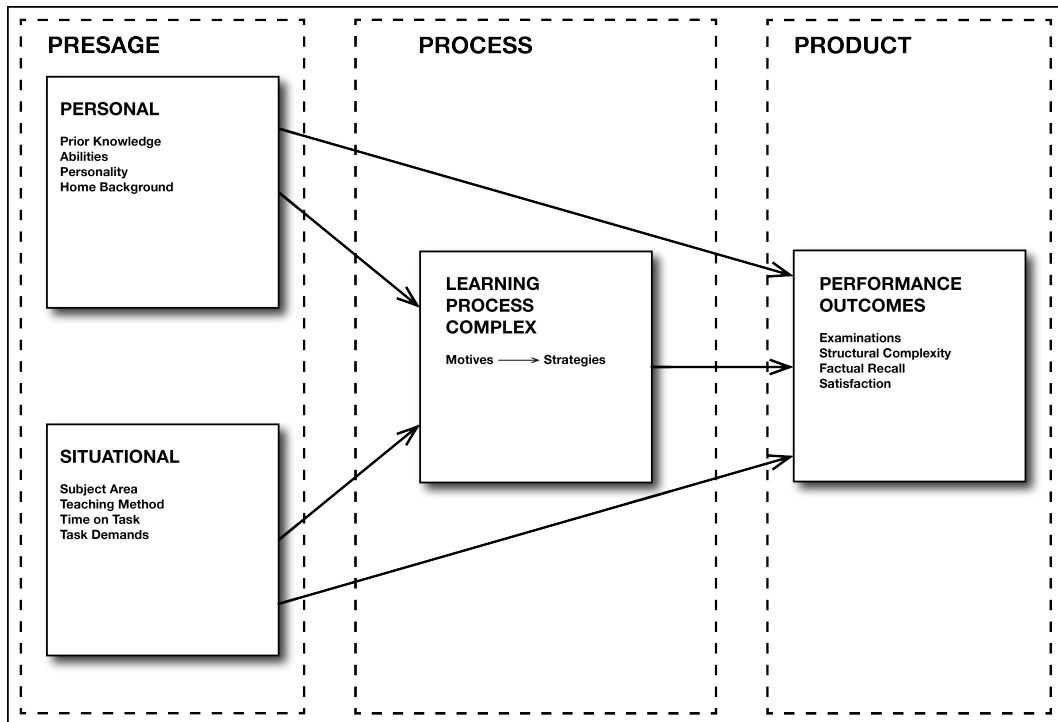


Figure 1.3: The 3P Model of Teaching and Learning (Biggs, 1985)

The two frameworks presented above, suggest that learning in architectural education is influenced as much through social interaction, observation, and circumstance; as it is from the knowledge and learning that occur as a direct result of formal teaching. Inputs into this process, may suggest activities akin to inculcation, as pointed out by Strickfaden and Heylighen (2010), analogous to enculturation of children into families, or learning through rewards and penalties as suggested by Argyris and Schön (1974, p. 82). Suggestions of ‘power asymmetries’ (Dutton, 1991) and the impact this could have on the dynamics of professional education, thus emerge as significant and worthy of exploration.

1.3 Personal Interest and Motivation

Beyond the theoretical background as presented in Section 1.2, this thesis owes its existence to professional motivation, as well as an interest in student learning, arising from my experiences; as a student of architecture, and subsequently as an architectural educator. These experiences, gained in different countries over the past three decades, served as a catalyst for the initial questions raised about the nature of architectural education and its attendant processes.

An initial motivator arose out of an incident as instructor of a first year architecture history class - the students’ blank stares while discussing Greek and Roman

architecture - highlighting the dislocation of some aspects of the historical approach to architectural education from particular educational contexts, and emphasising the European origins of formal architectural education. This experience compelled me to reflect on my own architectural education experience in Australia and Canada, which for all practical purposes were of European origin. In these contexts architectural history courses at the time, did have a strong emphasis on the European origins of architectural endeavours. While this did change during the 1990s, a consequence of what Fung (1996) identified as student bodies becoming less heterogeneous, leading to questions about the nature of architecture education. In essence, architectural professionals are socialised into a profession that required students to discard their histories, and becoming dislocated from their historical and cultural past in a mode presented by Pido (2002) in relation to his early formal education in Kenya. This was also highlighted by Foster in the context of Uganda, stating “[...] there [was] no such thing as African education; there are only Africans being educated like Europeans” (1961, p. 146). The difficulties faced by students as they navigated their way through architecture school, are thus intriguing, deserving further exploration.

Getting back to my experiences as an architecture student, my desire to engage with the built environment beyond what was presented in architectural history courses - largely as history of western civilisation - formed (in hindsight) a critical shift in my understanding of architectural education. The decision to take geography as a second major alongside architecture, was a means for me to contextualise (and personalise) architectural education, more so as geography allowed exploration of societies beyond those traditionally presented. The need for contextual relevance was made more obvious with my transfer between architecture programme in Australia and Canada. While this experience did reveal the universality of some knowledge criteria, it also brought forth the importance of values imparted through the educational process, evident in joint architecture/landscape architecture studio projects, and those which embedded ESD, and social concerns as part of projects, presenting architectural design as not just the making of buildings, but having a broader social and environmental agenda as well.

As an educator, initially as a tutor at the University of Adelaide, and later as a course instructor and course leader at Uganda Martyrs University, experiences between students and staff were certainly noteworthy. As tutor, the one-on-one engagement, highlighted different approaches and learning styles adopted by students in their quest to get through courses, some clearly linked to the espoused approach of instructors. In Uganda, some experiences were particularly memorable - in one case a student walked into my office and exclaimed, “You should mark us

like Ugandans!” It was apparent that this student felt that the evaluation (and the subsequent grades he had received) was somewhat inconsistent with his views of architectural education. This situation led me to reflect on cultural issues in architectural education, and whether this confrontation was a result of a perception that standards were different between countries, or possibly disclosing a belief that students are empty vessels who come into architectural education with little idea of what architecture entailed, or possibly, that teaching and learning were mismatched.

Like many architectural educators, I do admit I have limited formal instruction in educational philosophy and pedagogy. My initial exposure as a tutor during my graduate degree, at a workshop brought to light the complexities of architectural education. As part of my early years as a tutor, I took time to attend all the lectures associated with the course I was assigned, to align my role as tutor with that of the course instructors. This not only helped me appreciate the links between knowledge and studio components, more so as the structure of the course was markedly different from what I had experienced as part of my own undergraduate programme. Further, within my tutorial group, having students of different nationalities, obliged me to look at the approach I followed in assisting students, as it was evident that their prior educational experiences did influence the way they engaged with course material.

The experiences suggest architectural education goes beyond the mere transmission of knowledge, to include individual and collective experiences as well, which could enrich or devalue the educational process. These experiences, both as a student and as an instructor, present as influences on my reading of architectural education. My subsequent desire to understand the processes that underlies the nature of teaching and learning within architectural education, and how this is influenced by the interaction between students and faculty thus took on added urgency. Thus, as an essential and integral component of architectural education, the social, or the tacit elements of the curriculum, were something I needed to appreciate and understand as part of my growth as an educator. This would entail a recognition of the views of instructors, and the often unheard voice of students, as key to the process of transformation, from novice to professional.

1.4 Research Setting

This research takes in five schools of architecture in East Africa - defined as the countries of the East African Community (EAC): Burundi, Kenya, Rwanda, Tanzania and Uganda. The study included only schools with students enrolled at all year levels: two in Kenya - University of Nairobi (UoN), and Jomo Kenyatta University of

Agriculture and Technology (JKUAT); one in Tanzania - Ardhi University (AU); and two in Uganda - Makerere University (MU), and Uganda Martyrs University (UMU). Three additional schools with architecture programmes but without full student cohorts at the time, were not included in the current study: Kigali Institute of Science and Technology in Rwanda (now University of Rwanda (UR)); Technical University of Kenya (TUK), in Kenya; and Kyambogo University (KU), in Uganda. The programmes under investigation fall into two categories: single degree programmes (MU, AU, and JKUAT); and dual degree programmes (UoN and UMU). In all schools except one, the nomenclature for the professional degree was the Bachelor of Architecture; with only UMU offering a Master of Architecture (Professional) degree programme (See Table 1.2).¹

Table 1.2: Architecture Programmes in East Africa - 2012

Country	Institution	First Offered	Current Professional Programme	Length
Kenya	University of Nairobi (UoN)	1958	Bachelor of Architectural Studies Bachelor of Architecture	4 Years 2 Years
	Jomo Kenyatta University of Agriculture and Technology (JKUAT)	1994	Bachelor of Architecture	6 Years
Tanzania	Ardhi University (AU)	1988	Bachelor of Architecture	5 Years
Uganda	Makerere University (MU)	1989	Bachelor of Architecture	5 Years
	Uganda Martyrs University (UMU)	2000	Bachelor of Environmental Design Master of Architecture (Professional)	3 Years 2 Years

For both Tanzania and Uganda, the pre-university programme, is the High School Certificate (HSC), a culmination of thirteen (13) years of education, while Kenya, has a matriculation system with a minimum of twelve (12) year of pre-university education. Consequently, a basic degree in Kenya takes four years, as opposed to three years in both Tanzania and Uganda. All programmes in the study, apart from AU are validated by the Commonwealth Association of Architects (CAA): UoN and JKUAT in 2010, and MU and UMU in 2011.

Three of the schools, AU, UoN and MU, are located in urban settings - the capital cities of each of the three countries - Dar-es-Salaam, Nairobi and Kampala respectively. The other two, JKUAT and UMU, are located in semi-rural settings, albeit within 100km of the main urban centres of Nairobi and Kampala. The three schools not included in the study were also located in the capital cities, highlighting an urban bias for architectural education.

¹ Schools in Kenya began the transition to the split programme. JKUAT embarked this process in 2013, incorporating an undergraduate Bachelor of Architectural Technology programme, followed by a professional Master of Architecture. A new school in the Technical University of Kenya (TUK), will follow a similar structure with a Master of Architecture professional programme, but their undergraduate programme is a Bachelor of Built Environment in Architectural Studies.

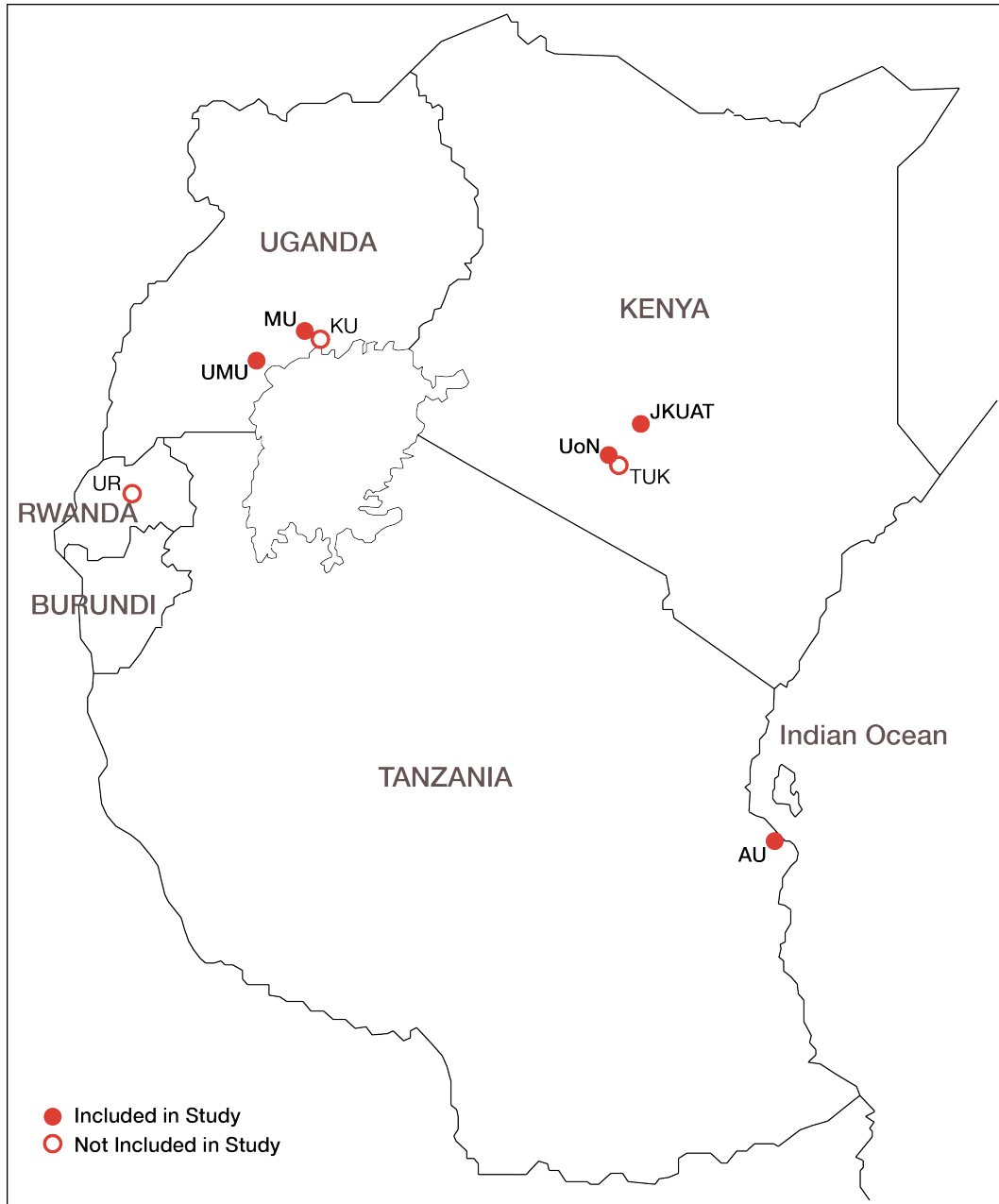


Figure 1.4: Schools of Architecture in East Africa

1.5 Research Questions

While several studies on socialisation in architectural education have been conducted in different parts of the world, an evident gap was found in the context of architectural education in the postcolonial setting of East Africa. Here, the central research question is based on the proposition that tacit aspects of architectural education, have a significant effect on the outcomes of the educational process. It is these unseen aspects of professional education that have made architectural education somewhat contentious. In this regard, the key aim of this thesis is to:

Investigate the nature of socialisation within contemporary architectural education in East Africa.

With the functioning of the design studio as a central feature of architectural education not fully understood; how novices are transformed into architectural graduates beyond merely passing examinations, warrants greater attention. This is crucial in the context of non European or Pseudo-European setting, many having adopted western traditions of architectural education; however, the underlying processes within the educational realm are not always discernible. This study, through its investigation of the elements that constitute the learnscape of architectural education in East Africa, will seek to contribute to an appreciation of socialisation and its influence on the wider educational landscape of architecture.

The primary research aim is divided into three sub questions, which relate to the socialisation process in architectural education, and the effect these have on teaching and learning in architectural education. These are:

1. **What are the perceptions of architecture and architectural education, which influence students' expectations of architectural education?**

This question investigates perceptions of architecture and architectural education, within the concept of anticipatory or pre-socialisation. The question scrutinises those anticipatory ideas and ideals of architecture and architectural education, and how they affect and influence architectural education. This question seeks to understand *personal knowledge* of individuals, as they enter architectural education, and how this influences their expectations on entry into architectural education.

2. **How does the environment of architectural education impact on socialisation within architecture schools?**

The environment of architectural education is used here in a broad sense, including its setting, and contingencies that frame architectural education, particularly its social nuances. The question thus interrogates the socio-cultural, socio-political, and socio-economic elements of the architecture learning environment, which set the necessary conditions for socialisation.

3. **What are the effects of socialisation within architectural education?**

This final sub-question scrutinises the intended and unintended outcomes of socialisation within architectural education. The social aspects of education are reviewed as significant aspects within the educational process, reflecting the nuances of the context within which architectural education is carried out, and in the process, divulging the consequential outcomes of the socialisation process.

These three sub-questions seek to understand the construction of architectural education in East Africa and the inherent complexities that relate to this. Understanding these facets of socialisation would demystify the proverbial black-box, revealing distinct elements of socialisation in architectural education in the context of East Africa.

1.6 Thesis Overview

This thesis investigates the intendant nature of socialisation in the context of architectural education in East Africa. It considers how socialisation influences professional architectural education, and how the experience of socialisation affect the key stakeholders within architectural education. The timeliness of this research is particularly significant, given ongoing discourse across the world, which seeks to understand the inner workings of architectural education, with this study providing a contextual perspective from East Africa.

It is recognised that the development of this research was not entirely linear, a consequence of what Conle described as “[...] the interdependence of content and form, of product and process, of ends and means [...]” (2000b, p. 192). Through this process, information and data is collected, interpreted and analysed throughout the process. Nevertheless, it is presented in a linear mode, acknowledging the inherent qualities of a written thesis. The evolution of the research is conceptualised in Table 1.3 below, highlighting the three key stages of the research process.

Table 1.3: Evolution of Research and Research Strategies (Adapted from Davis, 2007, p. 187)

	Phases	Techniques to Generate Research Knowledge	Literature Related to Content	Processes / Areas of Literature Related to Study
CYCLE 1 Groundwork	i. Initial thoughts ii. Where to begin? iii. Defining direction and tasks iv. Refining and redefining research v. Plan of action	<ul style="list-style-type: none"> • Reviewing published documents • Conversations and Informal Interviews with stakeholders • Reflection 	<ul style="list-style-type: none"> • History of architectural education • Research in architectural education • Architectural Education in East Africa 	<ul style="list-style-type: none"> • Research methodologies in sociology, education and architectural education • Record keeping
CYCLE 2 Fundamentals	i. Redefining research tasks ii. Investigating architectural education iii. Thoughts on findings iv. Initial write-up	<ul style="list-style-type: none"> • Focus group discussions • Conversations and informal interviews • Collection of data from architecture schools • Reflection 	<ul style="list-style-type: none"> • Perceptions of architectural education • Socialisation in professional education 	<ul style="list-style-type: none"> • Collecting & managing qualitative data • Analysis and interpretation of qualitative data • Template analysis
CYCLE 3 Reflections & Revelations	i. Implications for architectural education ii. Telling the story iii. Review of thesis iv. Completion of writing v. Completion of thesis	<ul style="list-style-type: none"> • Preparation of content and writing • Participant observation • Reflection 	<ul style="list-style-type: none"> • Architectural Education pedagogy • Theory/Philosophy of Education • Change in Education 	<ul style="list-style-type: none"> • Collecting & managing qualitative data • Analysis and interpretation of qualitative data • Completing the literature review • Completion of thesis

Through these three stages, this thesis seeks to provide a detailed and unique insight into the social context of architectural education in East Africa. This will

serve not only to enrich our understanding of socialisation, but also to offer insight into the contextual nature of architectural education in East Africa. Through this research, the thesis seeks to contribute to knowledge of the functioning of socialisation within architectural education from the lived experiences of key stakeholders within schools of architecture. The thesis is presented in the following chapters:

Chapter One: This introductory chapter sets the framework for the research. It introduces the research areas, the rationale for, and the importance of conducting this research, as well as presenting the key questions the thesis seeks to answer. The chapter also outlines the context of the research, provides an overview of key background theory for the research, and gives an outline of the objectives and motivation for undertaking the research.

Chapters Two and Three: These two chapters present a review of literature on bodies of knowledge pertaining to this research. Chapter Two addresses architecture and architectural education as well as contextual issues associated with these themes, and linking these to the context of East Africa. Chapter Three delves into socialisation in professional education, with reference to architectural education. The two bodies of literature are significant research areas in their own right; thus, the value in undertaking this review in two separate chapters.

Chapter Four: This chapter provides details of the research methodology and research methods employed in this study. Components of the mixed methods approach used in the research are presented, along with the criteria for selecting these specific research methods.

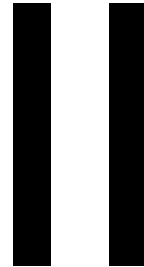
Chapters Five, Six, and Seven: These three chapters unpack socialisation in architectural education in East Africa. Demographic data of architecture schools in the region is presented, providing a contextual reference for the research study. Qualitative data derived from the different research approaches employed in the study is presented, including: information from focus group discussions, a questionnaire study, and details from participant observations. Responses are evaluated in the context of the research framework, to determine the nature, and extent of socialisation in architectural education in East Africa.

Chapter Eight: This final chapter summarises the thesis, highlighting the major findings as they correlate with the theoretical framework of the thesis. The chapter thus draws conclusions, revisiting the research questions, seeking to clarify how the findings relate to these questions. As the concluding chapter, it highlights the significance of these findings and identifies directions for future exploration.

Historical Context of Architectural Education in East Africa

For architectural critics to begin to support students in learning to construct their own architectural identities requires them to understand more about the learning process per se, that is, not about 'filling the empty vessels' with pre-determined architectural paradigms.

(Helena Webster, 2006, p295)



2.0 Introduction

In forging an understanding of socialisation, it is necessary to appreciate the socio-cultural and educational context within which this education takes place. This acknowledges how we make sense of knowledge and information, and subsequently make use of it, largely determined by the setting within which the knowledge is acquired (Eraut, 2000, p. 114). This chapter focuses on higher education, specifically architectural education in the context of East Africa, and seeks to situate the research within the local and wider global milieu. It will investigate inherent social and cultural idiosyncrasies that influence and affect architectural education, enabling an appreciation of the geo-political foundations of education in the region. The chapter is divided into two main sections: the first delves into the context and origins of higher education in East Africa; while the second presents an outline of architectural education in East Africa from a historical and contextual perspective.

2.1 Context of Education in East Africa

Formal education in East Africa has its origins in the late nineteenth century, coming from three distinct philosophical propositions, which have influenced education over the past century: Religious Missionaries; Traders; and to a lesser extent; Colonial Administration and the Military (Beck, 1966; Kithinji, 2012; Parsons, 2000). This triple heritage for contemporary education in East Africa, essentially disregarded prevailing indigenous educational approaches, prioritising instruction geared to

ensuring indigenous Africans acquired 'New Useful Knowledge' to enable them to participate in the newly introduced structures of the three groups. Each of these had their disparate, but somewhat unambiguous educational goals: religious groups, primarily interested in the spread of religious influence; traders and merchants, interested in economic exploitation therefore seeking out individuals to be a part of the growing trade and commerce network in the region; while the small colonial education system was geared to turn out desk clerks and other disciplined individuals to administer colonial office policies.

For the British Colonial Office, a key goal was to assimilate Africans into Western cultural values and practices, such that they could easily fit into the colonial administrative structure (Owuor, 2007, p. 25). This effectively served to present education as a means to participation in the modern economy, heightened through equating 'modernity' with 'westernisation', embedded in educational endeavours across the region (Gitari, 2008), and geared to allow Africans to participate in the various cogs of the colonial machine. However, lack of financial support from the British Foreign Office for colonial education, significantly affected these endeavours, forcing colonial administrators to rely on religious missions for the bulk of education in the region. For the missionaries, education served as a convenient vehicle for evangelism, geared to produce "[...] men of character who contributed to the missionary schools through their moral quality [...]" (Beck, 1966, p. 125).

Regardless of who was responsible, it could be inferred that education was akin to indoctrination (Kazepides, 1982), geared not to encouraging inquisitiveness or exploration, or the development of independent positions, but rather to accept without question what was taught; a quintessential part of cultural and ideological hegemony (Mazumdar, 1993, p. 235). Not only was this approach true for both Kenya and Uganda, which had been under the sphere of the British Colonial Office from the outset of colonialism, it was also the case in Tanzania (or Tanganyika), originally a German colony, but ceded to Britain after the end of the First World War. German colonial education policies were not dissimilar to that of the British Colonial Office, with government schools geared to producing administrators, while missionaries engaged in evangelisation (Cohen, 1993).

Educational efforts were generally directed at primary and secondary levels, with the colonial administration having reservations about the introduction of tertiary level education in Africa, fearing as presented by Joseph Houldsworth Oldham, Secretary of the International Missionary Council during the 1920s, that it would "[...] lead to a materialistic outlook which would bring only a distorted aspect of [W]estern civilisation to the new African generation" (Beck, 1966, p. 127). It was not

until after the Second World War, with growing demands for independence that the educational agenda were re-oriented, going beyond just basic education and vocational training, to include tertiary (read university) education as part of the postwar colonial reconstruction and development efforts (Ashby & Anderson, 1966, p. 211). The growing need for young people who were willing and able to serve in the growing colonial government structure as part of the civil service, was a major factor in this changed strategy (Hountondji, 2000, p. 39), thus leading to the establishment of the first tertiary level institutions in the region.

Inaugurated in 1949, Makerere University College in Uganda was the first tertiary institution established, taking over courses offered by the Uganda Technical College, that had been established in 1922. As a constituent college of The University of London, Makerere University College, as an inter-territorial college offered post-secondary education for the entire British East African territory. However, in the racially divided context of colonial East Africa, the college was perceived to be an institution for 'Africans', a consequence of it being located in the colonial territory with the smallest number of European and Asian settlers. This led to demands for a separate institution for East Africans of Indian origin, with pressure from the Kenyan based Gandhi Memorial Academic Society (GMAS), culminating in the founding of the Royal Technical College, Nairobi in 1952, that was partially financed by the GMAS (Furley & Watson, 1978, pp. 198-199). As with Makerere University College, the Royal Technical College, Nairobi, was also affiliated to the University of London. Ironically, these new tertiary institutions symbolised both the essence of colonialism; controlled by universities based in the metropolis, while at the same time serving as the base for a growing independence movement, promoted by the emerging elite who had been educated in these establishments.

While the founding of these colleges served to quench the growing demands for an indigenous educated elite (Kithinji, 2012, p. 196), they paradoxically served also to frame higher education as an elitist endeavour, seeding what Bernstein described as the social distribution of knowledge (1977, p. 477), embedding within the higher education system the idea of privilege and entitlement, which effectively alienated the new African elite (intellectually and culturally) from the wider society (Kithinji, 2012, p. 201). Accordingly, for the new African elite, "[...] education [was] not the means whereby he may develop the acuteness of his perception [...] Education, for him [was] a means of power" (Foster, 1961, p. 145). Initially, this allowed entry into the exclusive club of the colonial administrative structure, and continued years after independence with only the elite gaining positions in post independence governments. Fifty years after independence, this perception of higher education still rings true, reinforced by the prevalent method of selecting students; the High

School Record (HSR), which not only serves to constrict entry, but also affects the makeup of the student body. A review by Liang (2004), of admissions to public universities in Uganda between 1996/97 and 2001/02, for students who attained scholarships, revealed that 65% of these came from only twenty elite schools.

When the East African colonial territories gained independence from Britain during the 1960s, they set about transitioning these university colleges into fully fledged universities in their own right. Initially, this was as a single trans-national entity, the University of East Africa, with expensive professional programmes distributed across its three constituent colleges: Engineering, Architecture, and Veterinary Science in Nairobi; Medicine in Makerere, Kampala; and Law in Dar-es-Salaam (Kithinji, 2012, p. 202). The breakup of the University of East Africa in 1970,² highlighted the link between socio-political ideologies, and higher education policy, as being significantly important in the socio-cultural setting of higher education in East Africa, as noted by Kithinji:

[...] the three East African governments had hijacked the university colleges located in their territories, turning them into instruments to advance their political and ideological goals (2012, p. 210).

The three universities were thus transformed by the different governments to ensure they were of “greater relevance [...] to the national needs” (Furley & Watson, 1978, p. 348), defined along nationalistic ideologies of the post independence milieu, albeit still with historical roots in the colonial educational framework. Indeed, it is possible to conclude that:

African universit[ies] today [are] a crystallization point of African contradictions. Its academic language and pedagogical methods, its organisation and form, and sometimes even its architecture, bear the stamp, Made in Europe, or more recently, Made in the U.S.A. (Shore, 1965, p. 382)

Nationalistic tendencies were intermingled with attempts at Africanisation within the established confines of these ‘Ivory Towers’, and within which professional education was undertaken. The rationalisation of higher education by the postcolonial governments, in a way serving to (re)frame university education as a mere transmitter of knowledge, to serve an ideological function for the new nations. For Owolabi, this emphasis on knowledge as the basis of education, as opposed to critical and analytical thinking was founded on a belief that “[...] knowledge in its pure form [was] considered apolitical and universally relevant [...]” (2007, p. 71). It was appropriate therefore, to concentrate on knowledge, which could easily translate across cultural divides, important for unifying the culturally diverse

2 The three constituent colleges in Kenya, Tanzania and Uganda, became, Nairobi University, University of Dar-es-Salaam and Makerere University respectively.

countries of postcolonial Africa. As Bouman points out, this was clear to the protagonists:

There was a canon, there were rules, and there was a sense of vocation so that you knew what you were doing it for: for God, your country or another better world (2001, p. 9).

In the postcolonial setting of East Africa, knowledge was thus transformed into an eminently valued, and proprietary commodity; held in the hands of teachers who (reluctantly) passed it on to students, effectively commodifying the educational system. Education thus shifted from being a community activity, based around a community of scholars and learners (traditionally elders and novices), to become an isolated private activity undertaken alone, and occasionally with little or no reference to the past, prioritising knowledge above understanding, and often without contextual relevance (Semali, 1999). In this regard, students begin to view progress and development in education as an individual effort, rather than building upon past endeavours, by 'standing on the shoulders of giants', to borrow Sir Isaac Newton's adage. This is poignantly highlighted by Foster, with the opening paragraph of the book, 'White to Move' particularly noteworthy:

'Tell me, Peter, are those birds up there vultures?' A long pause while Peter squints out of the window. Then he answers decisively, 'The birds I am thinking of are not those' (1961, p. 11).

Embedded in this dialogue is the notion of students seeking validity from instructors, instead of stating outright that the question is either not understood, or the answer unknown. This also reveals an aspect of the dual world students inhabit; the 'educated world' espoused by the various educational and religious institutions, and the 'African world' of the ancestors; neither of which meet in education, a theme explored across African literary texts (Gatheru, 1967, p. 35). It is acknowledged that indigenous education across much of Africa was largely based around informal learning, tied to peer, community and collective approaches, suggesting an emphasis on group and team efforts, which was effectively dismantled by the introduction of a formal classroom approach. This revised view of knowledge and education has thus come to define educational systems in East Africa, framed by a notion that knowledge itself is the most valued element of education. At a broader level, the notion that the tacit elements of education were unimportant in formal education, relates to a modernist view of educational theory, which largely negated the experiences of the learner, as pointed out by McCallum (1996), and presented in Table 2.1.

Table 2.1: Modernist versus Post Modern Educational Theory

	Modernist Theory	Postmodern Theory
Knowledge	<ul style="list-style-type: none"> • Educators are authoritative transmitters of unbiased knowledge 	<ul style="list-style-type: none"> • Educators have biases • Educators are co-"constructors" of knowledge.
Culture	<ul style="list-style-type: none"> • Culture is something students learn about 	<ul style="list-style-type: none"> • Students are engaged in the culture they exist in and empowered to take control of their existence.
Values	<ul style="list-style-type: none"> • Educators are legitimate authorities on values • Educators <i>train students in universal values</i> and 'help' students 'decide' what values to hold. • <i>Rationality and progress are prized.</i> 	<ul style="list-style-type: none"> • Education help <i>students construct useful values in the context of their cultures.</i> • Instructors state their position as being one of many.
Teaching and Learning	<ul style="list-style-type: none"> • Objectivity in teaching and learning • Mastery over subject matter evaluated through exams and tests - enhances students' self-esteem. • Education helps individuals discover their identities. • Individuals and society progress by learning and applying objective knowledge. 	<ul style="list-style-type: none"> • Education is a social construction and cannot exist in a vacuum • <i>Self-esteem is a pre-condition for learning, helping construct identities</i> • Individuals and society are empowered to attain their chosen goals.

There is a general aversion to moving from the modernist educational approach across the region, partly resulting from embedded paternalistic views in East African society, but also a cognisance of the ideological value of education as a key component of contemporary education (Seepe, 2000). The modernist approach thus reflects the historic origin of formal education: initially detached from its socio-environmental context, and with an overtly alien agendum, carried across the years. This augmented the prevailing hierarchical nature of the society, onto which was overlaid an overt ideological mission.

2.2 Architectural Education in East Africa

Formal architectural education in East Africa, was first offered at the Royal Technical College, Nairobi in 1958. This three-year certificate level programme intended to 'train' architectural draughtsmen, to work as assistants to RIBA Part II graduates who had migrated to East Africa from other parts of the British Commonwealth (Danby, 1969; Omenya, 2011). The programme responded to a need for individuals with mid level qualifications, to participate in increased building activity following the Second World War. These projects required a cadre of local 'architects', to help fulfil legislative requirements of the *East African Architects and Quantity Surveyors Registration Act 1934*, which made it mandatory to use registered architects for projects of 'significance' (largely projects in urban areas), effectively rendered redundant 'traditional' architects (Windsor-Liscombe, 2007). Given its mandate, the new programme took a very pragmatic view of architecture, as did similar programmes in West Africa, relating it to the provision of shelter and comfort for the largely urban expatriate community, through attention to the 'boundary condition', as presented by Le Roux (2004). This effectively framed architecture, and architectural education primarily as technical endeavours, concerned with the

science of making buildings, but not linked to the needs of the local population. The programme also created a dilemma for architecture, separating the making of architecture from its roots as a social activity, from its design component, which was placed in a formal educational setting, rooted largely in western educational pedagogy. The dichotomous situation created, was a consequence of formalised architecture being planted where “[...] the idea of ‘architect’ [...] had scarcely grown before” (Potter & Potter, 1984, p. 31).

With independence looming, and only a year or two after the first graduates had emerged, the programme at the Royal Technical College was upgraded to become a fully fledged professional degree, based on the prevailing model for architectural education in Britain, reproducing a curriculum which in the words of Smith, were “[...] domesticated versions of that knowledge for uncritical consumption” (1999, p. 65). This programme remained the only architecture programme in East Africa until the 1970s, when the collapse of the University of East Africa in 1970 and the East African Community (EAC) in 1977, led to the establishment of separate professional programmes in the three different countries of East Africa. Tanzania set up an architecture programme in 1977 at the University of Dar-es-Salaam (now Ardhi University). Originally a Diploma in Architecture, this mirrored the initial setup at the Royal Technical College, Nairobi, and geared to graduate mid-level professionals. The programme was augmented with a Graduate Diploma in Architecture in 1988, which served as the professional programme, until the two programmes were merged into a five-year professional Bachelor of Architecture in 1996.³

In Uganda, political upheaval during the 1970s and 1980s, prevented the inauguration of a local architecture programme, although Kyambogo Polytechnic (now Kyambogo University) had offered a Diploma in Architecture Drafting from the 1960s. A professional Bachelor of Architecture degree programme, based in the Faculty of Technology at Makerere University, was eventually inaugurated in 1989. Setting up this programme in an engineering faculty, served to reinforce a long standing perception of architecture as akin to engineering; with the diploma course at Kyambogo University, also based in an engineering faculty. Indeed, with architects designing only a small proportion of new buildings: prestigious government and a few large corporate buildings, for many, there wasn't much distinction between engineering and architecture, as most building design and construction projects were, for the most part, undertaken by engineers. Consequently, to remould the image portrayed of architecture and the architecture

3 Ardhi University was formerly the College of Lands and Architectural Studies, a constituent college of the University of Dar-es-Salaam. It gained full University status in 2007, taking on the name of one of the original institutes, the Ardhi Institute, that was incorporated into the College.

profession, as an international, modern, high-tech, and influential profession (Danby, 1983, p. 15), it was necessary to emphasise and highlight the distinction between engineers and architects, as presented by Potter and Potter, in reference to the origins of architecture in Sudan:

[...] I found myself explaining to a crowded audience of budding muhendiseen a new and somewhat revolutionary idea. This was that henceforth those studying building should be divided into two groups, the architects and the civil engineers. The former would be concerned primarily with the social and aesthetic aspects of design, the latter mainly with the ever-increasing problems of strength and stability (1984, p. 31).

Locating architecture programmes in engineering faculties was, however, a way to garner status for these fledgling programmes, being introduced into an educational paradigm that relegating arts and humanities to the background in the context of the broader *Arts versus Science* debate, as highlighted in the landmark publication *The Two Cultures* (Snow, 1998). In the context of East Africa, this is visible in the derogatory label bestowed upon the performing arts, with the Faculty of Music Dance and Drama (MDD) at Makerere University, often referred to as *Musilu Dala Dala*, literally translated to mean, “For the Totally Stupid” (D. Tumusiime, 2010). This attitude toward the creative arts, partly accounts for the decision to place the new architecture school at Makerere University, in the Faculty of Technology and not in a separate Faculty of Architecture linked to the School of Fine Art as advocated by Stanley Mulumba, the early protagonist for an architecture programme in Uganda (Birabi, 2000). Placing the new school in the Faculty of Technology was thus an attempt to accord architecture prominence and academic currency, legitimised through association with long established engineering profession.

2.2.1 The Ethics of Modernist Architecture

While architectural education in East Africa was only formalised in the 1950s, the profession itself was formalised during the 1900s with the founding of the East African Institute of Architects (EAIA) in 1913, and gazetting of the East African Architects and Quantity Surveyors Registration Act in 1934. These milestones served as the beginning of the profession in the region, but with a distinct urban bias, largely concerned with the wellbeing of the expatriate communities, that were based in these urban centres (Le Roux, 2004; Windsor-Liscombe, 2007). The inauguration of architectural education in the region during the 1950s, at the height of modernism, had another effect, serving as a platform for the uptake and eventual dominance of this approach to architecture across the region.



Figure 2.1: Early Modernist Architecture in Uganda - Library Building, Makerere University

At the time the first architecture programme was inaugurated at the Royal Technical College, Nairobi, modernism had established itself as the preeminent approach to architecture across the world. In the context of European colonies in Africa, modernism took on an added dimension, associated with a body of knowledge described as 'Tropical Architecture'. This originated in West Africa during the post war years, in response to a need to satisfy requirements by European settlers for comfort from the 'oppressive' climate (Le Roux, 2004). Modernist architecture in Africa thus became synonymous with what was perceived to be appropriate approaches to environmental design for tropical conditions (see Figure 2.1), and therefore rapidly propagated across the European colonies across the tropics, aided by publications such as, *Tropical Architecture in the Humid Zone* (Fry & Drew, 1956).

The appeal of modernist architecture in the context of East Africa, may have had another significantly influential element; a presumption that the continent was *terra nullius*, with no real architectural precedents evident. Despite some indigenous buildings exhibiting status and grandeur (See Figure 2.2), these were not considered 'Architecture' as they were largely constructed with perishable materials. Consequently, the 'western' formulation of modernism that took root in the region, left little room for alternatives in the formulation of the contemporary canon of architecture in East Africa. This effectively reframed the notion of what constituted

architecture, through what Hobsbawm described as ‘invented traditions’, which are “a set of practices, normally governed by overtly or tacitly accepted rules and of a ritual or symbolic nature, which seek to inculcate certain values and norms of behaviour by repetition, which automatically implies continuity with the past” (1992, p. 1).



Figure 2.2: Kasubi Tombs - Grand Scale Indigenous Ganda Architecture

The dominance of modernism, was further cemented into the urban fabric, and the psyche of society, after it was adopted by postcolonial governments, as a means of expressing modernity and global ambitions, as expressed by Windsor-Liscombe:

The legacy of the Modern Movement in Kenya, if not Africa as a whole, is thus typified by the urban grid of commercial buildings along Government Road in Nairobi lauded as signifying [post] colonial progress [...] (2007, p. 32).

In the early schools of architecture, modernism overcame a significant dilemma for the teaching of architecture, with its ahistorical approach effectively exempt educators from the need to delve into social and historical studies, more so as historical precedents from the region were considered invalid. This promoted what can best be described as ‘history free’ architecture, highlighted by early proponents of tropical modernism in Africa - Maxwell Fry and Jane Drew, quoted thus:

Maxwell Fry: ‘A Nigerian aesthetic? On what would it be based that is as solid as the plywood techniques, the old timber traditions of Finland?’

Jane Drew: 'If a Nigerian genius were to be born, upon what deeply-felt indigenous art might it not feed – and be better digested, perhaps, than Picasso's reactions?' (Ihejirika, 2000, p. 185)

In the global context of architectural education, numerous cohorts of architecture students across the world, were being exposed to the benefits of modernism and 'modernist' ideology, as stated by Cripps:

We were given a mixed diet of 'functional' techniques for organising design, and lectures in history which began with Ancient Greece and continued to Frank Lloyd Wright, Le Corbusier and Mies Van Der Rohe, which provided the climate for the development of our ideas about architecture. Other civilisations such as that of China, India, Japan, Africa or America or the impact of western colonisation were not mentioned (and are seemingly still not mentioned other than as tacked in, historical, anecdotes in lectures, to 'mainstream' history (2004, p. 471)

Modernism effectively became the standard for architecture across the globe, not only as a means of addressing the needs of post war reconstruction, but also to cope with the myriad of new methods and materials that were being availed. Without the formal historicised architectural traditions, epitomised by the Ecole des Beaux Arts, architectural education was (re)framed, through a discrediting of craft practices, "[...] depicting it [Craft] as a form of local knowledge subordinate to the universal knowledge or 'science' of the professional [...]" (Upton, 1991, p. 195), and reinforced through the education system. The reduced value of traditional architecture in the eyes of the 'educated' public, established a cultural hierarchy which privileged western architecture, "leaving no doubt that the geographical, ethnic, and racial biases that underlie the architectural canon" (Baydar, 2004, p. 23). This was based on a defined set of values, and an architectural ethic that effectively lead to:

[...] a devaluing of the past, knowledge of the past, and experience, then consequently a devaluing of old people, of old ways, and of old things, and finally (as we know from critiques of capitalism) a devaluation of the human being into a temporary source of labour (McKay, 2004, p. 8).

This approach to education, systematically erased in the minds of architecture students, any reference to indigenous architecture, replaced by a new set of references and values as a platform for contemporary architecture in the region. Over time, embracing modernist architecture played into the demands of the newly independent nations eager to establish and assert themselves on the global scene.

The students were eager to learn the skills of the image-making foreigners so that they, in their turn, would be able to produce modern buildings worthy of the progressive aspirations of their countries (Danby, 1983, p. 15).

For architectural education, this prioritised a narrow narrative model, centred around great works of western architecture, described by Kingsley (1988, p. 21) as a "great men, great monuments" approach, effectively ignoring the role of society in creating

architecture (Lokko, 2000, p. 15). Modernism was therefore cemented in the minds of many as the epitome of 'good' regional and appropriate architecture from the 1950s onwards, effectively becoming the default standard for architecture in East Africa, and embedded in early architecture curricula.

The trend of an ahistorical approach to architecture, is still evident today, more so in postmodern architectural exploits. Largely in its infancy, but exploding across the urban landscape, postmodern projects draw heavily from international ideas and ideals that place this architecture anywhere, and nowhere at the same time (See Figure 2.3). While this emerging style, spearheaded by indigenous locally educated architects, could be interpreted as an attempt to refocus the post independence architectural canon, its basis in the ahistorical modernist view of architecture is still plainly evident.



Figure 2.3: Post Modern Architecture in Uganda - Office Building, Kampala

Within the context of contemporary architectural education, exploration of modernism rarely goes beyond modernist star architects, such as Le Corbusier, and Mies van der Rohe among others. Only scarce mention made of the works of significant African modernist architects, such as Richard Hughes and Amyas Connell in East Africa, or even Maxwell Fry and Jane Drew in West Africa. This highlights the overt link to pre-colonial perceptions of architecture, which still serve as a basis for architecture discourse in the region.

2.2.2 Views on Architectural Education

Discourse on architectural education is largely framed around four prevalent perceptions of architecture, identified by Groák, as: i. Vocational/Professional; ii. Multidisciplinary built environment profession; iii. Autonomous discipline defined by its tradition; iv. Largely theoretical practice, mythical in nature (1988, p. 79). These perceptions have framed the direction architectural education has taken over the past century, from its origins in the “[...] codification of societal power relationships during the late eighteenth century enlightenment” (Haar, 1999, p. ii). Over the years, architectural education has been transposed, from a vocational master-apprenticeship model, into a variety of different forms, but primary undertaken in the university setting. The changing nature of architectural knowledge, evolving skill and practice requirements, as well as external pressures particularly licensing and registration requirements, made the ad-hoc apprenticeship format increasingly unreliable as a path to an architecture professional qualification (Mazumdar, 1993; D. Schön, 1988), necessitating the streamlining not only of architectural knowledge, but also its educational approach as well. The transition served to ‘professionalise’ architectural education, according it academic currency and status, at par with established professions such as Medicine and Law. Ironically, the very professions that architecture has been trying to emulate, have during the same period transitioned toward the practical approach embedded within architectural education, as Neumann notes:

Until the end of the nineteenth century, medical education consisted almost entirely of lecture (sic). Medical students did not practice medicine under supervision. At most, they observed their teachers practicing (2013, p. 154).

This transition was also about quality, and how it could be maintained or ensured across the burgeoning number of schools. The formalisation of architectural education, has become a key defining feature of professional programmes, and a key component of validation requirements. Formalisation of educational requirements, enabled the prospect of educating a significantly large number of potential architects than had been possible under the apprenticeship model (Oyaro, 2011, p. 298). It also ensured an accepted level of quality was achieved in the schools, something that had been difficult to achieve through the fragmented apprenticeship model.

Architectural education, in the early years of the transition into the university setting, viewed architecture in its traditional role as making buildings. This saw architects trained in classical or traditional techniques, similar to the approach taken in the apprentice model, ensuring some form of continuity with the past. Architectural

education was geared to prepare architects capable of “[...] working in a local context on a project that can be encompassed by the individual in a small form” (Worthington, 2000, p. 28). This approach, although adequate for the time, does not account for the rapid changes to contemporary practice, with the role of the architect changed considerably, from one analogous to the master-builder, to one situated within the knowledge based economy (Worthington, 2000). With performance requirements for new buildings, far more complex than ever before, and with a myriad of legislative and budgetary requirements making contemporary architecture practice a complex undertaking, architectural education today is far removed from what it was at the beginning of the twentieth century. The constantly evolving field of practice thus brings into question the technocratic model of architectural education, with a primary goal being to prepare students for localised traditional style practice.

According to CAA President, Wale Odeleye (1989-91), problems faced by the architecture profession only emerge because architects themselves failed to change with the times (Odeleye, 1991). Consequently, with a key function of architectural education, being to prepare students for a largely unknown and unfamiliar future, and to address challenges that require suitable and appropriate solutions for a particular context, it becomes apparent that educational inputs that relate primarily to existing practice situation, are inadequate or inappropriate for future professionals. The education process in response, must ensure that students, as future professionals, continue learning throughout their careers, as stated by Boyer and Mitgang, who concluded that “[...] architectural education is really about fostering the learning habits needed for the discovery, integration, application, and sharing knowledge over a lifetime” (1996, p. xvi). This is reiterated by Brady, when she writes; “[...] to prepare students to meet the complex demands of the profession, the degree focus and structure as well as the curriculum must facilitate the relationship between general education and specialised study” (1996, p. 33).

For successful contemporary architectural education, Nicol and Pilling state, “architectural education must [...] enable students to develop the skills, strategies and attitudes needed for professional practice and it must lay the foundation for continuous learning throughout life” (2000a, p. 1). However, Abramowitz (2003) laments that architectural education often fails to consider the changing nature of the architecture profession, with architects today often taught the same way as in the past. This does not acknowledge that contemporary architecture practice is increasingly multidisciplinary, taking on (or moving back into) areas traditionally not viewed as ‘architecture’, with “societal, and thus spatial, constructs [...] emerging with such rapidity that we are (sic) can no longer educate for a fixity; instead we

must educate for moving targets” (Till, 2005, p. 170). In this context, the technical-rational model, based on a practice scenario which “[...] involves working with solvable problems which yield to logic and the application of knowledge” (Lester, 1995, p. 44), comes into question. Of greater significance would be a creative-interpretive model which acknowledges “[...] a complex, dynamic system in which there are less often neat problems than ‘messes’ which defy technical solution” (Lester, 1995, p. 45). It is here that the inherent conflicts in architectural education are remarkably overt, particularly as many educators come into architectural education with only their own educational and practice experience as a reference; these ideologies and beliefs garnered from their background, thus have a strong influence on their approach to teaching (Salama, 1995, pp. 1-2).

In relation to the education of architects in Africa, Odeleye posed several questions associated with the challenges faced by Developing Countries vis-à-vis, the type of architect desired; the education necessary to enable engagement with potential clientele in Africa; the content of the architecture curriculum to ensure relevance; how diversity is ensured among architecture graduates, and; how architects can be ‘trained’ to perform the duties expected of them? (Editor, 1991, p. 3) On one hand, these muses suggest a broad role for architects - providing solutions to contemporary and future challenges - however, they also seemingly imply that, architectural education should provide graduates with education and training necessary to ensure that on completion of their formal education, they are ‘fit-for-practice’, and ready to undertake any challenges encountered (Hartenberger, Lorenz, & Lützkendorf, 2013, p. 68). Odeleye’s comments also alluded to a wider, more pertinent issue, the relationship of architectural practice to architectural education, and how views of the profession are influential in determining the nature and direction of architectural education. It is here that the conflicts within architectural education, and what is regarded as quality are evident, demonstrated through ongoing discourse and debate regarding the validation of professional programmes. According to Thilakaratne, and Kvan:

Validation is a process that assesses the quality of an educational programme to certain prescribed external standards. These standards are often prescribed in terms of outcome-based criteria and competence-based assessment is a widely adopted basis by most professional validation systems (2006, p. 317).

It is assumed that meeting stipulated validation requirements is adequate confirmation that a school has achieved the stated values or quality standards. For Coleman, this however emerges as a key point of contention in contemporary discourse on architectural education:

Preparing students for work in (conventional) architectural offices upon graduation persists as the main aim for schools of architecture. On the face of it, there is nothing at all unreasonable about this condition, except that as architectural practices have become more industrialised in their organisation and output, the degree to which the academy ought to be led by its obligation to the profession emerges as an important ethical question (2010, p. 204).

The complex relationship between academia and practice, and within academia itself as an ethical question, thus becomes significant, related to the idea of *Knowledge*, and *Knowing*, which linked to the four areas of professional competence, presented by Cheetham and Chivers (1996, p. 24) as being: Knowledge/Cognitive Competence; Functional competence; Personal/Behavioural Competence; and, Values/Ethical Competence. Within architectural education, these competence categories, suggest fundamental elements of professional education, that cannot be acquired garnered through the formal knowledge transmission or the acquisition of skills, as advanced through the technical-rational model.

The diverse views of architectural education, some of which were presented in this section, highlight the complexities of this educational endeavour, adding to the paradox that is architectural education. With no defined or single correct approach, the education of architects, and the process through which novices are transformed into professionals, is as diverse and complex as is evident in this brief discourse. In East Africa, where architectural education was inherited from a European/Pseudo-European context, the socio-cultural setting in which it occurs presents an opportunity to (re)visit the transformational process of novices to professionals, and its effect on socialisation in the context of contemporary architecture and architectural education.

2.2.3 Architectural Education and the Learning Context

The predominant image of contemporary architecture in East Africa, is largely sourced from outside the region, a consequence of the historic origins of the architecture profession. This is coupled with a practice across many colonies across Africa, whereby local histories were demoted in favour of European ones (Saidi, 2005, p. 270), thus presenting 'Architecture' as somewhat alien to place. Over the years, this underlined the idea that cultural and social context, were unimportant to the practice of architecture. It is acknowledged however, that it is impossible to discuss architecture and architectural education without touching on the notion of culture, which in the context of Africa, is intimately linked with colonialism, post-colonialism, and the (re)construction of national identities (Vale, 2008).

Culture and architecture are inexplicably linked, with architecture often regarded as a physical manifestation of a society and its culture, transmitted or perpetuated through architectural education (Milliner, 2000, p. 223). For Eraut, this relates to the processes by which “[...] norms, values, perspectives and interpretations [...]” (2004, p. 254), are formulated, both consciously and semiconsciously. With relation to formal architectural education, with its origin in European and Pseudo-European educational traditions, undertaking architectural education, thus meant taking on European traditions as part of the process. In this light, Weisman asks:

How can an architectural education that continues to define professional expertise in relation to the history of white, heterosexual, Euro-American male consciousness prepare students to function as effective professionals in pluralistic communities? How will students be sensitized to ‘difference’ when they are encouraged to suppress their own gender, race, and class identities in the process of becoming ‘professional’? (1996, p. 279)

The broader cultural aspects of education, were rarely acknowledged or discussed in discourse on architectural education (Crysler, 1995; K. D. Moore, 2001), although increasing internationalisation of architectural education showcases this as problematic. In Australia, Fung attests that, “[...] the presence of Asian students in many schools of architecture has probably helped to highlight the Eurocentric (or Anglo-American-Centric) nature of the canon of architecture that is institutionalized in our teaching programmes” (1996, p. 11). The diverse student bodies illuminated the deficiencies of formal architectural education, with a typical response being to ‘add relevant’ content to existing curricula, generally as electives. This however neglects a fundamental aspect of architectural education, in that the attitudes and effectiveness of how knowledge is imparted, is as significant as the knowledge itself.

It seems to me that the fundamental problems facing us at present are the same wherever architecture is taught, but they differ in degree and vary in cultural implications. To consider people implies culture: place implies climate; cost implies resources. The visual process of architecture is universal, but with cultural variations. If the so-called western attitude to architecture has inhibited architectural education elsewhere, it is because its purely local cultural aspects have not been distinguished from the universally valid elements (Danby, 1983, p. 5).

Over the years, architectural education has been presented as a complete package, which teaches students all they will need to know for their professional life (Schürer & Gollner, 2008, p. 1). In so doing, local cultural aspects were often considered secondary, as described by Mills and Lipman with regard to architectural education in the context of South Africa:

[...] the presentation, the transmission of packaged, of predigested, information - education as instruction administered to the ‘ignorant’ by experts;

education as competition, as a series of predefined, sequential exercises, in which the success of some is the failure of others;

Education as a set of hierarchically arranged, predetermined activities - a set of hurdles;

Education, that is, as institutional training - training conducted on the principle that significant decisions are taken by those with privileged access to information (1994, p. 215).

This is not unique to Africa, with similar ideas of university education highlighted by Bess, in the USA, stating of academic faculty:

They assume that students come to college to acquire knowledge and skills in thinking about a variety of subject matters, all of which hopefully combine in some inexplicable way to provide preparation for vocational and leisure life after graduation. The responsibility of faculty, according to this view, is to transmit knowledge of the subject matter in their fields and to make certain that students independently exercise their minds to build their thinking prowess (1978, p. 289).

The disconnect between the knowledge of architecture, and its context, has led to a perception that architectural education is the 'studying about', instead of 'participating in' the profession (M. R. O. Olweny & Nshemereirwe, 2006). Further, concentration on knowledge as the primary component of architectural education has overt consequences, emphasised by what could be described as a paternalistic educational approach, which in East Africa is reinforced by lack of resources, with teaching taking a didactic approach, in a 'do as I say, not as I do' mode (Parnell, 2003). Teachers, with their immense *Cultural Capital*, as defined by Bourdieu (1986), thus became the main and often only source of information and knowledge for students. This is conceptualised by Allmendinger who writes:

So, for example, students who want to pass exams regurgitate the strong programme, and as science has been given a dominant position in society the public accept a 'strong program' as 'truth' (2002, p. 7).

For architecture students, this seemingly benign issue leads to difficulties, as presented by Banerjee who notes, with relation to students from developing countries studying in industrialised countries, that "by learning how to solve design problems of developed societies, these students become increasingly socialized to a world view and belief system shared by developed societies" (1985, p. 28). Omenya underlines an overt consequence of this approach to architectural education:

The professionals' failure to respond appropriately to the context is blamed on the context being less regulated, having less educated clients, therefore limited understanding of architecture. These professionals concentrate on solving design and practice problems that are largely non-existent in the global South (2011, p. 286).

Perhaps more overt for socialisation, is how this translates into the educational realm, notably in how instructors are recruited and mentored, as well as how they engage with students. For many educators in East Africa, teaching is not a first preference for employment, a consequence of the lowly status accorded to teaching, a legacy of recruitment methods employed at lower levels of education, as well as the poor remuneration accorded to educators at all levels. A direct consequence of this situation, is a significant disparity between academics, and their peers in practice, which also serves to prevent potentially good instructors from engaging in teaching (Mungai, Asiimwe, Esiara, & Mande, 2013). Anecdotal evidence suggests that two groups of individuals go into academia: those who are dedicated to education, or those who are desperate; accentuated by the George Bernard Shaw idiom, "Those who can, do; those who can't, teach." Taking a broader view of educators, Boyer and Mitgang suggest that architecture faculty fall into one of five categories:

- Those whose backgrounds are mainly academic;
- Those who combine teaching with limited practice;
- Those with well-balanced careers in teaching and practice;
- Practitioners who teach, mostly on a part time or adjunct basis; and,
- Practitioners who mentor and provide internships to students and graduates (1996, p. 51).

With four of these categories linked to practice, and with many academics receiving little instruction in educational pedagogy, the nature and background of architecture faculty is, without question, crucial for architectural education. Practitioners also represent the voice of the profession, and their presence in architectural education presents an important link between academia and practice. For students, practitioners, are the epitome of what they aspire to be, thus the allure of 'stararchitects' for architecture students. Of interest here is the cultural capital held by practitioners, relative to that of academics, and how this can be influential on student within architectural education. Learning and teaching in architectural education, thus become key factors, beyond the mere transmission of knowledge, but also linked to the nature of those engaged in the educational process.

2.3 Summary

As an overview of education in East Africa, this chapter provided a useful framework from which it is possible to investigate the perceptions of architecture and architectural education. The chapter presented an outline of education, and architectural education in East Africa, seeking to frame the study in its socio-cultural context. This was necessary to place the study with relation to the rather complex socio-political systems that frame architecture and architectural education in East

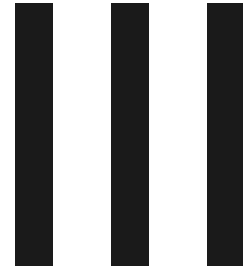
Africa. The literature suggests that the complex interactions of the stakeholders, historic antecedents, and contextual nuances, may be particularly pervasive in the framing of architectural education in the region. This is framed by the historic origins of university education, the origins of the architecture profession, and views of the purpose of education across East Africa. Questions are thus raised about the influence of the stakeholders on architectural education, through inherent ideas of what constitutes architecture and architectural education. This suggests that the basis of experiences within architectural education, are a symbiosis of elements that inform the educational process, thus influencing the process of socialisation.

Comprehending how ideas of what constitutes architecture influence perceptions of architectural education, and how the educational process itself unfolds as a result of these perceptions, is therefore of interest. This relates, in particular, to how faculty and students interact within the realms of architectural education, emphasising the significance of social factors as part of the educational process. Interaction within this process, is thus a fundamental part of architectural education, but is not always clearly understood, or appreciated, and therefore becomes a key area for investigation. The idiosyncrasies evident, also suggest links to the philosophical foundations of education in the region, which emerge as possible influences on students' expectations as they come into, and go through architectural education. From the literature, there are strong suggestions of links between perceptions of architecture, and experiences within architectural education. Further, the environment, and context within which architectural education takes place may be more than a mere backdrop to the educational activities within schools of architecture. These elements, thus provide a contextual framework for the exploration of the research questions of this thesis.

Framework for Socialisation in Architectural Education

“A major portion of the energy that is devoted to building education goes to forming the value system of the students. This effort would be better guided by a consciousness of value systems through a study of the values involved and their formation, examining past and present value systems held by different groups. Similarly, value-related analysis may also be used in the studies of designer attitudes and behavior.”

(Mustafa Pultar, 2000)



3.0 Introduction

This chapter addresses socialisation in professional education, with particular interest in architectural education, where the proliferation of different approaches to the education of architects, but with fairly homogeneous educational outcomes, makes socialisation particularly significant (Bragg, 1976). This raises questions related to conformity and standardisation, not so much in terms of the knowledge elements of the curriculum, but with regard to the output of the educational process (students), and the ideas they embrace. The chapter is presented in three subsections; the first reviewing socialisation in a broad context, referencing the social reproduction of culture; the second, looking at socialisation in higher education, particularly in professional education; and, the third, elements of socialisation within architectural education.

Early writings on socialisation, were associated largely with childhood development, and the socialisation of children to be better integrated into society, showcased in the writings of Durkheim (1961), and Jackson (1968) among others. This was a consequence of childhood representing a key point, when children are socialised into ‘mainstream’ society through somewhat standardised curricula, across states, provinces, or even countries, making the effects of the socialisation process plainly apparent (Bloom, 1972). This literature, nevertheless, provides a good background, useful in the appreciation of socialisation in professional education, given the goals of professional education are largely similar to early childhood socialisation, geared to the transformation of individuals into useful members of a society (Shuval, 1975,

p. 414). In either case, the outcome of the educational process is a discernible group, who espouse a clearly identifiable set of values and skill sets, which they have garnered through their educational experiences.

3.1 The Idea of Socialisation

In his treatise on the *Origin of Ideas*, Hume (1902) suggested that our thoughts are a faithful mirror of reality; thus, we think, and behave in the context of what we know. This in essence acknowledges that learning, as part of this reality, is a socio-cultural practice (Orr & Gao, 2011, p. 6). Learning is thus more than just the transfer of knowledge, and is both contextually, and socially contrived. Returning briefly to the definition of socialisation given by Bragg, presented as:

[...] that process by which individuals acquire the values, attitudes, norms, knowledge, and skills needed to perform their roles acceptably in the group or groups in which they are, or seek to be, members (1976, p. 6).

Brim gives a similar definition, presenting socialisation as: “the process by which persons acquire the knowledge, skills, and dispositions that make them more or less able members of their [professional] society” (1966, p. 3). Both these definitions use the term ‘*acquiring*’, although, a more rudimentary definition given by Bernstein, describes socialisation as, “[...] the process whereby the biological is transformed into a specific cultural being” (1977, p. 476). This ‘*transformation*’, which occurs within a socio-cultural setting, highlights two additional aspects of socialisation: *Social Structure* and *Social Interaction*, both fundamental to any society, as these are what bind a particular group together. Of fundamental importance within this interaction, is that learning can occur independent of a formal curriculum, and to some extent does take place unconsciously (Eraut, 2000, p. 115).

Socialisation is generally presented as being largely one-way, dominated by those in positions of authority. In this format, socialisation could appropriately be described as *Enforced Socialisation*, where individuals on the receiving end, have little or no control of the socialisation experience. On the extreme is *Political Socialisation*, defined by Barbagli and Dei as a “conservative process facilitating the maintenance of the ‘status quo’ by making people accept the system under which they are born” (1977, p. 427). Here, the embedded power relationships, between those in position of authority, and those on the receiving end of this authority, according to Easton and Dennis (1969, p. 276), can lead to institutionalisation of this authoritative socialisation structure, making it ‘the norm’. For Bourdieu (1977, p. 487) this structure is instrumental in the transmission of power and privilege in society, a significant element embedded in formal education. Tierney (1997) likens this

approach to a process of assimilation, by which recruits acquire skills to enable them to be successfully integrated within existing institutional frameworks, or what Wheeler unflatteringly terms “people-processing” (1966, p. 54). By extension, this can lead to assumptions of static institutional frameworks; however, it is apparent that the socio-cultural context of education, within which socialisation takes place, is anything but static, but is dynamic and ever changing, and “[...] something with which people fight, about which they fight, and the ground over which they fight” (Stevens, 1995, p. 108). Tierney; thus, proposed an alternative view of socialisation, suggesting that it is more than just the acquisition of tacit knowledge, but:

[...] an interpretative process involved in the creation - rather than the transmittal - of meaning. [...] Rather, socialization involves a give-and-take where new individuals make sense of an organization through their own unique backgrounds and the current contexts in which the organization resides (1997, p. 6).

Socialisation is thus viewed as a two-way process, with two primary stakeholders: learners, making a commitment to the process; and instructors, with the responsibility of guiding students, although in many cases it is more “[...] the transmission of dominant values [...]” (Barbagli & Dei, 1977, p. 423). Socialisation in this regard, is not just the habituation of students to pre-determined societal expectations, but is also a relationship between those seeking to join an organisation or group, with those who are already part of that organisation (Morton, 2012, p. 100). It is this inherent relationship that formed the basis of Dutton’s definition of socialisation, as “[...] those unstated values, attitudes, and norms which stem tacitly from the social relations of the school and classroom as well as the content of the course” (1987, p. 16). This can be termed *Negotiated Socialisation*, whereby individuals are not only aware of the socialisation taking place, they are knowingly and willingly involved in acts related to socialisation as well.

Along with the social relationships between stakeholders within the educational process, are the venues where socialisation occurs. Educational institutions serve as the primary venues where this social and cultural interaction takes place, creating conditions for reproduction of culture, through the transmission of *Cultural Capital* (Bourdieu, 1986). Bourdieu went on to refine this concept using the term *Habitus*, which he describes as “a set of internalized dispositions that incline people to act and react in certain ways [...]” (Stevens, 1995, p. 111). This suggests that it is difficult to appreciate, or understand something that exists outside ones own experiential reality, or without reference to it; i.e., we use our *Habitus* to interpret the world around us. In the context of education, Sara (2004, p. 239) points out, that students learn significant aspects of their profession from the socio-cultural setting

in which they reside, as well as from exposure to particular teaching and learning approaches not directly linked to the knowledge espoused. This indicates that teaching, is crucial to the learning experience, and how (and what) students eventually learn. The context of education; thus, presents as an important aspect of formal education; and is significant in the formation of individuals within the education system.

In professional education, seeking to prepare students for entry into specific fields, often isolating students from the wider community, and with comparatively high levels of interaction between instructors and students socialisation is particularly significant. These lengthy programmes provide favourable conditions for what Wheeler termed '*Developmental Socialisation*' whose objective it is to develop individuals in areas in which they are deficient (Wheeler, 1966, p. 68), or in some cases, in areas instructors and professionals determine are necessary for participation in a profession. It is this aspect of professional education that has received significant attention, particularly in fields of Medicine, and Nursing (Barnett et al., 1987; Becker, Geer, Hughes, & Strauss, 1961; Broadhead, 1983; Clouder, 2003; Coulehan, 2001; Meerabeau, 2001; Paisey & Paisey, 2000; Shuval, 1975). This relates to what is colloquially termed 'bedside manner', overtly linked, not to the knowledge of the medical profession, but to its tacit elements, which are generally not part of the formal curriculum. A key point about tacit knowledge is that it is essentially '*personal knowledge*', used uncritically, simply because the user believes it works, due to a previous experience, and often with little review or evaluation of alternatives (Eraut, 2004, p. 253).

In the context of architectural education, Strickfaden and Heylighen state that, architectural education is where "[...] students gradually take on language codes, stylistic preferences, and rituals of architects, while becoming increasingly remote from the way laypeople describe and prioritise architecture" (2010, p. 122). Becoming an architect, thus entails consciously embracing the embedded attitudes and values of the profession. For Stevens, socialisation is "[...] an integral part of architectural education" (1998, p. 196), acknowledging that it is through education that cultural aspects of the profession are "[...] slowly absorbed from those who are already cultivated" (1998, p. 196). Socialisation is thus significantly important in the transformation of individuals within the context of professional education, with the key influences presented in Figure 3.1 below.

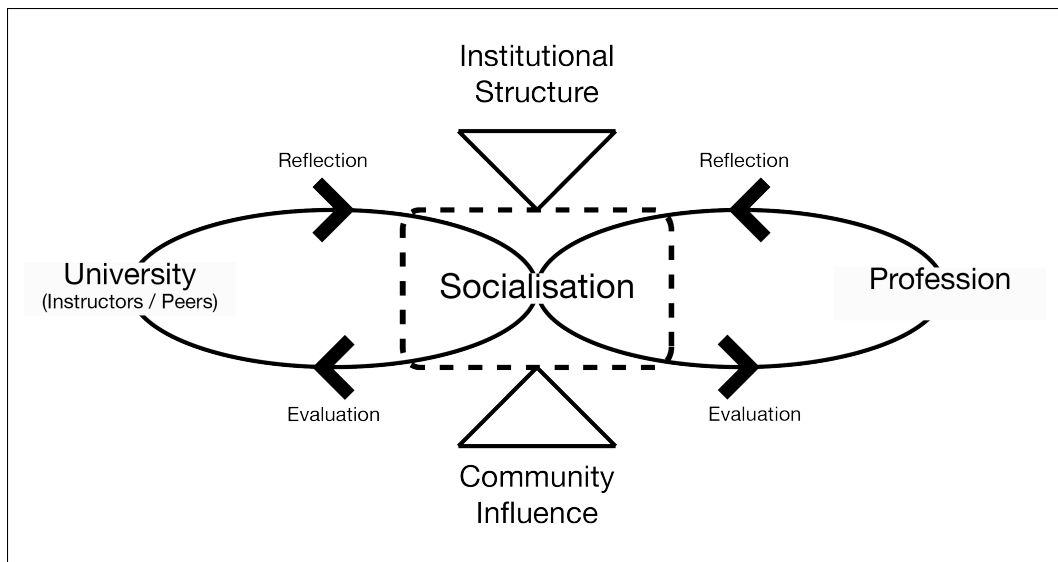


Figure 3.1: Influences on Socialisation (Adapted from Weidman et al., 2001)

Returning to Jackson’s preeminent study, which investigated what he described as “trivial classroom events” (1968, p. 4), it is clear that socialisation extends the realm of education beyond just the official explicit curriculum. Tierney reaffirms this notion, suggesting that socialisation is a result of “[...] the less dramatic, ordinary daily occurrences that take place as we go about the normal business of being a professor, student, administrator, or staff member” (1997, p. 3). In this setting, numerous intricate elements and outcomes of socialisation are visible: from clothing worn, language used, criteria employed in the assessment and judgement of quality and the formulation of solutions, nuances not normally included in, or perceptible as part of the main curriculum, but are nevertheless of vital importance for participation in the profession (Cuff, 1991, pp. 43-44; Stevens, 1995; Vowles, 2000). Professional education thus can be viewed as a powerful form of socialisation, initiating students into the [cultural] norms of a profession. However, how students take on elements of the profession, through Involvement, participation, and investing their time in activities related to the profession is not fully documented (Weidman et al., 2001, pp. 15-19).

The processes of socialisation themselves are not straightforward, involving several stages, with Weidman, et al. (2001) identifying four: i. Anticipatory (or Pre-Socialisation) - which generally occurs prior to entry into the formal or principal socialisation situation; ii. Formal; iii. Informal; and, iv. Personal. Each stage is associated with the transformations that occur in individuals or groups as part of the educational process, acquiring competence and competency, increased confidence, as well as greater acceptance into their respective professions. In an example related to the acquisition of skills, Dreyfus (2004) presents a five-stage model described as: Novice; Advanced Beginner; Competence; Proficiency, and

Expertise. Lave & Wenger (1991, pp. 41-42) label this process as ‘Identity Mastery’, building an understanding of the roles and responsibilities of a particular profession (See Figure 3.2), but which could also lead to a change of ones identity as greater responsibilities are taken on (Morton, 2012, p. 101).

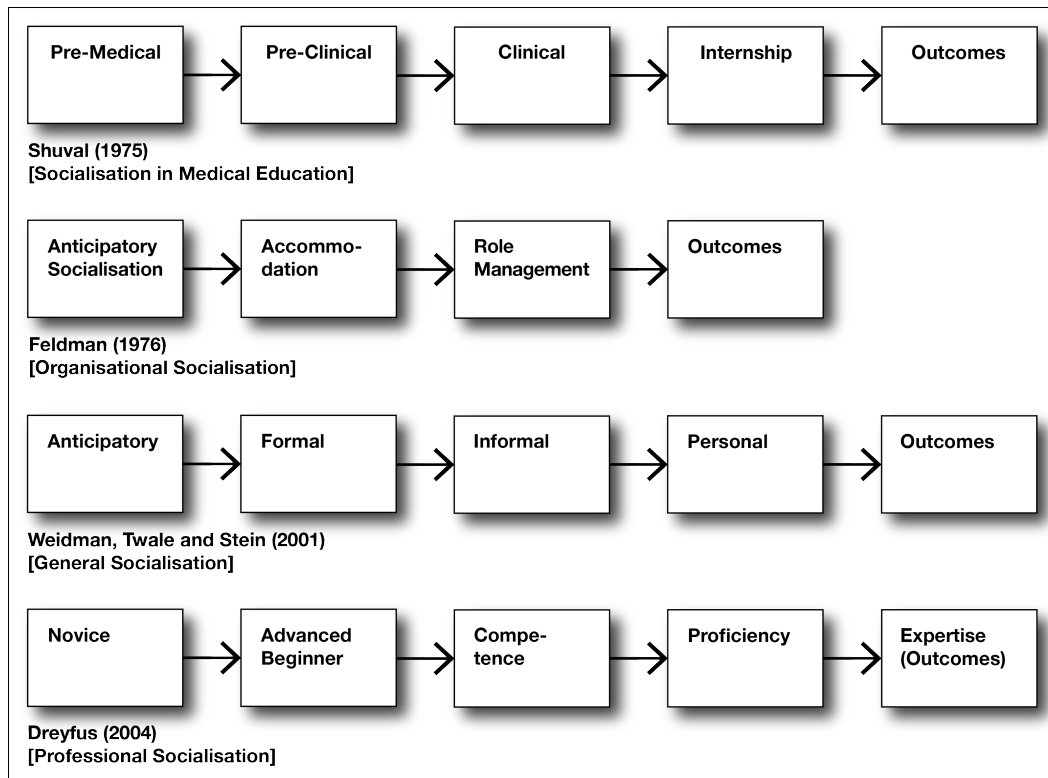


Figure 3.2: Stages of Professional Education

Additionally, the process of socialisation is intrinsically linked to culture and place, with Lloyd suggesting “it is extremely difficult to teach without cultural reference [...]” (1983, p. 368) as knowledge and experiences are deeply rooted in the lived experiences of a society or community. Tacit knowledge thus, becomes an important consideration in architectural education, which for Till (2005) is the most important aspect of architectural education along with characteristics of the programmes themselves, which he equates to a prison yard, with “[...] an outer fence policed by the values of the profession and an inner fence policed by the authority of the school” (Till, 2005, p. 167). For Shuval (1975, p. 414), this aspect of socialisation highlights the fact that it is not a smooth mono-directional process, but is distinguished by stages of conflicts and reconciliation that affect and influence progress through professional education. This relates to what Olesen & Whittaker (1968), describe as a “triple-identity” objective within professional education intertwined with increasing awareness of students leading to a convergence towards professional competence.

3.1.1 Socialisation in Professional Education

A key mandate of professional education is the transform of individuals into professionals, requiring learning (or relearning) of things relevant for participation in their selected profession. Although seemingly straightforward, this process is complicated by established repertoires of learning and socio-cultural traditions that often have to be questioned, or even unlearned. Professional socialisation is thus geared toward the “decline of idiosyncrasy” (Stelling & Bucher, 1973, p. 661), which for Shuval (1975, p. 414), is to ensure the internalisation of professional norms and values that define a profession, and within which professionals operate. This ensures recognition of the profession, based on the unspoken (or unspeakable) assumptions on which it rests (Banham, 1990, p. 23). These attitudes and values are generally acquired within the context of education, with students socialised into the profession by their peers and instructors. It is however difficult to explicitly map out all the elements that students need to learn as part of their education, as Eraut notes:

[Students] are also learning how to present work for assessment; how to participate in shared discussions; algorithms and schemas for reading and problem-solving; a hidden curriculum of orderly, disciplined behaviour, working to deadlines and submission to authority; and a rich array of knowledge, beliefs, attitudes and behaviour from peer group interaction (2000, p. 131).

Consequently, the apprenticeship style of learning which still forms the heart of architectural education through the design studio, for which the phrase ‘*Community of Practice*’ may be appropriate, takes on added significance (Morton, 2012, p. 101). Eraut (2000, p. 131) goes on to question whether it is possible to separate formal learning from informal (or non-formal) learning, as he regards both as essential to the educational process.

It is necessary therefore, to acknowledge the distinction between ‘socialisation’ as earlier defined, and ‘professionalisation’, described as “[...] the process by which students learn the skills, values, and norms of the occupation or profession [...]” (Bess, 1978, p. 292). While professionalisation and socialisation do often occur together, they represent distinct elements within professional education. Professionalisation, is about ‘*learning*’ explicit aspects embedded in a curriculum, while socialisation, is about ‘*acquiring*’ the tacit aspects ascribed to a profession, or the transformation that individuals go through as part of the process of becoming a professional (Brown & Moreau, 2002). These are explained by Polanyi with reference to knowledge, defining *Explicit Knowledge* as “knowing a thing by attending to it, in the way we attend to an entity as a whole” (1962, p. 601), while *Tacit Knowledge* is “knowing a thing by relying on our awareness of it for the

purpose of attending to an entity to which it contributes” (Polanyi, 1962, p. 601). While the explicit curriculum, is somewhat straightforward and relatively easy to define, overtly presented in course outlines and syllabi, linked directly to educational attainment and achievement (Jackson, 1968, p. 22), the tacit aspects of professional education are however rather elusive. The outcomes of the implicit curriculum are nevertheless ever-present, visible in student outputs, and in the way graduates conduct, and present themselves. This becomes critical, given that tacit knowledge is inescapably transmitted, largely informally and often unconsciously as part of the education process. Within the context of professional education, notions of Best practice; Experience; Inherent wisdom, Thinking and the thought process; Competence & competency; and, Commitment, all integral to a profession, but rarely explicitly referenced in the curriculum are highlighted as important and essential to being a professional, but are not always fully appreciated as part of the education process. This calls for a more explicit exploration of socialisation and its links to acquisition of the tacit aspects of professional education.

3.1.2 Education, Indoctrination and a Question of Sameness

Discourse on socialisation inevitably touches on matters of indoctrination, and sameness. These are ever present features of professional education, and at the heart of the traditional apprenticeship system, the basis of the architecture ateliers where replication or simple adaptation were desirable, as noted by McLaughlin; “The atelier method, which involved apprenticeship within a sort of academy [...] when techniques were simple and honor went to him who adapted best the particular variation of tradition that the master within the academy offered” (1954, p. 1). Stevens likened this approach to architectural education to religious indoctrination, stating; “The Ecole [des Beaux-Arts] functioned much as a seminary, inducting individuals through a long period of training into its priesthood” (1998, p. 181).

Transformations that occur within the educational process, inevitably suggest notions of standardisation, sameness, and indoctrination, linked to roles that routinely require professionals to act in solidarity as one. Indeed, in the legal profession, Sullivan, Colby, Wegner, Bond & Shulman (2007) indicate that professional identity and purpose constitute a third of core apprenticeships of legal education. Being able to identify professionals by their constitution and behaviour thus becomes a key part of being a professional. This level of sameness, according to Hartenberger, et al. (2013) is difficult, if not impossible to achieve in architectural education. Unlike the medical profession, with a common set of values based on a commitment to ‘doing good’ (through its Hippocratic Oath), architectural education generally does not foster development of a shared cross-professional identity. On

the contrary, architecture professionalism is generally geared to offer something unique and special, celebrating uniqueness rather than sameness. This inevitably creates tensions and conflicts within architectural education, as there are often cases where sameness is desired, but this conflicts with the broader goals of architecture as a profession.

Sameness thus forms a key element in the transformation of individuals into professionals, where a degree of sameness is regarded as the epitome of professionalisation, and thus rewarded at the expense of difference, which is systematically made 'invisible' (Garrick, 1998, p. 84). The (re)production of sameness itself, invites comparison with indoctrination, an extreme notion of socialisation, as presented by Bobel (2006), or even [cultural] cloning, described by Essed & Goldberg as the "[...] systematic reproduction of sameness" (2002, p. 1067). In the context of professional education, sameness also stems from a crucial feature; links to the historic origins of a profession, which for architecture, builds a "[...] sense of kinship with centuries of traditions, thoughts, and personalities [...] the true tie that binds those who practice architecture with those who teach it and study it" (Boyer & Mitgang, 1996, p. 4). Tradition in this context is the transmission of a set of ideas, largely unquestioned, from one generation to the next, which in its most basic sense is a:

traditum, that which has been and is being handed down or transmitted. It is something which was created, was performed or believed in the past, or which is believed to have existed or to have been performed or believed in the past. (Shils, 1981, p. 13)

Within contemporary architectural education, the shared unmediated link with European or Pseudo-European traditions and culture, a consequence of the *Zeitgeist* within which formal architectural education emerged, thus becomes important (Cuff, 1991, pp. 24-28). An overt illustration of this, lies in the design studio, with its origins in the atelier system enshrined in the French Ecoles des Beaux Arts approach, and refined through its interface with the key principles espoused by the German Bauhaus (Anthony, 1991, pp. 10-11). This is further explored in Section 3.2.1

In the context of architectural education, educators "[...] logically represent a major contributing force towards enculturating new designers-to-be" (Strickfaden & Heylighen, 2010, p. 122), representing a key component of the educational agenda, often determining 'the what, how and why' of education. The experience of art educator Pido (2002), whose engagement as an art student in early higher education in East Africa, serves as an example: the educational process cast him as a blank slate, *tabula rasa* on to which new knowledge could be written, sentiments

also expressed by Matos (2000). This view of education originating, like the *Ecoles des Beaux Arts*, in the seventeenth century age of enlightenment, with the approach to education and knowledge acquisition akin, to how children learn, as expressed by Locke:

Let us then suppose the mind to be, as we say, white paper, void of all character, without ideas; how comes it to be furnished? Whence comes it by that vast store, which the busy and boundless fancy of man has painted on it, with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer, in one word, from *experience* [...] (2004, p. 109)

Formal education in East Africa owes its pedagogy and curriculum to such educational philosophy, and although developed as part of colonial educational policies, its effects are still visible today. Credibility for educational endeavours, for example, required a detachment from the immediate social context, in essence, rebooting students with new knowledge and ideas (Illich, 1971, p. 47). This approach was pertinent with relation to 'Upward Social Mobility', and the perceived relationship between social status, knowledge and the established benefits of education. The proliferation of residential or boarding schools across the landscape of the colonies emerged as a means of controlling what and how students learnt, the most overt scenario being the example of Kings College Budo in Uganda, where "the missionaries aimed to place [...] a structure of British-style secondary education of a neo-traditional kind" (Ranger, 1992, p. 222). Indoctrination is overtly evident in this scenario, framed as education, but effected as the mere "[...] transmission of packaged, or pre-digested, information - education as instruction administered to the 'ignorant' by experts [...]" (Mills & Lipman, 1994, p. 215). For Sutton, this created a sense of "[...] dependence, alienation, or disenfranchisement [...]" (1996, p. 287), reinforced by an education system geared to train students to conform to particular realities and norms, as opposed to enabling the exploration of possibilities within a particular cultural context. This approach, with its embedded biases, is increasingly being questioned and challenged in contemporary discourse (L. Groat & Wang, 2013, p. 78). The notion of unlearning, in the process of being able to relearn something new is therefore significant, and the basis for the process of (re)defining identity, as presented by Cain (1991), with relation to the process of engagement in alcoholics anonymous sessions.

Unlearning or relearning of traditions is a key part of professional education, and while traditions are taunted as a key reason for the persistence of certain ideas, these traditions are not necessarily derived from within the society, but occasionally formulated, and set in the minds of people through somewhat clandestine activities or sometimes through enforcement, as presented by Hobsbawm & Ranger (1992).

Colonialism in particular played a key role in (re)defining traditions, serving to reshape existing compositions of human knowledge (Loomba, 2005, p. 53). These invented traditions can conflict with contemporary expectations, as highlighted by Lloyd (1983) in his assessment of students at the School of Architecture, Planning, and Building at the University of Science and Technology, Kumasi, Ghana.⁴ Commenting about a key challenge of architectural education, Lloyd noted that students were required to exhibit originality as part of their exploration of the multi-dimensional architecture design problems with multiple possibilities, instead of single universally correct answers (Lloyd, 1983, p. 367). It was clear, however, that the educational system students had come through trained them to believe all problems had clearly defined and correct answers, more often than not prescribed by a teacher. Within the broader educational context of East Africa, children are expected to be submissive, regarded as a sign of respect for authority and their elders. In the context of formal education, this translates to passive learning, where questions are not asked, and students responding only to direct questions; an approach also seen in Asia, as noted by Inkarojrit (2007).

Going further, at the extreme sameness can be dangerous, creating sub cultures and social injustices which, according to Scholarios, Lockyer & Johnson (2003, p. 184), could potentially lead to a level of 'cloning' that could impact negatively on society, as depicted in the 1981 Todd Strasser novel, *The Wave* (Strasser, 1981). Such discourse leads us to a contentious notion of nature versus nurture, in which it is pointed out that all people are born equal; however, it is socialisation that affects how people eventually behave and act in society (Kazepides, 1982; Schaffler, 1953). This often lead to comparisons with secret societies, or aspects of 'sameness', as pointed out by Till, citing Jacques Lucan, in reference to Miroslav Sik's atelier at the ETH Zurich, "[...] whose members 'black uniforms and deliberate isolation bore overtones of a clan' [...]" (2005, p. 165). In this regard, Cuff states that architectural education:

[...] involves the intense indoctrination characteristic of initiation rite: a high degree of commitment, a certain amount of isolation from nongroup members, cohesion within the group, sacrifices, and rituals marking passage at various stages (1991, p. 118).

The idea of socialisation thus forms a significant part of architectural education, an understanding of which will enable a better appreciation of the transition from novice to professional within the educational process.

3.2 Socialisation in Architectural Education

In seeking to understand the development of professionals in architectural education, Dutton (1987), based his work on the concept of a *Hidden Curriculum*, described by Jackson as being additional to the 'official knowledge curriculum', but nevertheless "[...] which each student (and teacher) must master if he is to make his way satisfactorily through the school" (1968, pp. 33-34). A hidden curriculum is formed by "[...] the crowds, the praise, and the power [...]" (Jackson, 1968, p. 33), inherent tacit elements of the educational process. In the context of architectural education, Dutton defined the hidden curriculum as "[...] those unstated values, attitudes, and norms which stem tacitly from the social relations of the school and classroom as well as the content of the course" (1987, p. 16). This highlights the contribution of social relationships and activities to the educational process, acknowledging that education is a social activity which does not occur in a vacuum (Bragg, 1976, p. 7; Fung, 1996).

Deliberating on the transmission of values through education, particularly in design education, Ward went on to define the hidden curriculum as "[...] those tacit normative value structures which stem from the social, professional and political milieu as well as from the content of the course, and which structure and constrain that which is included or excluded from the content itself" (1990, p. 10). As previously noted, Lloyd indicated that, "[...] it is extremely difficult to teach without cultural reference [...]" (1983, p. 368), which is at the heart of education, thus linking socialisation, with the context in which education occurs. We are therefore confronted with what Foucault termed, 'our cultural archive' (2002, p. 145), which is a collection of archival knowledge based on established societal norms of doing things. In the context of architecture and architectural education, the experiences of faculty as key stakeholders, thus begin to reflect the cultural archive of both the profession, and its social context, and is therefore a significant aspect in this educational context, showcasing the importance of socialisation in architectural education.

An engendered belief by students in East Africa, is that they come to university education to be provided with all the information they need to become competent in a particular field (M. R. O. Olweny & Nshemereirwe, 2006). This approach, described in various circles as the transmission model (Cryslar, 1995), or 'banking education' approach (Freire, 2005, p. 72), presents students as empty vessels, having no useful prior knowledge; with instructors making deposits of information and knowledge into their empty accounts. Freire (2005, p. 73) also notes that this approach to education is based on the assertion that people are infinitely adaptable,

and able to adjust to whatever knowledge and information is presented to them. This approach typified early education in East Africa which “[...] treated the African learners and society as if they were *tabula rasa*, void of any knowledge or value systems, on which foreign cultures and knowledge could be imprinted without resistance” (Matos, 2000, p. 19). Hager (2004) suggests this approach to education is particularly pervasive, perpetrated as the ‘standard paradigm of learning’, even influencing how students are selected. The prevalence of this view of education raises the prospect of the value of architectural education being misappreciated, a finite element transforming novices into architects, through a prescriptive linear process. This is summed up by Malanot, quoted by Johnson:

“All good architecture students, of course, listened to their teachers, be they in academe or in the workplace, [...] ‘I started to realise you had to express yourself in some way or another and the only way I knew how then was to imitate my tutors,’ says Laurie Malanot.” (P.-A. Johnson, 1996, p. 118)

Looking closer, to the relationship between instructors and students, Jackson describes this as “[...] the division between the weak and the powerful [...]” (Jackson, 1968, p. 10), with students as ‘the weak’, and instructors as ‘the powerful’. Given embedded seniority factors, along with a traditional ‘teacher-knows-best’ approach employed across the region, along with stiff competition for the few available places at the different levels of education, a premium is placed on success, or more specifically the perception of success, encapsulated in the standard paradigm of learning, which rewards replication of content, above understanding and application, in what Edwards (1996) described as a ‘Know-What’ rather than ‘Know-How’ approach. This has become the norm, emphasising the importance of replication and copying as the epitome of learning, which is pervasive in pre-university education.

3.2.1 The Nature of Architectural Education

In the context of this study, an appreciation of how architectural education is framed; its format and how the various components are linked, is of interest. Influential studies, by Schön (1985) on the design studio, and Lawson (1997) on the design process are important in this regard, framing the learning process as it occurs in the studio setting, a key aspect of architectural education. Robinson’s (2001) exploration of the structure of knowledge in architectural education, as well as a study by Anthony (1991) that investigated the examination process embedded in design juries are also significant, highlighting educational process that influence socialisation. Further studies, such as Dutton (1987) and Shannon (1995), examined design studio pedagogy and studio culture in the context of architecture

programmes, while Webster (2008), and more recently Chamberlin (2010), studied learning and the learning environment of architectural education. What many of these studies revealed is widespread separation not only knowledge elements from the activity of architecture design, but also between the knowledge categories of architectural education, as presented in Figure 3.3 below.

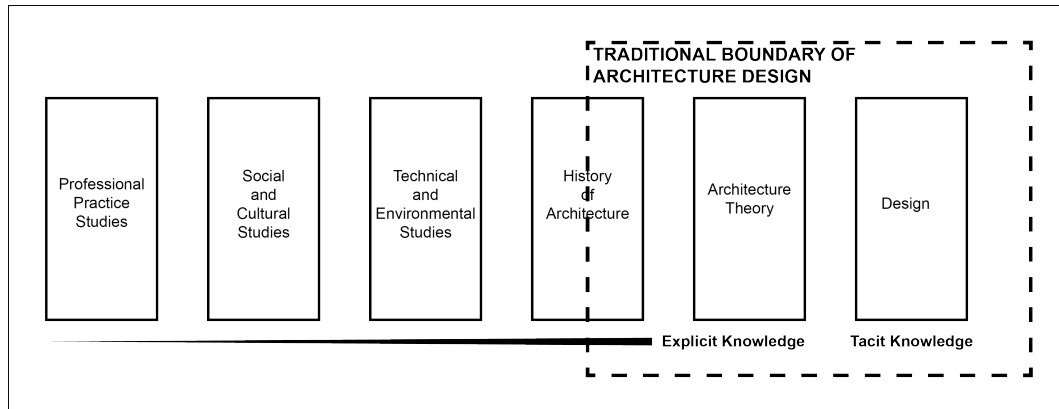


Figure 3.3: Boundaries in Architectural Education (Adapted from Robinson, 2001, p. 69)

The traditional boundary of the architecture design studio, regarded as the quintessential heart of architectural education as presented, was largely limited to [D]esign, as well as the History and Theory of architecture components, generally disregarding the other categories as inconsequential to the creation of architecture. The separation of the various knowledge categories reflects the historic divide between the *liberal arts* and *sciences* across the educational landscape, as highlighted by Snow (1998). The boundaries created, are thus perpetuated in contemporary education, fragmented it into disconnected units. Linked to this are concerns for the design studio within architectural education, a consequence of the status it holds within architecture curricula, however, while its goals are fairly well established, as the “[...] organization of activities [...] for the creation of a meaningful stack of experiences [...]” (Uluoğlu, 2000, p. 57), how these experiences are effected, is somewhat unclear.

Key questions thus arise, linked to the separation of knowledge from activity components in architectural education, and the resultant organisation of architecture programmes and the structure of curricula. Bernstein sought to explain this through two curriculum classifications: *Collection Type* - whose contents are largely separate or insulated from each other, which facilitates the development of “a sense of the sacred, and the ‘otherness’ of educational knowledge” (Bernstein, 1971, p. 56). This is unlike the *Integrated Type* - where the content is open or related in some way to other components (Bernstein, 1971, p. 49). While these are linked to the knowledge elements of education, in the context of architectural

education, Radford suggests that organisation of a curriculum “[...] reflects fundamental decisions about teaching and the ‘balance of power’ between the status and time associated with different aspects of [architecture] education” (2005). Radford (2005) goes on to identify four common or core models in architectural education: *Separate Kingdoms Model* (akin to Bernstein classification); *Streamed Model*; *Wheel Model*, and; *Integrated Model*, all having numerous variations as well. These organisational structures link back to the embedded educational approach as earlier described, influencing activities within the programme, with implications to learning, a consequence of the strong relationship between instructors and students within architectural education.

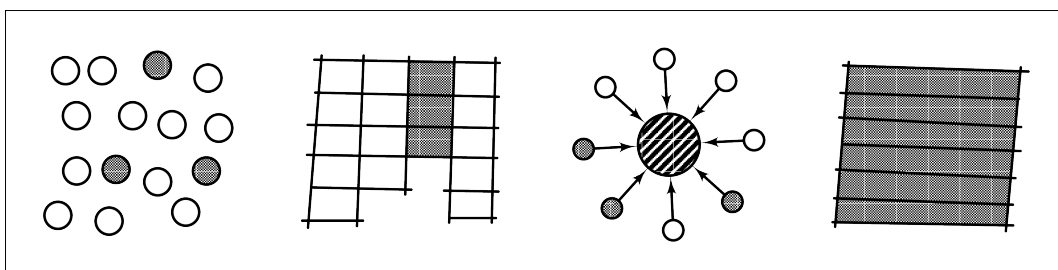


Figure 3.4: Four Common Formats of Architecture Curricula (Reprinted from Radford, 2005)

Along with Bourdieu’s (1977) concept of *cultural capital*, such models are critical in understanding how architects are moulded or transformed into professionals. In one such reflection, Hartenberger et al. (2013, p. 68) regarded a system analogous to the *separate kingdoms* model, as serving to ‘ghettoise’ educational content into stand alone modules, serving to emphasise the uniqueness of content, but ignoring linkages between modules, and impacting on tomorrow’s built environments (Ratcliffe, 2011, p. 56). Within these models, the placement of the quintessential heart of architectural education, the design studio is of particular interest, being “[...] where architects are socialised into the profession [...] and where they acquire attitudes, work-habits and values that will stay with them for life” (Banham, 1996, p. 295).

The origin of the design studio, in the Ecole des Beaux-Arts atelier, a largely student lead process with significant value placed on the peer review process, is thus significant. This is described by Draper as follows:

The key ingredient of the atelier spirit was group loyalty. The *patron’s* little band pulled together to defend its honour against the other studios. Everyone, from the greenest *nouveau* to the most advanced *ancien*, helped one another, at the same time maintaining a friendly internecine rivalry. The *anciens* criticized the work of the *nouveaux*, and the *nouveaux* pitched in to help the *anciens* render plates for a big competition (1977, p. 223).

While the value of the design studio is extensively documented (Briggs, 1996; D. A. Schön, 1985; Shannon, 1995), highlighting its potential to “[...] develop a thoughtful, competent, responsible architect who is well integrated into society” (Briggs, 1996, p. 75), the design studio is also criticised as being where “[...] young minds can become insecure, egoistical, self-absorbed, easily intimidated, and eternally frustrated” (1996, p. 75). The studio setting, according to Anthony (1991), also tends to encourage excessive competition, inflate egos, build insecurity, and encourage procrastination, not to mention the impact it has on the physical and emotional health of students (Anthony, 1991; Doidge, Sara, Parnell, & Parsons, 2000). Banham highlights the enigma of the design studio when he states: “Anthropologists have been known to compare the teaching studio to a tribal longhouse; the place and the rituals pursued there are almost unique in the annals of western education” (1990, p. 295). These sentiments relate not only to the knowledge and explicit aspects of architectural education, but to its implicit elements as well, linked to the design studio.

For Eisner, the curriculum and by extension, the way it is structured, is a powerful form of socialisation, and a mind-altering instrument, as “what we teach whether in the primary school, or in the university, is a means for altering the ways in which students think” (1988, p. 19). This acknowledges a key aspect of professional architectural education and a fundamental aspect of socialisation, relating to the activities within programmes, made possible through the arrangement of curricula.

3.2.2 Architectural Education or Education of Architects?

There is significant debate on the aims and objectives of architectural education, as well as the impact this has on pedagogy and interaction between instructors and students. Of interest is the dual function of architectural education: to educate people in the discipline of architecture; and, to educate professional architects (often presented as merely ‘training of professionals’). For Stevens (1995, p. 111), this dual function is a key factor inhibiting the growth of architectural education as a discipline, hampered by constant calls from the profession for architectural education to produce practice-ready graduates. Broadbent aptly points out that offices are often “[...] looking for drawing board fodder; they wanted graduates above all to be rapid draftsmen, churning out details of the kind their offices used, heads down, hard at it on the drawing board from the moment they arrived in the office” (1983, p. 108). ‘Office ready’ graduates who are easily absorbed into existing practice structures, are often vaunted as a measure of success of a programmes’ relevance. This approach also presumes that it is possible to educate

for all possible scenarios, an approach that fails to recognise, as Pugsley & McCrorie point out in relation to medical education:

Potentially, they have an enormous amount of knowledge to acquire, yet have to be able to sift through this mountain of knowledge to learn what they really need to know to practise medicine safely. They have to know what they do not know and learn how to fill such gaps in their knowledge banks. They have to learn to adapt to changing knowledge, to keep up to date with new skills, with new laws [...] (2007, p. 314).

This highlights an inherent conflict, with the fit-for-practice camp seeking to produce graduates who are 'ready-to-use', fitting into existing practice structures, effectively being socialised into the existing status-quo. Such leanings neglect a key reason architectural education was moved into a university setting; the need to professionalise architecture, and to accord it academic currency. The conflicts that inevitably emerge from this dual function pits academic interests against practice, invariably affecting student learning. Architectural education on the other hand seeks not just to train architects for existing practice, but to educate for a constantly changing reality (Gutman, 2000, p. 237). This often leads to students being provided with as much codified knowledge as possible within the formal educational process, determining not only the aspect of architecture that students engage with, but also how this is undertaken (Bannister, 1954, pp. 23-24).

Gelernter (1988, p. 52) suggests there is merit in a practice centric approach, indicating that this provides a firm foundation for any future creative endeavours. This approach however, fails to account for inevitable changes in architecture practice, and the reality that a significant number of students entering architectural education often exit the programme without gaining a professional qualification. Corcoran & Clark (1984, p. 135) used the term 'Role Failures', to describe this group; although more common terms found include: Drop-outs; Academic dismissal; or Voluntary withdrawal (Tinto, 1975, p. 117). In the context of East Africa, within the fit-for-practice camp, role failures are regarded as necessary casualties of the education of architects, as highlighted at the 2012 Uganda Society of Architects Annual General Meeting, at which it was disdainfully stated by several practising architects, that students who failed mid way through an architecture programme (without gaining any qualification) proved they were not ready to be architects in the first place, and thus did not deserve a degree, not even an intermediary qualification at the Part I level. It is noted; however, that role failures include not only students who do not complete the full architecture programme, but also those who do not continuing into a graduate professional programme after completing an architecture related undergraduate programme, as well as students who do complete the professional programme but do not end up working as

'architects' (Stevens, 1995, p. 111). For Griffin, role failures may also be a consequence of the tensions embedded within the educational process, a result of students not being able to identify with academics, described as *disidentification* (2002, p. 71). With the interaction between students and instructors as a key aspect of architectural education, *disidentification* thus represents a key element of the social construct of architectural education.

3.3 Socialisation in Professional Education

Specific aspects of socialisation emerge from the appreciation of the different elements of architecture and architectural education. These can be categorised into two areas: Anticipatory Socialisation - incorporating occurrences that took place prior to entry into architectural education; and, Educational Socialisation - which relates to events that are part of the educational process. These can be compared to the initial two categories of the 3P Model (Presage and Process) as presented by Biggs (1985) in Figure 1.3, and a modified version by Trigwell & Prosser (1997) presented in Figure 3.5 below.

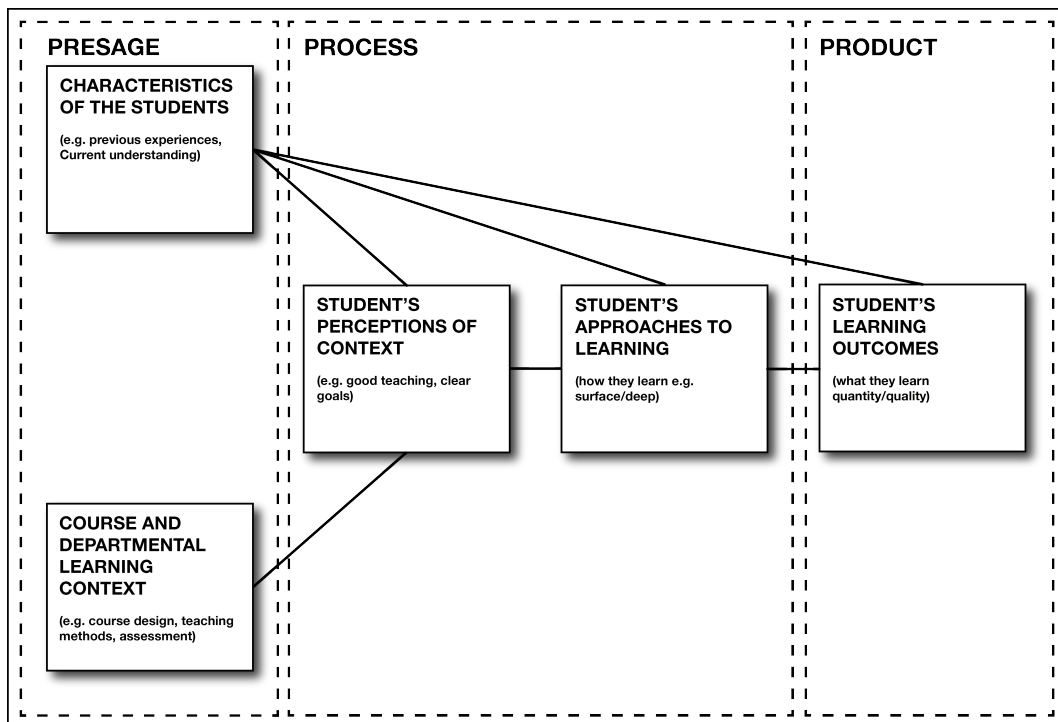


Figure 3.5: Modified 3P Model (Trigwell & Prosser, 1997)

The 3P model highlights the relationship between anticipatory conditioning of students, and the nature of the educational setting, and educational endeavours, in which socialisation is evident. Anticipatory and educational socialisation thus form key components of this discourse.

3.3.1 Anticipatory Socialisation

Largely discussed in the context of entry into a profession, after completing formal educational requirements, Anticipatory Socialisation, also labeled as ‘*Pre-Arrival*’ by Porter, Lawler & Hackman (1975), can be regarded as the first stage in the decision to commit to, and invest resources (time, energy, and money) in a particular profession. Within education this can be broadened to relate to the phase during which prospective students cultivate an interest in the profession, prior to joining a programme. According to Bragg (1976), compatibility between anticipation of the tacit elements of a profession, and the actual activities within a profession, correlates to successful educational outcomes. Reflecting on studies by Foster (1961), Lloyd (1983), and Porter & Porter (1984), there is a clear divide between the anticipation of incoming students, and expectations of higher education. Nelson (1974, p. 87) presented the elements of anticipatory socialisation as ‘Value-Goal Factors’, which relate to students’ perception of the benefit derived from a particular programme (See Table 3.1). Value-Goal factors may also be useful in understanding the correlation between the values of individuals entering architectural education and those embedded within the profession.

Table 3.1: Value-Goal Factors in Architectural Education

Value Goals (Nelson)	Motivational Factor
<ul style="list-style-type: none"> • the challenge and stimulation of the work • being able to design, create things 	Desire to be Creative
<ul style="list-style-type: none"> • being able to deal directly with people • being able to be of service to other people • childhood experiences 	Family / Friends / Societal Preconceptions
<ul style="list-style-type: none"> • being a member of a highly respected profession 	Educational Background and Experiences
<ul style="list-style-type: none"> • having interesting and intelligent people for colleagues • being ones own boss • being sure of a good income 	Fame and Fortune
	Received Professional Advice

Value Goals, also known as *Motivational Factors* (Lewis, 1998), may either accentuate (or downgrade) the experience within architectural education. This makes these value goals influential in architectural education (Navarro-Astor & Caven, 2012), and could lead to disillusionment, a consequence of the disparity between student expectations of architecture, and the reality experienced, something also found by Feldman (1976), with relation to the transition into the workplace. Related to the motivational factors as presented above, is emphasis placed on factors that influence career decisions. Duffy & Sedlacek (2007, pp. 151-152) identify four key factors that influence student career decisions, presented

as: *Intrinsic values* - importance of autonomy and interest in an area; *Extrinsic values* - importance of making money and having job security; *Social values* - importance of working with people and making contributions to society; and, *Prestige values* - importance of having a prestigious and respected occupation. It is the disparity between these values and expectations, and the reality, which according to Graham & McKenzie (1995, p. 7), may create an element of 'cultural shock' for incoming students, building uncertainty, self doubt and resentment in students, further affecting their experiences within the educational setting. This was something found by Riordan & Goodman (2007, p. 7) in the context of the transition from professional education to the work environment, determining the success (or failure) of individuals (Gelernter, 1988).

More specific for East Africa, is the impact these value goals can have on student perceptions of professional education. A study on built environment education in Uganda, found that students do expect that while in architecture school, they will be "[...] 'spoon fed' all the required information – indisputable facts – that would make them 'experts' in their careers [...]" (M. R. O. Olweny & Nshemereirwe, 2006). This perception students have of professional education, was also found by Becker et al. (1961) in a study of medical education in the USA, in which students did indicate that they needed to learn all they could to make then qualified doctors. This presumption contradicts a basic tenet of professional education, in which it is not possible to prepare students for all the roles they will likely face in the future (Brim, 1966, p. 3). Further more, architectural education does not consist of a finite body of knowledge and skills that can be neatly packaged for systematic delivery to students (Haar, 1999, p. iii).

3.3.2 Educational Socialisation

While Anticipatory Socialisation, is largely external to the activities of architectural education, Educational Socialisation is integral to the educational process. Bragg (1976, p. 7) identified five steps that characterise Educational Socialisation:

- i. Observation - Identification with a role model
- ii. Imitation - Mimicking or 'trying on' the behaviour or the role model
- iii. Feedback - Evaluating the mimicked behaviour of mentor
- iv. Modification - Alteration and refinement of behaviour
- v. Internalisation - Role models values and behaviour are embedded in the individuals behaviour.

Viewed with relation to the uptake of *desirable cultural capital*, with those being socialised taking on aspects they consider valuable in the development of a professional ethos, taking on what is valued, and simultaneously discarding, or disregarding what is regarded as irrelevant or valueless (Boyer & Mitgang, 1996, p.

25; Cuff, 1991, p. 43). Through observation, mimicking, and feedback, students gradually develop into socialised professionals, systematically building a repertoire of ideas and approaches, which are either reinforced, or discouraged by instructors or peers (Brim, 1966, pp. 11-12; Jackson, 1968). As they increasingly become socialised, students also acquire a cache of 'accepted' behaviour traits that begin to distinguish them from non-professionals, and into a sub-culture of society (Larson, 1977, p. 45; Webster, 2007, p. 22). A key feature of the acquisition of *cultural capital*, is that it is largely informal, garnered through participation in social activities; thus, people are largely unaware it is happening, or how it influences their behaviour (Eraut, 2004, p. 263).

The educational setting, and the intendant teaching approach, described by Peel (2011, p. 1) as discrete professional pedagogies, facilitate the integration into specific sub-cultures, in this case architecture. Progress through the educational system, is thus determined by feedback received, as well as the motivational factors inherent in the relationship between instructors and students, as well as between the students' peers. For Graham & McKenzie (1995, p. 8), this progress can be described in four key stages: Uninformed Optimism; Informed Pessimism; Hopeful Realism; and, Informed Optimism. These are presented graphically as a commitment curve as seen in Figure 3.6 below, reflecting the experiences of students as they transit through the educational process.

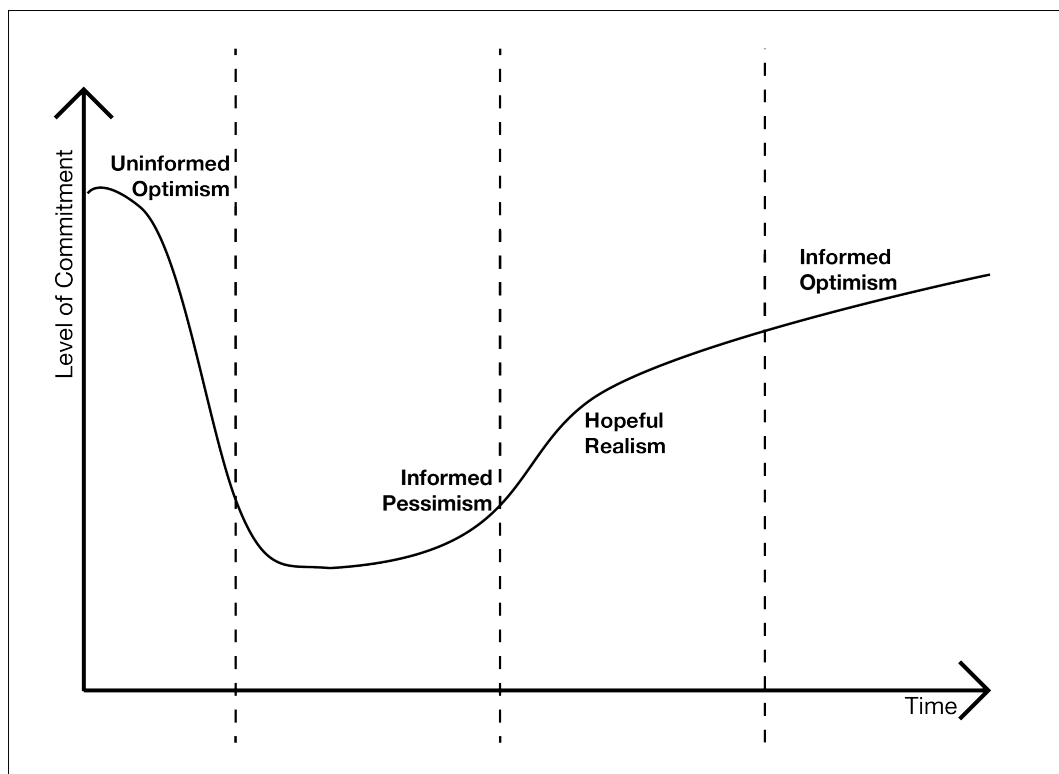


Figure 3.6: Commitment Curve (Reprinted from Graham & McKenzie, 1995)

While the commitment curve is somewhat generic, it does link to students' motivation for joining a programme, showcasing how students are affected by the nature of the educational experiences they go through. This is significant, as many students come into higher education with little or no knowledge of what they will engage with, ensuring motivation takes on added value within architectural education.

3.4 Summary

The chapter has given a background to socialisation in general, with relation to architectural education, providing a framework for the ensuing investigation of socialisation in architectural education in East Africa. Factors of importance emerging from this review include: explicit aspects of architectural education, incorporating the nature of knowledge and layout of the curriculum, through to implicit but often hidden elements of architectural education, nevertheless are significant in socialisation. These elements exist within the *learnscape* of architectural education, and serve as the basis for the production and reproduction of architectural cultural capital. This provides a framework for socialisation, which forms the basis for the investigation of socialisation in architectural education in East Africa (See Figure 3.7).

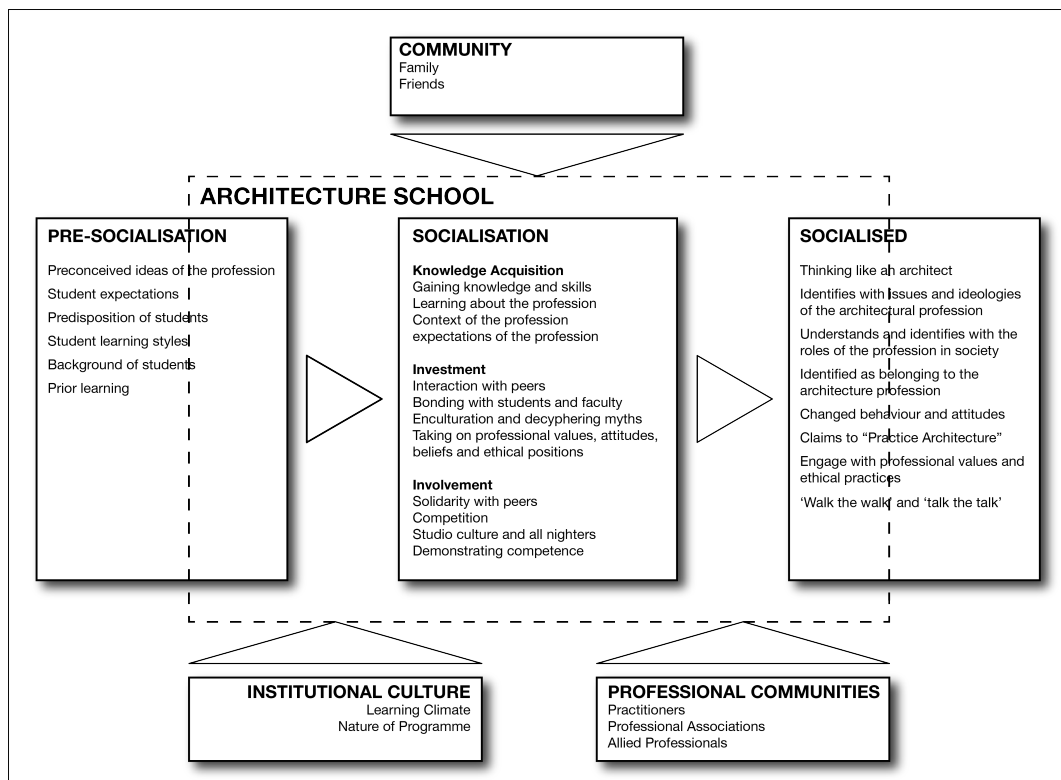


Figure 3.7: Framework for Socialisation in Architectural Education

This framework provides an overview of the investigative components of the study, and is related primarily to the process of socialisation as depicted through three sequential components: Pre-Socialisation and its influence on socialisation; Socialisation within architecture schools, and; the resultant socialised individuals. These three components are linked to the three research questions posed in Chapter One of this thesis. The framework also serves to underscore the important place of student within the socialisation process, growing from novices to professionals, influenced by a host of factors that enable this process to occur. In the context of architectural education in East Africa, these are not fully appreciated or understood. This study therefore seeks to look at the processes of socialisation as they occur within architecture schools in East Africa.

Methodology

Traditional scientific method, has always been, at the very best, 20-20 hindsight. It's good for seeing where you've been. It's good for testing the truth of what you think you know, but it can't tell you where you ought to go, unless where you ought to go is a continuation of where you were going in the past.

(Robert Pirsig, 1999, p266)

As researchers, we have to devise for ourselves a research process that serves our purpose best, one that helps us more than any other to answer our research question.

(Michael Crotty, 1998, p216)



4.0 Research Approach

This chapter outlines the research methodology, and associated research methods employed in this thesis, as well as the rationale for using these strategies. The methodological approach framed not only the research process but the research itself, a consequence of the study being undertaken in multiple countries. This presented a challenge in formulating a suitable approach, owing to the different programmes, programme formulations, and jurisdiction limitations in the context of East Africa. To overcome these challenges, the research initially looked to preceding studies to derive relevant research methodologies and methods. It is acknowledged however, that established research methodologies are often defined, and refined within particular historical and cultural contexts, thus expressing prevailing cultural paradigms or world views unique to a particular setting, but are not necessarily transferable (Allmendinger, 2002, pp. 4-6).

While it is useful to review studies in the local context, only a few formal studies of architectural or design education have been undertaken across Africa. Birabi (2000) made use of a comparative approach to analyse the differences between fine arts education, and architectural education in Uganda, while another study by Pido (2002) made use of personal narrative to expose problems with art education in early postcolonial East Africa. In South Africa, Saidi (2005) used a quantitative positivists approach, to investigate curriculum models in architectural education in South Africa; this remains one of the few comprehensive studies on architectural education conducted in sub-Saharan Africa.

Looking wider afield, seminal work by Boyer & Mitgang (1996), made use of both qualitative and quantitative approaches as part of their investigation into architectural education in the USA. Ostwald & Williams (2008) adapted this methodological approach for their comprehensive assessment of architecture schools in Oceania.⁵ An earlier study by Shannon (1995) sought to understand the architecture studio in one school of architecture in Australia, and in her (re)reading of the studio, found it necessary to appropriate research strategies from outside traditional architecture research paradigms (widely recognised as: History & Theory, and the Sciences). Shannon thus made use of feminist theory to overcome inherent methodological dilemmas, thus enabling a recognition of power relationships within the design studio. In another study which explored the role of live projects in architectural education, Sara (2004) made use of *critical feminist epistemology*, taking into account her own experiences and encounters as the researcher, to unravel embedded issues, with an overall goal of “[...] understanding human behaviour, rather than collecting facts and providing explanations” (2004, pp. 166-167). Weisman also exploited the use of feminist theory in her study of architectural education, indicating that:

Feminist pedagogy - with its attention to collective processes, redefining power relationships, deconstructing false dichotomies (for example, between theory and practice, client and professional), and eliminating inequities in gender, race, class, disability status, and sexual orientation - can be especially useful in constructing a new model of architecture education and practice attuned to today's real problems and possibilities (1996, p. 280).

A more recent study by Chamberlin (2010) on socialisation in architectural education within two schools of architecture in the USA, is particularly significant. Reviewing the cultural reproduction of architectural education, this study made use of case study methodology, with traditional qualitative and quantitative tactics as the basis for that investigation.

The diversity of methodological approaches seen, highlights the multitude of issues within this area of architectural education, more so when linked to socio-cultural factors. Methodological approaches provide significant scope in the consideration of an appropriate strategy for the current study, not forgetting “[...] the researcher's own assumptions about both the nature of reality and how one can come to apprehend it” (L. Groat & Wang, 2013, p. 63), are also influential in selection of methodology. In this regard, my own research background, and experiences as presented in Section 1.3, were critical in determining the approach selected. Exposure to the setting through a previous study: *Design of a Satisfactory Indoor*

5 Oceania includes Australia, New Zealand and Papua New Guinea

Environment, With Reference to Kampala, Uganda (M. R. O. Olweny, 1997), gave an insight into the strengths and weaknesses of some research approaches when applied in the context of East Africa. As part of the pilot for that study, elements of 'Courtesy Bias' and 'Respondent Bias' were evident, with the potential to affect the reliability of findings, and thus recognised as a danger of cross-cultural research (Malhotra, Agarwal, & Peterson, 1996). A further dimension to this, as cited by Foster, relates to answers given that are not particularly useful, when "[...] a reply, not an answer, has been given; and it is a reply calculated [...]" (1961, p. 11). While challenging, an appreciation of these subtleties does validate the need for an appropriate system of feedback to overcome these difficulties.

It was thus essential that the methodological framework adopted, acknowledge not only the broad goals of the research study, but also the context of contemporary East Africa. An approach permitting open dialogue within the research context would therefore be ideal, and acknowledge as asserted by Guba & Lincoln that, "[...] there exists multiple, socially constructed realities ungoverned by any natural laws, casual or otherwise" (1989, p. 84). Further, as knowledge, ideas and meaning are constructed from our experiences, exposure and education (Whyte, 2006), an approach that aids the synthesis of ideas, enabling the 'unheard' voice to emerge, is critical, as recognised by Ernest when he stated:

Each culture has values that are a part of its view of the world, its overall goals, and the purposes it gives to its members. Each culture, like each individual, has the right to integrity. Thus, the system of values of each culture are *ab initio*, equally valid (1991, p. 264).

An approach that accommodated multiple research strategies, recognising numerous constructions, as well as specific contextual issues that may not always be apparent was therefore necessary. Further, with the focus of study - architectural education - intertwined with the process of inquiry, and often indistinguishable from each other, a suitable research approach could be through ethnographical research. In this case aligned with the definition of ethnographical research by Hammersley & Atkinson, who described it as "[...] the most basic form of social research [that] bears a close resemblance to the routine ways in which people make sense of the world in every day life" (1983, p. 2). In undertaking any ethnographic studies, a key challenge is the lack of defined methodological rules to be followed. This is a consequence of ethnography being primarily a naturalistic approach which "[...] consists of open-ended observation and description" (1983, p. 24), making exacting research design somewhat difficult. This no doubt would impact on validity of the study; thus, the necessity to have a robust approach to documenting and reporting the study. Characteristics of ethnographic research according to Sangasubana are defined as:

- i. The research is conducted on-site;
- ii. It is personalised, with the researcher as observer and participant;
- iii. Data is collected in multiple ways;
- iv. Conclusions and interpretations can be given comments or feedback from those under study. (2011, p. 567).

Ethnographic research, draws from a wide variety of methods and information sources to unravel research issues. This approach is at times described as 'triangulation', defined by Denzin as "the combination of methodologies in the study of the same phenomenon" (1978, p. 291). Denzin (1989) goes on to describe three types of data triangulation approaches: *time* - collecting data on the same phenomenon over an extended period; *space* - collecting data from multiple sites; and, *person* - collecting data from multiple individuals, groups or collectives. For this study of socialisation in architectural education in of East Africa, the latter two approaches acknowledge the multifarious nature of the context, and the multiple themes being investigated, and are thus useful in obtaining views about the situation and for the validation of findings (Begley, 1996, p. 123; Dreher & Hayes, 1993). Further, use of an ethnographical approach, ensures access to true experiences of stakeholders, which may otherwise have been difficult to collect. This are in line with the current study, which seeks to investigate the social phenomenon of socialisation, and for which an ethnographic approach provides an appropriate framework.

Within the ethnographic approach, several research strategies that recognise the issues highlighted earlier are available. A key aspect of this is Qualitative Description; regarded as a "[...] plainer and considerably less sexy [...]" (Sandelowski, 2000, p. 334) method than other qualitative approaches, but is nevertheless particularly obliging, providing minimally theorised or reworked answers (2000, p. 337). Qualitative Description is not just a means of collecting and representing data, but is a mode of inquiry in itself (Conle, 2000a, p. 51), making it useful in investigations searching for meaning through user experiences.

The basis of Qualitative Description are narratives, which reveal true sentiments of people because, "[...] when we tell stories of any length we usually put in prolepses and analepses [...] [and] the places we start and end aren't natural either: they too are choices dictated by any number of considerations [...]" (Jo & Lee, 2007, p. 216). It is however noted by Sandelowski, that narrative description is heavily dependant on "the perceptions, inclinations, sensitivities, and sensibilities of the describer" (2000, p. 335). Consequently, understanding and appreciating stories in the context within which they exist, is an essential part of the research process. Hence, the relationship between the observer, and those being observed, is

intimately intertwined, so much so that it is often the case that “[...] the findings of an investigation are the literal creation of the inquiry process” (Guba & Lincoln, 1989, p. 84). This provides an opportunity to reflect on actions as part of the research process, ensuring the process itself is transparent, and therefore capable of being validated. Narrative in this context, is defined as “[...] the process of structuring and conveying elements of time, space and the human experience into a series of connected events that inform, educate or entertain [...]” (Burke, 2004), thus forming a key element in the conceptualisation of knowledge. For Sandelowski:

There is nothing trivial or easy about getting the facts, and the meanings participants give to those facts[,] right and then conveying them in a coherent and useful manner (2000, p. 336).

In East Africa, narrative takes on added significance, as local communities generally retain this as the safest and most suitable means of transmitting information (and knowledge) through their oral traditions. Further, with regard to the social makeup of these communities, narratives emerge as an overt means to garner the seldom heard voice of the minority or marginalised groups, in this case the seldom heard voice of students, suppressed through the ever-present paternalistic structure of East African society. Appropriate research instruments become key to success of the study; thus, as Sackett & Wennberg note, “[...] the question being asked, determines the appropriate research architecture, strategy, and tactics to be used - not tradition, authority, experts, paradigms, or schools of thought [...]” (1997, p. 1636).

4.1 Research Instruments

It is useful at this stage, to reflect on the three questions at the heart of this thesis, as reproduced below:

1. **What are the perceptions of architecture and architectural education, which influence students' expectations of architectural education?**
2. **How does the environment of architectural education impact on socialisation within architecture schools?**
3. **What are the effects of socialisation within architectural education?**

These questions are key drivers for the research approach adopted, considering the inherent complexities of the research context of East Africa. Accordingly, a key question linked to the research methods, and methodology thus emerges, asking: *'What methodological approach would best address these questions, while acknowledging the context of East Africa?'*

Acknowledging the multi-faceted, and multi-dimensional nature of the topic, what is suggested is an exploratory approach, based on a multi-layered research strategy. Multi-layered strategies can incorporate appropriate research instruments at different stages of the research, as a means of gathering assorted samples of information. In this case, the initial stages of the study included a survey of architecture schools in the region (undertaken largely as documentation analysis), and an investigation of perceptions held of existing architectural education criteria, and what the architecture fraternity regarded as important and of interest (through a questionnaire survey). The findings of these studies informed the focus group discussions, which formed the primary data gathering instrument for the research, acknowledging the socio-cultural context, while being cognisant of the challenges faced in previous studies. A final research instrument in this ethnographic study, is participant observation, primarily related to time spent as an educator in one of the schools, and undertaken continuously throughout the study. The use of multiple research instruments provided a means to collect different kinds of data on the same phenomenon (Jick, 1979, p. 602), and was integral to triangulation of the findings, and ascertaining their validity. Further, gathering data from multiple sites across East Africa, allowed the review of findings from different viewpoints, enabling cross-checking of data, thus strengthening their credibility and reliability (Jick, 1979, p. 603; Maxwell, 1996, pp. 75-76).

In determining appropriate criteria for evaluation, two studies stand out: Boyer & Mitgang (1996) in the USA; and more recently Ostwald & Williams (2008) in Oceania. For their study of architectural education in the USA, Boyer & Mitgang (1996) undertook a comprehensive study of several architecture schools: reviewing accreditation reports, observing classes in session, and validation visits, interviewing faculty and students, visiting architecture firms and, administering survey questionnaires to students, faculty and practitioners. A comprehensive study of all 20 architecture schools in Australia, New Zealand and Papua New Guinea by Ostwald & Williams (2008), made use of an equivalent approach, but in addition to surveys and interviews, also made use of focus group discussions as a key part of their investigations. As comprehensive studies of architectural education, the use of multi-method approaches and multiple research instruments, yielded rich outputs for both studies.

The focus of the current study will be on the five established architecture schools in East Africa, which had a full complement of students across the professional programme. While five schools may be regarded a small number, with the goal of the research being to garner detailed qualitative understanding of phenomenon, this sample is considered as appropriate. The study itself makes use of four key

research instruments, derived deductively from an appreciation of the research framework as presented in Chapters One to Three. The four research instruments include: Document analysis; Questionnaires; Focus group discussions; and Participant observations, and are discussed further in the subsequent subsections.

4.1.1 Document Analysis

Use of Document Analysis, was to establish the state of architectural education in East Africa (See Appendix 1). Document analysis served two important functions; providing a background and overview of the architecture schools and programmes; and, providing some qualitative data, through a review of formal documentation and reports, most notably reports prepared for CAA validation visits (Commonwealth Association of Architects, 2010, 2011a, 2011b, 2011c). These included: formal narrative reports provided by the schools, directed at the CAA Validation panels, as well as Validation reports prepared by the CAA, which give standardised information on the schools, and thus a means by which the schools could be compared and contrasted. Other documents reviewed included; published and unpublished information from the schools (brochures, handbooks, and yearbooks), as well as External Examiners reports, availed as part of the validation documentation. Further, interaction with the various Heads of Schools was useful in providing insight into the characteristics of the schools and programmes, generally not available in published documents.

Criteria for analysis varied, based on data being reviewed and on the context within which data was presented. This was in line with the broader methodological approach for the thesis, in an ethnographical sphere, with both qualitative and quantitative data requiring varied analysis strategies. Analysis looked at commonalities or divergences that could illuminate patterns within the data. Document analysis was useful in providing an appreciation of architectural education in the region, and in contextualising the findings. The limited research undertaken on architectural education in the context of Africa, and lack of readily available information on architectural education in the region, made it necessary to occasionally augment the literature with anecdotal evidence. While acknowledging that this approach does have limits, use of analogy in this context did assist in grounding evidence within the backdrop of non local literature.

4.1.2 Questionnaire Study

A key purpose of the questionnaire survey, was to investigate perceptions of education knowledge criteria as contained in the education policy of the Uganda Society of Architects (2006), as the only formal document on architectural education

in the region. Besides ranking the knowledge criteria, the study solicited ideas and perceptions of architectural education as it currently existed, through open ended questions. Through these questions, it was thought possible to determine potential realms of educational socialisation in the eyes of the profession, which could be further interrogated as part of the study. A decision not to include students in this investigation came from an understanding that the questionnaire was to garner reflective perceptions on what architectural education entailed, from people who had been through the process, and who inform architectural curricula and pedagogical practices. These ideas could generally not be garnered from students.

Knowledge criteria, as used by the Uganda Society of Architects, as well as the Australian Institute of Architects (2009), and until 2010 by the Royal Institute of British Architects (2003), are generally elucidated in architectural education policies. These form the basis for evaluating compliance within educational programmes and acting as guidelines in the formulation of programmes. Recent iterations of validation criteria, move away from prescriptive descriptions, which suggest an emphasis on what is to be taught, to more descriptive criteria emphasising what students are expected to achieve - at times presented as 'Graduate Attributes'. The revised RIBA/ARB criteria (Architects Registration Board, 2010) are one example of this shift, with eleven descriptive categories compared to the original five seen above (See Appendix 2). Schools in East Africa generally make use of the CAA Validation Criteria (Commonwealth Association of Architects, 2008) (See Appendix 3), which are based on what Godwin & Hopwood describe as the 'validation of variety' (2013, p. 29), acknowledging diverse approaches to architectural education are not only useful, but desirable for continued discourse in the profession. Validation criteria used by the CAA are somewhat similar to that in use by the RIBA/ARB, and in the same vein are descriptive rather than prescriptive. In East Africa, the Uganda Society of Architects Education Policy (2006), provides a local benchmark for the evaluation of architecture programmes, and is to be used by all schools in Uganda. A comparison between the stated criteria of these three documents is presented in Table 4.1 below.

Table 4.1: Knowledge Criteria for Architectural Education (Australian Institute of Architects, 2009; Royal Institute of British Architects, 2003; Uganda Society of Architects, 2006).

Uganda Society of Architects	Royal Institute of British Architects	Australian Institute of Architects
Design Integration	Design	Design Studies and Design Integration
Design Studies		
Technical Studies	Technology and Environment	Documentation and Technical Studies
Environmental Studies		Environmental Studies
History and Theory Studies	Cultural Context	History and Theory Studies
User Studies		Practice & Project Management & Implementation & User Studies
Implementation Studies	Management Practice and Law	
Skills	Communication	Communication Skills
		Elective Studies

To place this study of socialisation in context, an appreciation of perceptions of the knowledge criteria of the Uganda Society of Architects Education Policy was necessary. As highlighted through the literature, knowledge components of a curriculum - the tacit curriculum - often take precedence, regarded as the primary, or at times, the only valid component of a curriculum solely because it is explicitly documented. Consequently, how respondents view knowledge criteria was critical in gaining an appreciation of what they viewed as essential in architectural education. This was essential in defining the eventual inclination of the focus group discussions and providing a framework within which to operate. This exploration is particularly useful in view of how respondents judge these criteria, which could lean either toward a literal view of what the criteria entailed, as evident in the hard sciences, a result of the application of universal laws and theories (Allmendinger, 2002, p. 3), or to a broader interpretation, as found in design disciplines such as architecture, open to different views and interpretations (Stevens, 1998, p. 172). The latter approach affording greater freedom within courses and programmes in the quest of develop creative abilities in students. Reflecting on education in East Africa, there are suggestions of literal interpretation of knowledge criteria, influencing the way criteria are implemented. This is particularly critical in view of a drive to develop standard educational requirements for higher education across the region, described as ‘*Minimum Standards for Courses*’, intended to equate qualifications across different institutions, but interpreted as standard sets of knowledge content.⁶ Perceptions of knowledge criteria reflect current ideas in architecture design and construction, and thus how practice views the needs of architectural education, that

6 Minimum standards have been prepared for Business and Management, Sciences and Humanities. At a meeting of the Heads of Schools of Architecture in East Africa, it was agreed that it would not be constructive to take the same route for architecture, effectively rejecting this proposal to “harmonise the curriculum.”

are inevitably reflected in the socialisation process. The questionnaire study thus explored the following:

- i. Perceptions of the importance of knowledge components of the curriculum and the relationship to the broader constitution of architectural education;
- ii. Ranking of knowledge criteria based on perceived importance;
- iii. General perceptions of the nature of architecture practice and architectural education.

The questionnaire (See Appendix 4) was circulated to architects across East Africa, using email addresses provided by architectural institutes in Kenya, Tanzania and Uganda. Of the questionnaires distributed, 76 were started and fifty-four 54 fully completed. A female to male ratio of 1:4, was achieved, marginally lower than the prevailing situation in education, which on average stood at 1:6. More than 35% of respondents had attained their professional architecture qualifications outside East Africa, and 25% describing themselves as primarily academics. The number of completed questionnaires represented 5% of the registered architects in the region in 2007. Respondents ranked the various educational categories, as well as the intricate knowledge criteria within each category, indicating their relative importance in architectural education. For this task, “1” represented the most important issue, with progressively higher numbers indicating what respondents perceived to be of lesser importance, with each number used only once in each category. In addition, respondents completed an open ended question that was used to garner further insights into perceptions of architectural education. Comments received are presented in Appendix 5, and formed the bass for topics discussed in the Focus groups, as presented in Table 4.2 below.

Table 4.2: Key Topics for Focus Group Discussions

Code	
Anticipatory	
	Admissions / Why do Architecture?
	Who Makes a Good Architect
	Background of Students / Baggage
	(Preconceived) Ideas About Architecture
Ideological	
	Context of School (University/Society/Setting)
	Purpose of Architectural Education
	Contemporary Issues in Education
	Nature of Programme
	Teaching Approach / Educational Pedagogy
Professional / Societal Community	
	Fit for Practice
	Who/What Determines What is Taught
	Links to Practice
	Links to Allied Professions

The comments received revealed the diverse views of architectural education evident across the region, and provided an excellent basis on which to base discussions that would be carried out in the focus groups.

4.1.3 Focus Group Discussions

As a quintessential data collection method for gathering qualitative data (Duggleby, 2005), focus groups present an opportunity for a group of individuals to collectively discuss issues of mutual importance, providing not only information on matters under investigation, but also by the nature of group dynamics, venturing into topics the group regards as important. Based on interaction between participants, focus groups also provide an additional dimension from which it is possible to ascertain the opinions, attitudes, experiences, and perspectives of participants, as people in peer group settings are generally willing to compare information, and critique ideas (Morgan, 1997, p. 20). For this study, focus groups will be undertaken in a 'self-contained' mode, in which the findings stand on their own (Morgan, 1997, p. 18), and not as the basis for additional quantitative investigations.

Onwuegbuzie et al. (2009, p. 2) give several benefits for using focus groups in research:

- i. Economical, fast, and efficient method to obtain data from multiple participants;
- ii. A socially oriented environment gives a sense of belonging to a group, increasing participants sense of cohesion;
- iii. Interactions among participants can yield important data;
- iv. Opportunity for spontaneous and unexpected responses; and,
- v. Enables participants to discuss issues unimpeded, and in some case offer solutions.

It should also be acknowledged that “[...] focus group members might modify their communication styles depending on the audience [...]” (Onwuegbuzie et al., 2009, p. 13), enabling an appraisal of important topics, through the ensuing conversations. These modifications may present as a weakness in focus groups, inhibiting participation by some members or encouraging overzealous participation by others (Stycos, 1981, p. 451).

In the context of East Africa, focus groups are invaluable, as traditional questionnaire based studies are often ineffective, with respondents providing responses they feel the researcher is expecting, as opposed to what they (respondents) actually think, through interviewer or courtesy bias. Focus groups also allow engagement with narrative discourse, which, as suggested by Esser-Hall, Rankin & Ndita (2004) enables otherwise hidden, or silent voices to be heard, as this circumvents the voice of the ever-present authoritative expert. This gives access to discussions that offer insight into pertinent issues, and allows for disagreement, debate and corrections among discussants. In this way, focus group discussions can go beyond the master, or grand narrative that often plagues research in Africa.

Ten focus group sessions were conducted over an 18 month period between 2011 and 2012. To ensure wide and inclusive participation, discussions were held in the various universities, with 71 self selected individuals taking part, responding to calls for participants distributed within the architecture schools. Separate discussions were held for students and faculty, with participation from 60 students (39 male and 21 female) and 11 faculty (7 male and 4 female). The male to female ratio of approximately 1:2 was consistent for student and faculty focus groups, but represented a much higher female response rate than the questionnaire study. Separation of students from faculty was to ensure cohesion of the information (Sandelowski, 2000; Webb, 1992, p. 750), and to provide a setting conducive to peer conversation, acknowledging a key socio-cultural aspect of East Africa; juniors are generally unlikely to give opinions or comments if a senior person is present. Discussion topics had been derived from the literature, as well as from the questionnaire survey, and related to: ideas and perceptions of architectural education; experiences in architecture school (teaching, learning, and associated matters in architecture school); links to society; professional practice and allied professions; and, perceptions of contemporary issues in architectural education (See Appendix 9). The focus on students was based on an assertion that they can provide opinions on those unintended and unexpected elements of education, but unbound by espoused rhetoric (Bath, Smith, Stein, & Swann, 2004, pp. 325-326).

Discussions were recorded using audio recording software: *Sound Studio*™ on an *Apple® Inc MacBook Pro®* and *Voice Memos*™ on an *iPhone 4®*. Over 15 hours of audio recording were made and transcribed with the help of inbuilt features of *Sound Studio*™ and *iTunes®*. Use of two recording devices was to ensure at least one good quality audio recording was always available, accounting for possible failure of one of the recording devices, degrading of audio quality resulting from excessive background noise, or other unforeseen events. While documenting the discussion sessions, attempts were made to record behaviour and mannerisms of participants, in line with suggestions by Jo & Lee (2007); however, this was not always possible for a variety of reasons, most notable being the unavailability of video recording equipment. Behavioural nuances are difficult to reconstruct and transmit accurately in text form (Hammersley & Atkinson, 1983, p. 186), thus it was accepted that some fine-grain information contained within nonverbal communication would be lost. Nevertheless, the transcripts sought to capture intonations, raised voices, periods of silence, talk-overs, laughter, sighs etc where possible, derived from supporting notes made during discussions. These notes also indicated the speaker, the time they started, and any other unusual points,

...serving to link the audio recording with the conveyed information. This also aided the transcribing and evaluation of the data.

Analysis of data derived from focus group discussions is not always straight forward; the significant amount of textual narrative data calling for infinitely flexible and accommodating analysis instruments. Suitable means of analysis was thus found in *Template Analysis*, a means of thematically categorising and analysing qualitative data (Crabtree & Miller, 1992). Unlike Micro-Analysis Coding (Allan, 2003) or Keywords-In-Context Analysis (Onwuegbuzie et al., 2009; Waring & Wainwright, 2008), which characterised by word-by-word and line-by-line analysis; Template Analysis, also referred to as Key Point Coding (Allan, 2003), or Constant Comparison Analysis (Onwuegbuzie et al., 2009, p. 5), is useful in categorising and coding important cross-cutting and recurring issues and ideas that stand out. Template Analysis initially makes use of *a priori* codes for descriptions, providing a structured approach to coding data, developing, adding, or deleting codes as review and analysis progresses (Miller & Crabtree, 1992, p. 19). This approach is particularly accommodating in management and analysis of qualitative data derived from multiple focus groups, ensuring additional themes could be incorporated into the analysis, as and when needed. Template Analysis offered a degree of flexibility within a structured analytical approach, ensuring triangulation was embedded in the analysis process. Initial *a priori* codes used to mine the data from the focus groups were derived from the literature, representing the broad categories linked to socialisation seen in Table 4.3.

Table 4.3: A Priori Categories and Codes for Template Analysis

Code	
Faculty	
	Nature of Cultural Capital
	What Teachers Profess / Teaching approach
	Attitudes / Values / Beliefs / Ethical Positions
	Relationship with Students
Students	
	Background
	Knowledge of architecture
	Ideas of architectural education
Architecture School	
	Setting of School
	School Philosophy
	Links to Profession
	Learning environment
Educational Factors	
	Relationship to other students / Peers
	Relationship with Faculty
	Studio culture
	Peers

Initial coding and markups, were undertaken by hand on hard-copy transcripts of the data as recommended by Crabtree & Miller (1992, p. 102). This process, as suggested by Hammersley & Atkinson (1983, p. 211), was essential to visualise the data, and allows for changes, additions, and elimination of codes as part of the analysis process. However, to better handle the large volume of textual data, a Text Analysis Markup System (TAMS) was required, and found in the programme *TAMS Analyzer™* (Version 4.42), used to markup transcripts of the focus group discussions for analysis. Use of TAMS enabled multi-dimensional analysis and evaluation of the data, accounting not only for relationships within individual focus group discussions, but across the different groups as well.

4.1.4 Observation and Participant Observation

A final research component was participant observation, described by DeWalt & DeWalt as:

[...] a method in which a researcher takes part in the daily activities, rituals, interactions, and events of a group of people as one of the means of learning the explicit and tacit aspects of their life routines and their culture (2011).

Participant observation forms an essential part of this ethnographic study, providing a means of observing and clarifying issues in a naturalistic setting, and particularly important to draw inferences about the contextual meaning of the focus group discussions. This acknowledges that socialisation takes place as part of the day-to-day activities of the educational process, with observations giving insight and meaning to activities within a particular context, thus revealing the cultures and subcultures of the people under study (Hammersley & Atkinson, 1983, p. 8; Tierney, 1997). Participant observation, provided an opportunity to view first hand the activities of architectural education, illuminating, and in the process clarifying information garnered through the different methods. In broader terms, this can be described as 'getting in and getting dirty', through observing, listening, asking questions and gathering data to help understand key research issues. While observations were carried out in all schools, being an instructor in one school presented an opportunity for full participant observation over an extended period.

Observations carried out included: monitoring day-to-day teaching and learning activities; scrutinising activities and behaviour of students and faculty in different situations; observing students in their development as budding architects, and to observe interviews for incoming students. It also involved conversations with stakeholders to garner their thoughts on the activities being observed. An outline of the various areas of interest for the observations are presented in Table 4.4.

Table 4.4: Areas of Interest for Participant Observations

Element	Observation Interest
Staff and Student Interaction	<ul style="list-style-type: none"> • Physical behaviour / Posture • Gestures • Verbal Behaviour / Language / Intonation
Student Interaction	<ul style="list-style-type: none"> • Physical behaviour / Posture • Gestures • Verbal Behaviour / Language / Intonation
Student Presentations	<ul style="list-style-type: none"> • Physical behaviour / Posture • Gestures • Verbal Behaviour / Language / Intonation • Interaction with audience • Appearance • Presentation focus
Interviews for Incoming Students	<ul style="list-style-type: none"> • Physical behaviour • Gestures • Verbal Behaviour / Language / Intonation • Appearance

Observations were conducted at various times over the course of the study, but largely between 2010 and 2012, coinciding with the focus group discussions. Activities observed, and the nature of observation varied across the schools, and linked to access and availability of observable tasks at the time, with full details presented in Table 4.5.

Table 4.5: Participant Observation Activities

School	Activity	Nature of Observation	Year Level	Period of Observation
School 2	• Final Presentations	• Observer	• 5	• one 3 hour session
School 3	<ul style="list-style-type: none"> • Applicant Interviews • Studio Sessions • Student Led Crits • Student Studio Work • Final Presentations 	<ul style="list-style-type: none"> • Observer/Participant • Observer/Participant • Observer • Observer/Participant • Observer/Participant 	<ul style="list-style-type: none"> • 1 • 3/4/5 • 3/5 • 3 • 2/3/5 	<ul style="list-style-type: none"> • six 5 hour sessions • ten 3 hour sessions • one 2 hour session • two 2 hour sessions • six 6 hour sessions
School 4	• Final Presentations	• Observer	• 1	• one 2 hour session
School 5	<ul style="list-style-type: none"> • Studio Sessions • Final Presentations 	<ul style="list-style-type: none"> • Observer • Participant 	<ul style="list-style-type: none"> • 3 • 3 	<ul style="list-style-type: none"> • two 3 hour sessions • one 3 hour session

Analysis of data from participant observations is particularly challenging, largely as findings are generally documented as field recordings and comments in a multitude of volumes, often interspersed with notes, comments and other trivialities. A key challenge was to ensure information was continually and systematically recorded as and when it was available, rather than retrospectively - a particularly arduous task. As a valuable tool in enriching the research, participant observations need to be appropriately presented. Dewalt & Dewalt (2011) propose the use of cases, or vignettes, as an appropriate means to present findings from participant observations. These are less direct and abstract than in text quotes, thus not distracting from the general flow of the thesis, but serving to reinforce the primary

discourse. In this thesis, participant observations are presented within text boxes, with additional cases presented in Appendix 8.

Data gathered from participant observations, is often brief and occasionally subjective, a consequence of the world view of the researcher. Far from being indisputable facts, this reality can be interpreted and understood in a variety of ways. This raises a key issue about credibility and trustworthiness in the gathered data. While these are pertinent to the entire study, as discussed in Section 4.3, credibility and trustworthiness are particularly noteworthy for participant observation studies, due to the existence of multiple realities and interpretations of data. Consequently, Graneheim & Lundman (2004, p. 110), suggest seeking “[...] agreement among co-researchers, experts and participants” in order to confirm that the reading of the data is consistent, and not to confirm a single universal understanding of the findings.

For this thesis, alternative readings were provided by two colleagues, through their review of data, in particular, observation notes, as well as reviewing occasional papers derived from the observations, such as M.R.O. Olweny (2010 and; 2013b). These alternative readings were geared to ensure consistency in the way conclusions were drawn from the data, and the way these were reported. Being a participant in some activities, at times left some areas undocumented, but revealed by revisiting events with the assistance of different colleagues. In one example, a review of design crits in a largely familiar setting, focus was on the activities taking place. It was however noted that there were patterns in the way students set up the spaces, as they prepared for their crits, and this warranted comment within the narrative. A second example, relates to the intake interviews for prospective undergraduate students. In this review of student perceptions of architecture and architectural education, reading the data within the context of the applicant's backgrounds was critical in appreciating their point of view. This was made possible with the assistance of a colleague who had been a student in the same school of architecture, thus providing a means to better categorise this data.

4.2 Data Reporting

While an ethnographic approach is fundamental to this research, it is acknowledged that there are practical limitations to the use of narrative and verbatim text, which can generate extremely lengthy quotes and paraphrased data within the body of the thesis. This is however, a necessary part of ethnographic studies to ensure validity by clearly presenting data, such that the logic of the research and the basis of the information is clear and understood (Webb, 1992, p. 750). As part of the data

reporting strategy, full transcripts of the focus group discussions are presented in Appendix 10 and 11. As indicated earlier, information derived from the participant observations is displayed separately, in 'text boxes' that augment the discourse while maintaining the distinction between data sources. In reporting the data, the thesis makes use of a series of codes to indicate the source of the data, and to enable cross referencing of data. Two codes are used, the first sequence, **FG1_3**, for the focus group discussions, with **FG#** referring to a particular focus group, while the second number in the sequence referencing a discussant within each focus group. The second sequence; **QR_1** is from the questionnaire study, with **QR** referencing the questionnaire and the second number referencing a particular respondent. A significant challenge arising from the large amount of data derived from the research, was the fact that it was not only arduous to collect, but also difficult to analyse, making personal engagement necessary at all stages, from data collection, to transcribing, checking, and analysis, to ensure information collected was not lost in translation.

Data from the focus groups is presented both within the body of the thesis, as well as in separate tables, where warranted for comparative analysis. As focus group data is largely qualitative, an appropriate means to present the relative weightings of the data sets without reporting actual figures was necessary. Use of this relative star rating approach, serves as a means to provide a weighting summary of the data, while avoiding giving a perception that the data is statistically representative (Pope, Ziebland, & Mays, 2000, p. 114). Use of actual quantitative information in this scenario would present misleading information, suggesting a level of delimitation outside the scope of this research study. The proposed *relative or comparative weightings scale* for the summary tabulations of socialisation factors is indicative of the emphasis of responses, from a low to high, as presented in Table 4.6. Acknowledging the disparity between the number of faculty and students, the scale is not directly linked to numeric frequencies. The tabulation of data for this evaluation, made use of the coded transcripts from the focus group discussions, with data collated, making no distinction between academics and students. Codes used were the final version arrived at after the analysis process.

Table 4.6: Comparative Weightings - Level of Importance

Number	Star Rating	Level of Importance
1	+	Not Important
2	++	Slightly Important
3	+++	Moderately Important
4	++++	Important
5	+++++	Very Important

This strategy ensured that the qualitative data derived from focus groups is not misinterpreted as quantitative data, an approach described by Becker (1970, pp. 81-82) as *quasi-statistics*. Quasi-statistics, is the use of descriptive statistics extracted from qualitative data, to “[...] test and support claims that are inherently quantitative, [and to] assess the amount of evidence in [...] data” (Maxwell, 1996, p. 113). Use of some numerical information thus serves to qualify focus group data within the context of the study being undertaken. In all, the diverse methods employed in the conduct of the research, along with the methods for reporting findings, are geared to achieve the goals of the study. Further, multiple data collection methods, ensured triangulation, a key part of the research validation process.

While a key goal of the research was to identify socialisation as it affects students, reporting of the findings is through collation of data from both student and faculty. The decision to present the findings largely as collated data, rather than as constant comparison between students and faculty, arose as the data collected did not always allow for comparison of information. Nevertheless, opportunity for comparison is presented by the second and third sub questions of the thesis, as presented in Chapters Six and Seven, which interrogated the educational process. Here, some comparison is undertaken, exposing divergent and convergent views that influence reading of the findings. It is acknowledged here, that limiting comparison does present a challenge in ascertaining the full extent of the nature of socialisation within architectural education. However, within the limits of the current approach, the collated data, along with comparisons undertaken, are aided by the observation notes, as a means of triangulating the data to achieve the goals of the study.

4.3 Validity and Trustworthiness

Key to any study, is the validity, reliability, and trustworthiness of any findings, which are intertwined with the procedures used to gather and process the data, potentially raising ethical questions as well. In the context of ethnographic research, validity is concerned with the accuracy of findings, while reliability is concerned with replicability (LeCompte & Goetz, 1982, p. 32). Similar to replicability, trustworthiness, according to Graneheim & Lundman (2004, p. 109), is key to the transferability of research. It is in these areas that ethnographic research is particularly challenging, given the instability of phenomenon, changes over the course of a study, as well as within the analysis process itself (Graneheim & Lundman, 2004, p. 110). Therefore, acknowledging these inherent aspects of

ethnographic research as part of the research process, was an essential and key aspect of the study, although not always straightforward.

With a key element of the investigation being the interface between stakeholders, it is recognised that replication of the findings is difficult, if not impossible, as “[...] human behaviour is never static, [thus] no study can be replicated exactly [...]” (LeCompte & Goetz, 1982, p. 35). Webb (1992, p. 750) therefore suggest that a means of ensuring validity in qualitative studies is by clearly presenting the research process, to ensure that the logic of the research process is clearly understood. This no doubt ensures lengthy reporting of the findings, as is seen in Chapters Five to Seven, along with the presentation of full transcripts of the focus group discussions and notes from the participant observations, which are included in the appendices. Further, to ensure trustworthiness in the research, Sandelowski suggests that by “deliberately focussing on how the researcher influenced and was influenced by a subject” (1986, p. 30), credibility is assured, and an appropriate means of gaining validity. It is here that a key aspect of the research, triangulation is important, and where time, as a potential weakness in the study, which according to Graneheim & Lundman (2004), presents a risk of inconsistency in data collection and analysis, becomes a key strength in the research. Collecting data on the same phenomenon over an extended period, from multiple sites, and from multiple individuals, by use of different research methods, serves to enable triangulation of gathered data, thus ensuring its credibility and trustworthiness.

Linked to credibility and trustworthiness, is the notion of ‘rightness’, which acknowledges that there aren’t any universal truths. Universal truths often have connotations of single narratives, which negate the value of ‘the other’, while rightness, according to Goodman & Elgin (1988), is multi-dimensional, broader in scope, and consequently more complex than the truth. Consequently, incorporating rightness as part of this study involved actions at a variety of levels: primarily through the methodological approach, making use of narratives, which according to Doyle (1997) are key to validating truths, and ensures these can be tested. Aiding this approach, is the inclusion of data from the focus group discussions within the context of the dialogue, as well as relating the findings of the focus group discussions with the participant observations. These were important means of incorporating rightness into the study, through alternative viewpoints, and in so doing, serving to verify the findings.

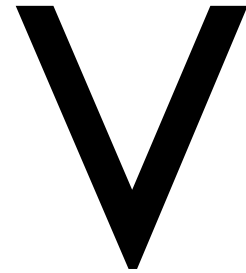
Ensuring confidence in the findings was also critical, given the few schools of architecture in the region, and with only five schools forming the basis of this study. It is thus difficult to present findings without possibly identifying particular schools,

or at times, individuals. Recalling the controversy surrounding the publication of Foster's book, *White to Move* (1961), which instigated a riot at Makerere University at the time of its publication, a decision was taken not to undertake a comparative evaluation of the schools, which possibly could have promoted an 'us-verses-them' scenario, not in line with the motives for the research. Use of codes to represent schools and participants, somewhat overcame this dilemma, and ensured that valid conclusions could be realised without confidential details of individual schools.

Defining Entry into Architectural Education

*In the age of MTV and Pop Culture, one must be brave
to turn your back on seduction.*

(Neil Leach, 1999)



5.0 Anticipatory Socialisation and Architectural Education

This chapter explores the first research question of this thesis, which asks: *'What are the perceptions of architecture and architectural education, which influence students' expectations of architectural education?'* The literature has shown that perceptions of architecture and architectural education, serve to influence expectations, and by extension, engagement with and experiences within the educational process. Further, it is acknowledged that preconceptions of past events and encounters, are particularly influential in how individuals not only make sense of the world around them, but also how they react to these events as well. These anticipatory factors serve to build expectations in students coming into architecture school, and affect how they engage with the educational programme. Exploring these anticipatory factors within the broader realm of socialisation in architectural education, provides an appreciation of the embedded biases of the key stakeholders within the educational realm. This investigation into perceptions of architectural education, seeks to uncover anticipatory factors that are linked to the context of East Africa, with two areas emerging as pertinent: a) motivational factors for students seeking entry to the architecture profession; and, b) students' expectations of architecture programmes. It is evident that these relate to key social, cultural and economic factors that influence education, which for architectural education include: prior learning; association with architects or allied professionals; perceptions of architecture and architectural education; and, reasons students seek to pursue architecture as a programme of study.

5.1 Motivation for Architectural Education

The literature revealed that links between students' ideas of architecture, and engagement with architectural education, were a determining factor for success (or failure) in architectural education. Two areas that called for further investigation were evident: a) The nature of *preconceived ideas of architecture and architectural education*; and b) *How this information was sourced*. For prospective students, perceptions of the architectural profession were derived from their world view, determined by their backgrounds, or habitus. Thus, an appreciation of this habitus would provide an understanding these preconceptions and pre-conditionings, as the basis for engagement within architectural education.

Three broad motivational categories were initially identified: a) Expectations of architecture and architectural education; b) Perceptions of architecture and what architects do; and, c) Sources of information of architecture and architectural education. Relating these to the architect's traditional roles as discussed in Chapter Two, the nature of these perceptions as motivational factors for those seeking entry to architectural education, formed the initial template categories as presented in Table 5.1 below:

Table 5.1: Initial Template Categories - Motivational Factors

- A. Motivational Factors**
 - A.1. Expectations of architecture
 - A.2. What do architects do? / What is architecture?
 - A.3. Sources of information

Investigation of these categories in the context of architectural education in East Africa follows, seeking to yield details on how these motivational factors influence decisions for those seeking to undertake architecture as a programme of study.

5.1.1 Visions of Occupational Prestige

In the context of anticipatory socialisation, what students believe architecture can offer, has a strong bearing on their expectations, in turn influencing their determination and drive to get through architecture school. As a relatively new profession in East Africa, architecture is nevertheless viewed as a prestigious profession, alongside traditional professions such as Medicine and Law. Architecture is thus a particularly sought after programme of study, more so in the context of the rapidly urbanising countries of East Africa. Being a part of a prestigious profession, this forms a major draw, accompanied by high expectations, or what Becker et al. (1961, p. 35) described as a "Long-range perspective" of expected perks. For most students, this is a positive view, filled with enthusiasm of what awaits at the end of the programme, as summed up by one discussant:

FG6_5 (T-5:40) - I had basically one thing, is that, how many choices do I have to pursue? And from our learning environment they're very few things that you would see. Engineer, doctor, teacher, and those few, if you get the chance, you'd know there's something called architecture, meteorology, and all other kind of, of, of things you can study.

The perceived prestige of architecture, along with a prospect of employment, emerged as important for students, with aspirations of upward mobility particularly strong, along with a desire for financial security as seen in Table 5.2.

Table 5.2: Motivational Factors - Financial security

	Sample Participant Response
Kenya	-
Tanzania	FG6-5 (T-05:40) - At times it's money, that I see that I earn money while I'm still young while I'm still at school
Uganda	FG2-1 (T-02:45) - for the money, generally architects are not very poor people

Financial security is significant in the context of East Africa, where regular employment is often difficult to come by, with an unemployment rate estimated at well over 30%⁷, providing a strong economic motivator to many applicants. What emerges is a notion of architecture as being financially rewarding, related in partly to a belief that being a professional bypasses the unemployment trap, in a belief that self-employment on graduation was guaranteed (See Table 5.3).

Table 5.3: Motivational Factors - Self Employability

	Sample Participant Response
Kenya	FG5_7 (T-2:39) - maybe the outcome of it, the aspect of being independent, you find that it means more or less mean at the end of it you have leeway to be more independent other than being employed.
Tanzania	FG6-3 (T-14:00) - I came to realise it's the best course, you get to employ yourself, and get to do big things, get to create stuff which er, stay forever. FG7_2 (T-6:30) - I wanna work for myself, I wanna be self employed. FG7_1 (T-3:59) - why I did architecture, was like, I wanted to be self employed
Uganda	FG3_2 (T-01:56) - I realised I needed a vocation that doesn't require me being an employee all the time, something that at some point I could be my own employee. So that is why I went into architecture.

This is bolstered by sustained economic growth across East Africa, which averaged 6.1%⁸ between 2004 and 2013 (The World Bank, 2014), translating into a heightened demand for architectural services. Further, family honour and pride also play a role in the decision to enter a profession, as narrated by another discussant:

FG9_5 (T-27:02) - [...] I think it's very important for us to understand, and be clear what the role is. The role defines our success in our education. If the role so to speak is that an architect, should be trained, finish, get a job, be able to buy a car, build a house, and be somebody in society [...].

7 Estimated unemployment rate for 2012.

8 Figures do not take into account inflation.

Overall, key motivational factors for incoming students emerge as being: The ability to make money and the prospect of financial security; Employability and the possibility of being self employed; and, Being part of a prestigious profession and being famous, or what has been described as *Occupational Prestige* (Pavalko, 1971). Thus, for many students, the draw to architecture was about leaving a legacy, or being remembered (See Table 5.4).

Table 5.4: Motivational Factors - Occupational Prestige

	Sample Participant Response
Kenya	FG5-10 (T-03:36) - I thought, through architecture you can be able to build a legacy.
Tanzania	FG7-1 (T-03:59) - I wanted to be kind of famous or something
Uganda	FG2_1 (T-2:45) - I think its about mainly getting remembered by having a landmark on the earth's surface and then they point at that building, and be that was Architect Kintu who did it. FG2_4 (T-1:39:24) - but the name is what people, right now people want to make a name.

Motivational factors are somewhat contextual, with perceptible variances between countries, particularly regarding financial security, and its relation to the state of a country's economy, with no comments related to financial security from Kenya, but significant for both Tanzania and Uganda (See Table 5.2). This correlates with the findings by Nelson (1974), who revealed a strong relationship between the social status of prospective students, and the anticipation of good income upon graduation. In that study, students from low socio-economic backgrounds, were more inclined towards remuneration as a motivational factor than students from wealthier backgrounds, who were more likely to go into architectural education for other reasons. Although socio-economic divisions were not investigated as part of the current study, the economic justification was evident nevertheless. This was even more overt as part of the interviews for incoming students in School 3, where an overwhelming number of applicants cited occupational prestige and income as primary motivators for joining architecture.

5.1.2 What do architects do or what is architecture?

A prevalent conception for many students coming into architectural education, is of architecture as the 'drawing of plans', extending to more ostentatious ideas about the architect as a graphic designer, or even as a contractor. Such notions of what architectural professionals engage with, are significant, in view of the perceived prestige of the profession, and the associated salary it is assumed they receive. While no study of remuneration for architects has been carried out in East Africa, anecdotal evidence suggests it is not as high as perceived by students.

Juxtaposed with this, is the traditional, but outmoded view of the architect as ‘Master-Builder’, prominent among architects, as was evident in responses received as part of the questionnaire study: “[...] Remember Architects are like God!!! They create things from zero [...]” (QR1_47). This perception of architects as ‘gods’ was similarly strong among students, as presented in the following comments:

FG3_2 (T-01:56) - [...] being able to create things out of ideas, and that sort of thing, so it makes me a semi-god or something like that.

FG3_3 (T-1:09:18) - You are going to be a team leader, you are going to be among these other professionals, but you should put your foot down [...]

FG6_5 (T-1:25:24) - I think that’s something that God did, and then after that those who believe in it. Then after that, some of us are given the same opportunity to create and make. So it gives me a very good opportunity to have a blueprint that would stay for a long time [...]

The widespread agreement of this view of architect’s, across different year levels, was remarkable, somewhat out of line with an expectation that there would be divergent views between students in the early years of the programmes, and those by senior students, who would have had greater exposure to the educational socialisation. This suggests a degree of socialisation pushback, with sustained beliefs amongst students, that may transcend the reality experienced within educational programmes. An evident split, related to perceptions of architecture as either design centred (See Table 5.5), or as technical drawing (See Table 5.6).

Table 5.5: Architects’ Roles - Design Centred

	Sample Participant Response
Kenya	FG6_1 (T-53:44) - So architecture to me, I'd say architecture is love, ah, punctuated with realism. Realism of that kind of emotional bit something, put it on paper, because I cannot design something I've not yet ... got a relationship with.
Tanzania	FG8_6 (T-36:41) - why we, we study architecture is to enable us to, to be able, in terms of professionalism, to, to create buildings.
Uganda	FG1-2 (T-29:14) - I think architecture to me is to design, to create and always to solve a solution. FG2_5 (T-46:13) - Well, in my opinion, architecture, at least the thing I found out, is about designing spaces for humans, this is of buildings.

Table 5.6: Architects’ Roles - Drawing

	Sample Participant Response
Kenya	-
Tanzania	FG7_4 (T-26:29) - before I joined university, I thought that architecture was more about drawing. FG7_3 (T-27:49) - initially of thinking of architecture is ... technical disciplinary, that it involves, I mean, I mean it has the technical part of it only, that you need to know the technic of drawing the building that is all.
Uganda	FG2_3 (T-4:24) - Ok, {1_Ideas}{1_3_3_Drawing}all I knew about architecture, when I was in high school, ok of course drawing buildings. FG2_6 (T-3:14) - I didn't know much about architecture, so I just know it's about drawing building and such things.

This is somewhat linked to the state of architecture in the different countries: With Kenya having a more 'mature' profession, compared with both Tanzania and Uganda, possibly accounting for greater leanings toward design motivators than the other two countries. In both Tanzania and Uganda, there is a strong association of architecture with drafting, relating to the nature of early practice and education in these countries, with early programmes producing drafting technicians, and professional programmes only established in the 1990s. The proliferation of drafting technicians in these countries, taking on the roles ascribed to architects, has served to entrench the idea of architecture as 'the drawing of plans'. The perception of architecture as being the drawing plans, is particularly strong for incoming students, many making the decision to apply to architecture school based on the presumption that they were going to learn how to draw plans, in line with what many had engaged with in technical drawing subjects as part of their secondary education (See Observation Note 5.1).

Observation Note 5.1: Expectations of Architecture

Expectations of architecture as the drawing of plans, does influence students coming into programmes, consequently generating cultural shock on joining. During interviews for potential candidates, it was often necessary to make use of an analogy to the medical profession to illustrate the difference between drafting and architecture; citing the difference between doctors and nurses as a means of emphasising the distinction between architects and drafting technicians. Use of this analogy was useful, however, it did not stem the high expectations of incoming students, who still believed they would spend five years 'drawing plans'.

For many students coming into architectural education, a key expectation was to be trained to 'draw plans'. The ubiquitous 'building plans' made available by architects, engineers and drafting technicians, largely presented on a single A1 sheet, showing a floor plan and key elevations, but rarely a site plan, sections, or details, are particularly noteworthy. These gave a somewhat distorted perception of what architects did, and what the output of the architectural process entails. This, coupled with uninformed guidance given by school guidance councillors, mean many come to architecture school with only a limited appreciation of what to expect.

Information from participant observation in schools, suggested that learning to draw plans, was a particularly strong motivational factor for incoming students. Interviews for incoming students in School 3, indicated a belief among applicants that this was what architectural education entailed. Underpinning this belief, was the pre-university system itself, which promoted the subject 'Geometric and Technical Drawing', as being akin to architecture, with prospective students informed that architecture was a logical next step.

FG8_4 (T-5:31) - My name is FG8_4 first year student, I chose architecture because I found out from long ago that I liked art and drawing, and I was good at it.

FG2_4 (T-05:35) - Me, aah, influences mostly came from the technical drawing aspects in high school, and the fact that we were also doing building drawing. So when coming to campus, architecture was my first choice.

Reviewing intake subjects for students applying to the architecture programme in School 3, between 2008 and 2013, it was found that approximately 33% had taken 'Geometric and Technical Drawing', growing from under 20% in 2008, to 46% in 2013. This sustained growth was also visible in Mathematics and Economics, attributed to the perception of architecture as primarily science based. Conversely, there was a drop in applicants taking humanities subjects, such as History, Literature and Foreign Languages, as presented in Table 5.7 below.

Table 5.7: HSR Subjects Undertaken by Applicants to School 3 (2008 to 13)

Subject	2008	2009	2010	2011	2012	2013
Mathematics	70.7%	71.0%	73.6%	82.1%	81.9%	91.4%
Economics	56.1%	58.1%	72.4%	78.2%	74.3%	76.3%
Physics	73.2%	67.7%	58.6%	62.8%	63.8%	69.9%
Art	50.0%	43.0%	41.4%	41.0%	41.0%	46.2%
Geometric and Technical Drawing	19.5%	29.0%	28.7%	35.9%	35.2%	46.2%
Geography	6.1%	10.8%	21.8%	21.8%	25.7%	20.4%
History	8.5%	6.5%	12.6%	5.1%	6.7%	2.2%
Foreign Language	2.4%	5.4%	3.4%	5.1%	3.8%	1.1%
English Literature	2.4%	1.1%	5.7%	0.0%	0.0%	0.0%

The decline in students entering architectural education having an appreciation of the humanities, could suggest the 'dehumanising' of architecture, with students having limited prior exposure to subjects that assist in dealing with the growing social imperative in architecture. Further, linked to these subject choices, were the sentiments related to perceptions of architecture, indicating a lack of awareness of what architects do:

FG4_3 (T-57:03) - "I didn't know about architecture as a course. We used to call them Engineers."

FG9_6 (T-15:50) - "[...] most of the public, or it would seem does not understand who the architect is, and does not understand what an architect does. Case in point is when we refer to the architect constantly as an Engineer or as an Architecture [...]"

A weak appreciation of what architecture is, or what architects do, certainly influences how students engage with architectural education, setting up conflicts, disappointments, and possible failures within the educational process. These ideas serve to highlight deeply entrenched ideas of architecture and architectural education, linked to the perception of architecture as being a mundane and easily accomplished low level activity - drafting, and thus substantially financially

rewarding. It is thus discernible that this imagined reality, builds inflated expectations for incoming students, whose ideas of architectural education are far removed from realities of the profession.

5.1.3 Sourcing Information on Architecture

The two preceding sections have presented key motivational factors for incoming students seeking to undertake architecture as a professional endeavour. What drives this motivation, thus becomes of interest. While the ubiquity of Medical Doctors, Teachers, and Religious Leaders in East Africa, make the transition into those fields less of a 'shot in the dark'; on the other hand, information on architecture, is not as readily available, a consequence of there being relatively few architects in the region (One architect for every 92,000 people). Students did admit having little knowledge of what architecture entailed before applying to, or joining an architecture programme. Where information was available, it was often inaccurate or even misleading, as evidenced through extracts from interview essays for School 3 (See Appendix 7).

Information was largely obtained from friends or relatives, with only a few applicants having access to career guidance counsellors. In some instances, guidance counsellors only added to student confusion, as the advice given reflected inherent misconceptions of architecture, and what architects did:

FG3_2 (T-06:30) - [...] people are assigned to do career guidance, but in most cases they hardly have an idea of what they even guiding students about. So in this case someone told me 'no, you know [named university] offers architecture, but there's also [named polytechnic], and [named polytechnic], its two years, a shorter period, it's very technical, so you get hands on experience, and people of that sort are preferred in this world'.

Overall, family and friends emerged as a major source of information for prospective students. Across the world, family and friends do form a primary source of advice for students seeking to join university. The importance of family in the decision to do architecture, was also found in Spain by Navarro-Astor & Caven (2012, p. 84), who found that family pressure was a major factor in the eventual choice of study programmes for students. It is recognised however, that family and friends are not always the best source of career guidance, given this advice is often based on personal biases and self interest, directing young people into safe or traditional careers, not necessarily suited to the ambitions or aspirations of those individuals (Burns, 2014). Naturally, young people do trust the judgement of parents and family members, making this source of information particularly noteworthy, but also potentially dangerous. In one case, narrated by a prospective lecturer to one of the schools, but nevertheless repeated each year, is where students seek to transfer

into different programmes simply because they had been awarded a scholarship. Such decisions are made due largely to pressure from parents and guardians, who had little understanding of the consequences of such a move. In this particular case, the graduate, on returning to her home country, found she was unable to gain registration, as the programme she had undertaken was not recognised by the local professional body.

Observation Note 5.2: Interview Stories and Fallacies of Architecture

Interviews for incoming students, provided some insight into perceptions of architecture by applicants, for which the following three narratives are particularly noteworthy, highlighting some of the fallacies surrounding architecture and architectural education.

- i. One applicant, who had achieved a relatively good HSR score, in the subject 'Geometrical and Technical Drawing', was adamant that the high grade he had achieved not only made him an excellent candidate for the programme, but more brazenly insisted he should be given status, allowing him to complete the architecture programme in two years. After all, he 'was already good at drawing'.
- ii. A second applicant who had completed a two-year Diploma in Architectural Drafting, but was nevertheless applying to join the first year of the architecture programme. He was unable elaborate on the differences between the two programmes, and the role of an architect, vis-à-vis that of drafting technicians. To him, the distinguishing factor was that the architect gave instructions to the technician. Even more perplexing, was the fact that he had spent six months working with a prominent registered architect.
- iii. A third applicant, who had also completed a Diploma in Architectural Drafting, when asked about the difference between the diploma and the professional degree, stated confidently that the two-year Diploma in Architectural Drafting, was a compressed version of the five-year architecture professional programme! This begged the question of why he wanted to join the architecture programme in the first place.

In these three examples, applicants had claimed to have some insight into the profession of architecture, from presumably knowledgeable individuals: career guidance councillors; a registered architect, and tertiary level instructors (who were qualified architects). This suggests a disconnect between instructors and students, with inferences made about what students regarded as being architecture, as a key determining factor in their attitudes towards the profession.

The proliferation of architecture related documentaries, such as *Mega Structures*⁹, and *Grand Designs*¹⁰ have increased exposure to outputs of the architecture profession, on the one hand providing an appreciation of the role architect's play in the built environment, but on the other, showcasing some of its extremes, with numerous unusual and often expensive projects regarded as epitomising architecture. These programmes, along with information accessed via the internet, are increasingly key in the formulation of ideas and ideals of architecture and architectural education. While these no doubt have been of immense benefit to the profession overall, in the context of East Africa, they serve to highlight the polarity of

9 National Geographic Channel

10 UK Channel 4

information on architecture, largely segregated along socio-economic lines. PayTV and the internet, are only available to a relatively small proportion of the population, with less than 15% of urban households having access to these information channels.

Access to print media was more widespread than PayTV and the internet, but with an average circulation of only about 3.8 newspapers per 1,000 inhabitants (1998), compared with 316.5 per 1,000 inhabitants in the United Kingdom for the same year (UNESCO, 2014). The low penetration of newspapers across the region, suggests as with PayTV and the internet, presents a clear polarisation towards a small percentage of the population, again relatively wealthy households. In this case however, newspapers present a stereotypical view of architecture, as the drawing of plans (See Figure 5.1).



Figure 5.1: Newspaper Clipping on Architecture (Jojo, 2014)

Notwithstanding, the fact that published information on architecture, portrays it as the drawing of plans, or the undertaking of mega projects, perpetuating fallacies of the daily role of an architect, these sources of information do make material on architecture available in the public realm. For prospective students however, the ubiquity of such information does become a source of frustration, as the reality of architectural education is often far removed from this portrayal. The few students who did seek out advice from architects, did find the advice offered was beneficial, helping them in their resolve to undertake architecture as a programme of study:

FG2-3 (T-4:24) - "So I met an architect when I was I think in S5, and what really made me like set upon this decision was, I wanted to do something that was practical and also connected with the way people live. And that guy helped me understand that in architecture its all about changing peoples way of life, not only in building, creating comfort, something like that, and I decided to do architecture."

The source of information on architecture, is thus a key factor in how students view the profession, and by extension, how they respond to the educational process. An outline of the various views on these information sources is presented in Tables 5.8 to 5.11 below.

Table 5.8: Sources of Information - From Family and Friends

	Sample Participant Response
Kenya	FG6_4 (T-4:16) - since I was a child it was a part of me because I, I say my uncle do it, and a few of my relatives have been doing it, and as I saw them doing it, I really liked it since I was young FG6_3 (T-14:00) - my dad used to practice, um, Engineering, Electrical Engineering. He also had a company too eh, which he, he had established.
Tanzania	FG7_4 (T-12:19) - So later on, through an architect who is designing one of our homes, I came to learn what architecture is. Se ever since I decided that, well I am going to do architecture. So it's out of interest that I came to study architecture.
Uganda	FG2_4 (T-5:35) - my parents are into a little real estate, so I kind of ..., I got involved in you know understanding how it went about, and what exactly was happening. So it sort of pushed me towards architecture rather than any other course. FG2_6 (T-3:14) - I liked drawing so much, I could draw structures in magazines, in newspapers, so it's daddy who like gave me an inspiration that you can end up becoming an architect, so it became a dream in my life.

Table 5.9: Sources of Information - From an Architect

	Sample Participant Response
Kenya	FG5_9 (T-3:11) -Ok, personally as I grew up I was able to interact with so many architects. So I could see there was a big difference if you compare with the other professions.
Tanzania	-
Uganda	FG2_3 (T-4:24) - I met an architect when I was I think in S5, and what really made me like set upon this decision was, I wanted to do something that was practical and also connected with the way people live. And that guy helped me understand that in architecture it's all about changing peoples way of life, not only in building, creating comfort.

Table 5.10: Sources of Information - Career Guidance

	Sample Participant Response
Kenya	-
Tanzania	-
Uganda	FG3_2 (T-05:16) -The choice of [named university] for me was more of an afterthought, cause I did a Diploma first from [named polytechnic]. But that was more of I think, a misguided choice in my opinion, cause I didn't get a chance of getting good career guidance along the way.

Table 5.11: Sources of Information - Published Sources

	Sample Participant Response
Kenya	-
Tanzania	-
Uganda	FG1-5 (T-04:20) - I compared it with the course at [named university], and it is a Bachelor of Architecture, here it is a Bachelor of Environmental Design, and the name automatically changed it, and I looked through the website, and the syllabus, and everything that is studied there, I thought would be more interesting than just limiting my self to just strictly architecture

A consequence of the limited availability of information on what architecture involved, made it inevitable that students would come into professional education with only a basic idea of what to expect from architectural education. The ensuing culture shock on entry into architecture school, thus becomes a notable factor in the acceptance, or resistance to any espoused ideas within architectural education.

5.1.4 Summing Up

For many students, the decision to study architecture was found to be based on an uninformed position, made for a variety of reasons: from curiosity, to ignorance, from information derived from a variety of sources. A diverse array of motivational factors influencing perceptions of architecture and architectural education were observed, related somewhat to stereotypical views of architecture. The range of motivational factors identified from the study, are presented in Table 5.12, in the three expanded template categories.

Table 5.12: Final Template Categories - Motivational Factors

- A. Motivational Factors**
 - A.1. Expectations of architecture**
 - A.1.1. Feeling of entitlement
 - A.1.2. Ability to make money / Financial security
 - A.1.3. Employability / Self employment
 - A.1.4. Prestige of profession / Making a name / Star architect / God architect
 - A.2. What do architects do? / What is architecture?**
 - A.2.1. Design centred
 - A.2.2. Mediator / Talking / Presenting / Writing
 - A.2.3. Drawing
 - A.2.4. Site and construction supervision
 - A.3. Sources of information**
 - A.3.1. Family and friends

- A.3.2. Recommendation / Career guidance
- A.3.3. Access to published information / Visited architecture schools
- A.3.4. Met with an architect
- A.3.5. Working in allied fields

In the context of anticipatory socialisation, these motivational factors align to what Feldman (1976) termed *Congruence* and *Realism*; process variables associated with the success individuals have in making career decisions based on the accuracy and completeness of information available. In the context of East Africa, the lack of accurate or complete information on architecture and architectural education, ensures decisions to undertake the programme are weak. This places students in a vulnerable position, exposing them to pressures within the educational setting, accepting as given what they are told, or for some, may seed doubts about their decision. Due however to the nature of formal education in the region, as will become apparent in Section 5.2, students generally have limited opportunity to rethink their decision to undertake architecture.

5.2 Influencing Entry into Architecture School

With architecture perceived to be a well-remunerated, and prestigious profession, the motivation for students to enter the programme is unequivocal. How this influenced entry into architectural education is explored in this section. Reviewing factors analogous to pre-educational attitudes presented by Sang, Ison, Dainty & Powell (2009), two key initial factors were identified: a) student dispositions related to architecture as a career choice; and b) the character and qualities of the architecture programmes (See Table 5.13).

Table 5.13: Initial Template Categories - Transition into Architectural Education

- 2. Influencing entry into architectural education**
 - 2.1. Dispositions of students
 - 2.2. Character of architecture programme

These were regarded as essential components in the transition into architectural education, as alluded to in Section 5.1. How these two elements influence which students come into architectural education, and which programme they go into, are discussed on the following subsections.

5.2.1 Student Dispositions

Nelson (1974), suggested that predispositions of students were important for entry into architecture, influencing how they engaged with architectural education. The questionnaire study had revealed that an appreciation of student dispositions was important in gaining an understanding of why students came into architectural education. It was suggested that in some cases, the disposition of students is

contrary to what is often presented as key motivators for architectural education, as presented by one respondent. This was regarded as “[...] the wrong and easy route in enrollment (sic) ... [leading to] Architects who at best should have been engineers or economist etc” (QR_65). While creativity is an important factor for students seeking entry into architecture school, as found by Sang et.al (2009), its place in the context of East Africa is not as pronounced, given leanings towards the sciences as found in section 5.1.2. For the most part, creativity is subdued as a factor influencing entry to architecture schools, with only limited references to creativity as a motivational factor for students (See Table 5.14).

Table 5.14: Disposition of Students - Creativity

	Sample Participant Response
Kenya	FG8_6 (T-6:00) - I decided to do architecture because it was the next best alternative of a creative option. So, ... I like creative things, and apparently that was the only thing I could find palatable at the moment. FG5_8 (T-3:02) - I enjoy design, and the thought of seeing an idea come to life
Tanzania	-
Uganda	FG3_3 (T-03:02) - I decided to do architecture, because I felt it gave me ... more options, and I would get to use and improve on my creativity

While several students were adamant that they were creative, showcased by their abilities in the subject Geometrical and Technical Drawing, what they perceived as creativity, was closer to skills in drawing, and being able to (re)present buildings. However, as noted by Lawson, “creativity is not just a skill or talent but is also related to context; the situation within which the person perceives the problem and performs the process” (Lawson, 1997, pp. 114-115). Far more significant with regard to entry into architectural education, were the *subject requirements for admission*, as well as the *educational background* of students. These were regarded as very significant, linked somewhat to the pre-university system of education, and the HSR as the predominant criterion for the selection of students for university programmes.

Observation Note 5.3: Intake Criteria

Not being tied to the JAB selection process, provided an opportunity for the school to explore alternative approaches for the selection of students. This was prompted in part by the low number of female applicants, and a lack of diversity in student backgrounds, with many coming from a handful of elite schools, as a consequence of relying on the HSR as the main selection criterion.

A key goal for the alternative entry criteria, was to ensure students selected demonstrated an interest and aptitude for architecture, and were ready for the rigours of the programme (both somewhat difficult to judge). It was also to diversify the profile of incoming students, in terms of their social and cultural background, as well as to broaden the range of subjects students had undertaken, acknowledging that architecture is as much rooted in the sciences as well as the liberal and visual arts.

A four stage selection process was devised:

- a. The HSR (to fulfil the requirements of the higher education authority, which stipulated minimum entry criteria for university;
- b. Applications were evaluated with relation to their pre-university education (related to the subjects taken for both the HSR ('A' Level) and the 'O' Level certificate), and any 'relevant' work experience (defined rather loosely). Desired subjects included Physics, Mathematics, Economics, Geography, History, English Literature, Foreign (Second) Languages, Music, and Agriculture. While Art and Geometric & Technical Drawing were considered, their value was only 50% relative to the other courses, as the way these courses were taught served to diminish their value to architectural education. Applicants achieving a combined weighted score of 35 and above, out of 70, received an invitation to the next stage of the selection process.
- c. Shortlisted applicants were asked to prepare a supplementary application package, incorporating a short essay on a prescribed topic, along with a portfolio of any design related work. Acknowledging the diverse backgrounds of applicants, the nature of the portfolio was deliberately left open to interpretation.
- d. For the final stage, students were invited for an interview, which served to link submissions to individuals (some submissions are often not those of the applicants). The interviews were particularly useful in gauging student interest in architecture, and their preparedness for the programme.

While this approach did diversify the mix of students admitted to the programme, increasing the number of female students, from less than 20% to, over 40%, and taking in students from a broader range of schools and subject backgrounds, how this has affected student engagement within the programme, as well as their performance is yet to be fully evaluated.

Entry into university programmes in East Africa, is almost exclusively based on the highly competitive HSR achievement score, derived from prescribed subjects for various programmes: for architecture, science subjects [Physics, Mathematics, and Chemistry] are often given the highest weighting. Liberal arts subjects (Geography and Economics) as well as 'Fine' Art were considered as secondary subjects for applicants. For prospective students, matching subjects advertised for particular programmes was largely perceived as adequate justification for making an application, and the predominant approach to selecting study programmes. This effectively made entry into architecture not so much a deliberate choice, but a

consequence of being ‘in the right place at the right time’, raising challenges of which faculty and students were vehemently aware:

FG4-1 (T-44:40) - [...] so basically I had to look at the [Named University], you know admission requirements for architecture, look for the course units they recommended to do architecture, physics, chemistry, maths; physics, economics maths, so basically I had to streamline myself from the beginning to do architecture.

FG9_3 (T-39:27) - [...] Most schools of architecture fall within a university, and the university is very bureaucratic. We have had a lot of challenges in (Named University), where we try to tell them that we want to get involved in the admission process and the like, and they can't hear of that. They want to do their thing, looking at the grades, calculating the points, so a lot of the people who come actually do not realise what they are coming into, yea, until they are in, then they start struggling.

Students thus *drifted* into architecture as a consequence of subjects undertaken for the HSR, matching programme requirements with the subjects they had undertaken, more as a consequence, than a deliberate choice (See Table 5.15). The impact this had on the student mix within professional programmes thus comes into focus: with places going to students with good HSR scores, but not necessarily having the aptitude for architecture, or more specifically, with students from particular subject areas. This is seen to reduce the socio-cultural diversity within architectural education, something regarded as a strength of contemporary architectural education and practice (L. N. Groat & Ahrentzen, 1996). The HSR itself has been widely criticised as a basis for selecting students for architectural education, as it does not always provide adequate representation of real interest or aptitude for architecture (Goldschmidt, Sebba, Oren, & Cohen, 2001; Oyaró, 2011).

Table 5.15: Disposition of Students - Educational Background

	Sample Participant Response
Kenya	FG8_2 (T-04:09) - think mine just came about as a result of the education system. FG8_12 (T-09:35) - I used to do drawing and design, and I wanted something that I can combine that passion part and a bit of science. So I decided to, to do architecture because it would give me that opportunity to exercise both art and science, because I actually liked science and the art also.
Tanzania	FG6_3 (T-14:00) - I pursued HGE in my Advanced, History, Geography, and Economics. When I went through my options, I came to realise that um, I cannot do any science course, as in Engineering, what, what. But um, when I went through architecture, I found there was a possibility I could do it. FG6_5 (T-12:23) - You kind of learn Mathematics, Science, Geography, that's all. So you don't really know where you are heading to. You just learn what you find. So it was more of, what chances do I have rather that what do I really choose.
Uganda	FG2_4 (T-05:35) - influences mostly came from the technical drawing aspects in high school, and the fact that we were also doing building drawing. So when coming to campus, architecture was my first choice. FG1-5 (T-1:13:38) - And then when you go into advance level, you are told that if you want to be a pharmacist, you have to do physics, chemistry and biology and A-Level, or if you want to be an Architect you have do Physics and Mathematics at A-level.

For Moore (1970), a low completion rate in some schools of architecture, was attributed to incoming students not being well suited for the rigours of architecture. This may well be the case for the schools included in the current study, although it was difficult to ascertain how many students were in this category, as key socio-cultural factors linked to student entry into these programmes obscured the true picture. The dispositions of students uncovered here are somewhat similar to what was found in related research, such as Cubukcu & Cubukcu (2009, p. 6), who found that a number of students in Turkey came into architectural education completely unprepared for the rigours of design based education. Some regional differences were nevertheless apparent within East Africa, with strong links to the HSR and subjects undertaken as the basis for determining the programmes students enrolled in, along with students being duty bound to complete a university degree if they gained a place, regardless of whether this was what they were interested in (See Table 5.16).

Table 5.16: Students Being Duty Bound

	Sample Participant Response
Kenya	FG8_8 (T-18:39) - So that was, that was one, two there was the issue of walking in the old mans shoes, so it feels like I'm basically yea, walking in his shoes [...]
Tanzania	FG7_3 (T-56:13) - He's going to be an architect, she's going to be an architect, but he or she won't be a good architect, because first of all, he is not talented and he is not interested in architecture. He's just doing it as alternative, after missing all the alternative of doing what he was willing to do, then he's just taking it as a last alternative of moving forward his life, of which it's very bad.
Uganda	FG3_3 (T-08:32) - And yea, my parents, were like, 'you need to keep out of town, [...] so my parents felt I was safer far away [...]. FG9_3 (T-76:43) - We actually have to think about our society. Now we should remember where we are, we are in Uganda. Here our parents educate us, we are expected to graduate with a degree, get a job, get married, build a house and die. [Laughter] ... and that is the story ...

For students in tertiary education, responsibility toward their studies often overrode other issues. Key irrevocable reasons related to two things in particular: students gaining a government scholarship, tied to a particular programmes, and which they would forfeit if they changed programmes; and, those having their tuition paid by a parent or guardian, who often dictated what programmes were to be taken. Students thus felt compelled to pursue whatever programme they enrolled in, even though they were not fully invested in the programme, given this was for many the only means by which they could gain a university qualification, thus dropping-out was not an option.

FG2_7 (T-53:30) - [...] when you get into school, you do not have a clear picture of what you want to be, or where you see your self in future. And so when you get a five-year block course, that's like you've been nailed to the cross (*Laughter*), you will only leave the cross when they tell you, ok it is time for you to resurrect (*Laughter*).

Responsibility in this case was not directly related to individual students, but more to their families. Some students were the first generation in their families to attend university, thus pressure to succeed, and a sense of responsibility was very strong.

5.2.2 Character and Reputation of Architecture Schools

The setting and character of the architecture schools, present as an additional anticipatory factor, increasingly so after 1995 with the liberalisation of higher education in the region ushered in a host of new universities and programmes. Before 1995, with only one architecture programme in each country (Kenya, Tanzania, and Uganda), the setting was inconsequential as gaining a place at university was for a select few, and was thus considered a privilege. University education, and professional education in particular, was thus framed as elitist. Increasingly however, the character and setting of universities emerges as important in students' decision where to study. Of interest is the structure of the programmes, particularly with relation to the length, the distinction between split and single degree programmes, as well as the physical location of schools.

Three of the five schools are located in the major urban centres (primate cities in the three countries), and represent the three earliest architecture programmes in the region. The urban setting was a strong draw-card for potential students who regarded it to be where 'architecture happened', providing the 'right' ingredients for in-depth engagement with architecture. In this regard, these 'legacy' schools and programmes were generally given preference, regarded as representing quality, and stability.

FG8_6 (T-17:26) - Ah for me it is basically, architecture is a practical course, and when you try to look at proximity of the two universities and the surrounding environment, you find that [named university] is more placed in a bush (... laughter ...)

FG8_8 (T-18:39) - I wanted to be in [named university], in the, in the middle of town, in the thick of things basically.

FG8_10 (T-22:15) - my major reason for choosing [named university] ahead of any other university in Kenya was the city link, it's next to the city here, and the reputation.

FG3_2 (T-05:16) - there were only two choices, and usually when you are choosing an institution, you try to look for a track record of sorts. So [named university] seemed the older university, and the one that had a little more opportunities in terms of scholarships, in terms of the track record and things of that sort.

The location of the 'alternative' schools, found in semi-rural settings, was not perceived by many prospective students as ideal for the study of architecture, perceived as not offering the same level of education as urban based universities.

Such sentiments are linked to notions of upward mobility, and the perceived benefit of being where architecture ‘happens’, and for some, a strong possibility of gaining part-time work, ‘drawing plans’. The perceived advantages of the urban setting, as expressed by students, were not shared by faculty, who suggested this did not allow students to grow beyond their preconceptions of architecture (See Table 5.17).

Table 5.17: Involvement constitutes Work

Category	Sample Participant Response
Students	FG7_4 (T-52:27) - [...] what I can say is that, it's an informal way of getting experience as students connect with clients on a personal basis. FG7_4(T-52:27) -- Positive in the sense that first of all, the student gets experience, but second the student builds a network of people, but ... on the negative side is that it robs time from your class work
Faculty	FG9_4 (T-33:58) - But because of thinking in a certain direction, ‘I have to have a little office in my little cocoon and draw my plans’, basically FG10_4 (T-36:58) - Some of our undergraduate students, as soon as they can just draw a line, or two on the computers, ok, they are already on the market looking for jobs.

The prestige value associated with the legacy programmes is however diminishing, with international validation and quality of education emerging as significantly important. This was particularly important for the new generation of fee-paying students, for whom value, recognition, and transferability of degrees was paramount, although at this stage these views were in the minority.

FG8_8 (T-18:39) - I, I used the UK as the standard, and from the UK, I found out about RIBA, then looked at the universities in the region. Looked at [Named University], [Named University], and, and, [Named University]. Then I found out there's stage one and stage two, and I found out that it's only [Named University] and [Named University], that are stage two exempt for, for RIBA or Commonwealth Association.

Adding to the lack of interest in universities located in rural and semi-rural settings, is the fact that most high schools across East Africa are boarding or residential schools, mostly located in similar settings. Students generally wanted to leave behind these experiences, which were perceived as lacking opportunities for entertainment, and for budding architects, not offering creative minds an opportunity ‘to grow’. Thus, the social imperative embedded in the location of the schools presenting as a means to discriminate between schools as part of the selection process.

With regard to the format of programmes, opinions were polarised about the specific university students were enrolled in, or for graduate architects and instructors, toward the programme they graduated from. While most participants in the focus groups were familiar with the single degree programme, the same could

not be said of split programmes, which seemed to suffer from considerable misinformation relating to its intentions and structure.

Table 5.18: Views on Programme Structure

Category	Single Degree Programme	Split Programme
Part I Students	FG1-3 (T-05:23) - In [Named University] it is five years, now for something where you at first are not quite sure especially for me whether you want to stick to that, five years is a big commitment FG6_2 (T-42:06) - by the time you opt for the five years you have to be really sure.	FG1-3 (T-05:23) - I like the programme here how they broke it down into three years, then one year and then the two years, after you have decided
Part II Students	FG2_7 (T-53:30) - And so when you get a five-year block course, that's like you've been nailed to the cross	FG8_10 (T-30:46) - As much as we have the degree, it's not something you can really miss, ok you're proud of it, but it's not something you can really do much with. FG2_7 (T-53:30) - I see the three-year plus two-year programme, giving you that opportunity like, well, the first advantage is you get the chance to decide
Part III Students	FG3_2 (T-26:34) - By third year in [Named University], people lose focus, lose gas, lose the zeal they came in with. That has happened to many of us, but then the last two years, you are like, ok I am almost there, let me just go for the sake of going.	FG3_4 (T-29:14) - Just something about what he said, the two tier programme, what you said is right, its, ... because I remember by the time I finished my third year, I was totally exhausted, but that one year out gave me a chance to; to really refocus my energy and decide yes, this is what I want. FG3_3 (T-08:32) - I also got to know that when I was doing this course, I would get two degrees in one, so I thought that was something nice.
Faculty	FG9_7 (T-24:59) - The five years [...] and I think that this is especially true for [Named University], it is set within a rigid system. Such that even when they want to do anything at all outside this system, they are told, the semester, the point grades, the marking scheme.	FG9_6 (T-63:03) - And I think that cross pollination or fertilisation should be allowed to occur, whether it is free movement between education levels or structures, because you find that people want to, to grow, but growth means exploration, and diversities.

Awareness of split programmes was somewhat rudimentary among students, and not based on informed opinions, but more on here-say. Indeed, some students believed the Part I degree was the professional qualification, and that graduates of these pre-architecture programmes were getting a professional degree, and a second degree as a bonus:

FG5_12 (T-50:04) - [...] in [named university] they graduate in fourth year, I am not saying we should be graduating in fourth year [...].

FG2_2 (T-1:02:59) - My question is, after you've got, ... so the three years gives you a degree in Built Environment, ...

FG2_7 (T-1:03:07) - No, Environmental Design, the Built environment is the name of the Faculty.

FG2_4 (T-1:03:13) - So after the three years, the other courses, are they elective or can you have to do the whole?

FG2_7 (T-1:03:19) - The three years?

FG2_4 (T-1:03:20) - Yea, because after three you go back, you specialise.

FG2_7 (T-1:03:25) - The three years as I said gives you an opportunity to select. You do not have to go back to [named university]. Ah, like, so far I think there are three students who have gone elsewhere, [...]

The hope of completing an architecture professional programme in three years, no doubt affected the psyche of students, particularly on discovering they would be spending almost twice as long as originally envisioned. Regardless, the split

programme in place for more than a decade, is viewed as having several benefits over the single degree programme: the ability to transfer into another programme for the Part II degree, being able to take a break between the two degrees; or, even offering an 'opt-out-clause':

An overriding consideration taking precedence over the strengths and weaknesses of the different programme structures, was the JAB selection process, which was linked to highly sought after government scholarships. This weighed in on student applications, and on completion rates, as scholarships were non-transferable. While there were some instances where students did drop out, many more stuck with long professional programmes, given the stigma attached to leaving university without a qualification. This was true for School 4, which did have a split programme, but had over 90% of students completing the Part I programme continued into the Part II programme. For School 3, where few students received scholarships, there were a greater number of students exiting after Part I, with only 51% of students continuing into Part II. While it is acknowledged that some students were not happy with being in architectural education, they nevertheless were obliged to continue for social or financial reasons.

FG7_1 (T-03:59) - But now when I got into the system is when I discovered that, oh, things looked a little bit different from what I wanted

This becomes a defining element in socialisation, and how students engage with architectural education, framing their acceptance or resistance to the implicit elements of the curriculum as part of the educational process. Not having an exit option thus could conceivably influence student engagement within the educational process, and possibly into practice as well.

5.2.3 Summing Up

It is evident that the transition into architecture school is influenced by a myriad of factors, of socio-cultural and socio-economic origin, dictating the disposition of students - and ultimately what they value in their transition to architectural education. Unlike studies in Europe and North America, creativity as an influential factor was diminished in East Africa, with pragmatic ideals particularly prominent across the region. This is attributable to the origins of the profession and enduring ideas of what constituted architecture. Not as prominent was the reputation of the schools, in determining where to study, a consequence of a rather rigid approach to selecting students. The expanded list of influential factors are presented in Table 5.19.

Table 5.19: Final Template Categories - Influencing Entry

- B. Influencing Entry Into Architectural Education**
 - B.1. Dispositions of students**
 - B.1.1. Feel they are creative / Like drawing / Creating things
 - B.1.2. Interested in particular subjects / Required subjects
 - B.1.3. Responsibility and Family Loyalty
 - B.2. Character of architecture programme**
 - B.2.1. Reputation of school / History / Legacy / Validation
 - B.2.2. Setting and Character of schools

This list of factors influencing entry into architectural education, suggests that entry is less a conscious choice, than a fortuitous one. This serves to create conditions for ‘cultural shock’ for incoming students, thus influencing their involvement with activities within architectural education.

5.3 Embedded Values

A recurring thread in this chapter, was a link to values students’ have on entry into architectural education. These embedded values form a key element of engagement with education, playing a key role in career decisions, which in the context of East Africa, are largely linked to the transition between primary and secondary education, and again between secondary and tertiary education. It is during these educational transitions, that inculcated values, largely derived from family, are questioned and challenged, often leading to negative emotions as students endeavour to grapple with multiple extraneous value systems for the first time (Wintre & Yaffe, 2000, p. 27). More significant for entry into architectural education, was the decision-making process for selection of a career, and ultimately entry into a particular programme of study (Hirschi & Läge, 2007, p. 165).

The findings of this study, suggest three areas were particularly important in connection with career related values. In this case, significant emphasis was placed on: financial security; employment security; and, prestige. A unifying element in these career related values, was career certainty, linked to the goals and aspirations of a prestigious career. It was noted that many students were encouraged to pursue study programmes that had the potential to yield high incomes, and would guarantee employment. Consequently, significant interest and value was placed on professional careers, including medicine, law, engineering and architecture. The possibility of career certainty, regardless of whether this information was true or not, formed a key driver for students seeking entry into architectural education. For Schulenberg, Vondracek, & Kim (1993), career certainty as a driver for selecting a profession, is often linked to individual value systems, but more so to embedded values of society, as evident in Section 5.1.1. It is evident therefore that there was a

strong bias toward extrinsic, and prestige values as the basis for selecting careers, and thus for entry into professional education. To a lesser extent, intrinsic values, related to students' perceptions of skills and abilities required of a profession. While these did feature prominently, they were largely subservient to extrinsic and prestige values, overtly seen in the applications to School 3.

By extension, the view of architectural education as leading to an infinitely rewarding career, built on the somewhat mundane task of drafting, may reflect societal ideals and attitudes toward work vs remuneration. In this case, the task of drafting, relative to the perceived high level of reward, are somewhat incongruous, but never questioned. This view of professional education does align with observations by Foster, with regard to students seeking public service positions, which were regarded as 'permanent and pensionable':

[...] ah! to sit at a desk like that, [...], to grant and sign or withhold documents, of which copies would be filed, there was something to set every youthful heart beating fast. They could hardly be torn away from the offices. The joy of learning to learn, of working for the achievement of some substantial improvement of the human race, [...] they had not walked twelve miles to school in their early days for that; they had not starved their bodies and sat brooding over their books until 2a.m. for that, they had not suffered the agonies of examination fever in order to become scholars or thinkers or adventurers, [...]. At the end of the enormous vista of classrooms lay the bright vision of the bureaucratic desk, at which one day they would sit and issue orders (1961, pp. 145-146).

The notion that completing a degree was a ticket to a guaranteed job, or one that was secure for life, is less of a reality today, but may persist in the minds of parents and guardians, whose nostalgia for the past may result in advice that is not entirely correct. Consequently, the degree qualification becomes the ultimate goal, neglecting the reality that a profession is for many, a life long decision. Understandably, the social origins of students' values become significant, findings which resonate with studies, such as M.K. Johnson (2002), for whom the social context is particularly revealing in the nature of values presented by students.

5.4 Summary

This chapter focussed on the nature of anticipatory socialisation in architectural education. This was in the context of East Africa, and sought to derive answers to the first research question, which asked: '*What are the perceptions of architecture and architectural education, which influence students' expectations of architectural education?*' Two significant areas emerged: Ideas of architecture and architectural education; and, Aspects that influence entry into architectural education.

Overall, prospective students had a weak appreciation of the architect's role, sometimes regarded as a profession within engineering, and architects as professionals who merely 'draw plans'. This appreciation of the role of architects was linked to students' expectations on graduation, in this case, linked to prospects of financial security. These findings recall the frustrations of Potter & Potter (1984) in Sudan; the lack of understanding further exacerbated by weak sources of information, largely from outside the profession, from relatives and friends, many having limited knowledge or understanding of the profession. These sources of information, are nevertheless significantly influential in decisions made by prospective students contemplating joining architectural programmes.

Remarkable similarities in motivational factors, were visible between the current study, and findings by Nelson (1974), and Caven & Diop (2012) (See Table 5.20), despite contextual differences between these studies. Deliberate choices, arrived at through researching the profession were in all cases a rarity, however the narratives linked to career choices point to similar decision processes across socio-political boundaries. It is evident from the comparison between these studies that matching what are believed to be compatible personal attributes, either alone, or with the help of friends or family, were key elements in fuelling student motivation for architecture. A stereotypical understanding of what architecture and architectural education entailed by students, ensured they brought into architectural education what could be termed pseudo-ideas. These ideas created a potential for 'cultural shock' on entry into, and within the schools, linked to the values and dispositions of students, and to a lesser degree, the nature of the architecture programmes.

Table 5.20: Motivational Factors for Prospective Students

Current Study	Nelson (1974)	Caven & Diop (2012)
Parent / Sibling in Building (A.3.1)	Parents Influence	Parents
Relative in Construction Industry (A.3.1)	Other Relative Influence	Relatives in Construction Industry
Friend / Relative is an Architect (A.3.1)	Architect Know Well	
Star Architects (A.1.6)	Architect Heard or Read About	
Creative (A.2.1)	Talent	Basic Instinct / Good at Drawing
Teacher / Counsellor (A.3.2)	Vocational Counsellor	
Friends Influence (A.3.1)	Friends' Influence	
Income (A.1.3)	The Income Expected	Monetary Rewards
Self Employment (A.1.5)	A Desire to be Respected	
<i>Template categories in brackets</i>		

Summary tabulations of anticipatory factors discovered through this discourse, are presented in Tables 5.21 and 5.22, making reference to the comparative weightings introduced in Table 4.5. These indicate how emphasis was placed on the different aspects, reflecting disparities with respect to ideas and influences on architectural education. Key issues and ideas emphasised, were strongly motivated by socio-

cultural factors, highlighting a rather rudimentary appreciation of the role architects play in the built environment, and a reflection of the profession itself being relatively new and unknown.

Table 5.21: Ideas of Architecture and Architectural Education.

A. IDEAS OF ARCHITECTURE AND ARCH. EDUC.	
Area of Emphasis	Importance
A.1 Expectations of architecture	
A.1.1 Feeling of entitlement	+
A.1.2 Financial security	+
A.1.3 Employability	+++++
A.1.4 Prestige of profession	+++
A.2 What do architects do? / What is architecture	
A.2.1 Design centred	++
A.2.2 Mediator	++
A.2.3 Drawing	++
A.2.4 Supervision	+
A.2.5 Builder	+
A.3 Sources and availability of information	
A.3.1 Family and friends	+++
A.3.2 Career guidance	+
A.3.3 Visited schools	+
A.3.4 Met with an architect	+
A.3.5 Working in allied fields	+

Table 5.22: Influencing Entry into Architecture School.

B INFLUENCING ENTRY INTO ARCH. EDUCATION	
Area of Emphasis	Importance
B.1 Dispositions of students	
B.1.1 Creativity	++
B.1.2 Required subjects	+++++
B.1.3 Responsibility and Family Loyalty	+
B.2 Character of architecture programme	
B.3.1 School Reputation	++++
B.3.2 Location / Context	+

Emerging from these findings, are what McMahon, Watson & Bimrose (2010, p. 6) had described as intentional and unintentional influences on career choices. In this study, unintentional influences emerge as being of greater significance than intentional influences, which were largely inconsequential to those seeking entry into architectural education. The nature of students' habitus, and how their perceptions and expectations of architecture and architectural education have been cultivated, may account for the strong presence of socio-economic and socio-cultural determinants as part of anticipatory socialisation. Indeed, reflecting on Hume's (1902) suggestion that our thoughts are a faithful mirror of reality, it is evident that the perceived reality of incoming students, is different from that presented and espoused by faculty. These differences are critical in appreciating the activities within the educational process, which will be explored in the context of educational socialisation, in the two subsequent chapters of this thesis.

Influencing Architectural Education

Remember who you were. Remember that you too inhabit this world. Remember that you too use buildings, occupy space. And remember that users are more than abstractions or ideals; they are imperfect, multiple, political, and all the better for it. An architecture (and an architectural education) that remembers all these will also be an architecture and education that begins to break free from the prison yard where the mythology of a perfected state is cruelly allowed to develop.

(Jeremy Till, 2005, p172)



6.0 Influencing Architectural Education

Building on discussions of anticipatory socialisation, as presented in Chapter Five, this chapter explores institutional Influences on architectural education, characterised for this thesis as *Institutional Socialisation*. With architectural education as one of the longest programmes within a university setting, compounded by diversity of pedagogical or andragogy approaches, institutional socialisation is a formidable factor in the educational process. The chapter interrogates the second research question of this thesis: ‘*How does the environment of architectural education impact on socialisation within architecture schools?*’ It was evident from the literature that two key areas were influential in this regard, forming the initial template categories presented in Table 6.1 below.

Table 6.1: Initial Template Categories - Institutional Influence

- C. Institutional Influence**
 - C.1. Educational Setting
 - C.2. Teaching and Evaluation

These two institutional factors serve as the contextual backdrop for educational socialisation, and the basis for an appreciation of activities carried out within the educational sphere, which will be explored in Chapter Seven. For this investigation, institutional influence does not include the physical environment of the architecture schools, as investigation of this aspect of architectural education was outside the scope of this research.

6.1 Educational Setting

The educational setting incorporates several elements that form the scaffolding of architectural education, although in this case, it excludes the nature of teaching - which is discussed separately in this thesis, and the physical setting - which was not part of the current investigation. The setting could be seen to include: educational philosophy as the basis of a programme, along with the structure and configuration of the programmes. As key scaffolding elements, these provide a backdrop for architectural educational activities, derived in part from the social context in which programmes are located, and linked to the inherited educational traditions of the region.

6.1.1 Educational Philosophy

Educational and philosophical positions, often presented in Mission and Vision statements, generally showcase the goals and intentions of an organisation, or in this case, provide a framework for educational activities. Mission and Vision statements, reveal the foundations of programmes, and the broader context within which courses and programmes were formulated, while also providing an indication of teaching strategies, and desired educational outcomes (Till, 1996). According to Kotler & Murphy, a mission statement is “[...] an ‘invisible hand’ that guides a college or university’s diverse personnel to work independently and yet collectively toward the realization of the organization's goals” (1981, p. 479). Kotler & Murphy (1981) go on to identify four key areas of importance within Mission and Vision statements:

Statement of Purpose - Goals and nature of the business;
Philosophy and Distinctiveness - Identity and the value to customers;
Function and Activities - Nature and focus in teaching and research;
Stakeholders - Largely the customers and what they gain or achieve
(1981, p. 479).

These four areas underpin the current review of Mission and Vision statements of the five schools, looking to uncover the philosophical positions embedded within the statements. Mission and Vision statements were extracted from faculty handbooks, prospectuses, and university websites: some specific to architecture programmes and schools, and others more generic. Excerpts from the various Mission and Vision statements with regard to the four areas of importance showcased above, are presented in Tables 6.2 to 6.5.

Table 6.2: Statement of Purpose

School	Statement
School 1	The architect needs to be trained not only as a designer by also as a leader of the design and construction teams
School 2	To provide high quality technological education and training
School 3	To offer the best built-environment programme in East and Central Africa
School 4	To be a key player in the transformation of our built environment, to create an environment that satisfies the highest ideals of the people
School 5	Integrated approach to design based on technology of social cultural factors.

Table 6.3: Function and Activities

School	Statement
School 1	The programme offers a balanced learning environment that combines practice and theory
School 2	To seek to focus professional and public attention on directions in architecture
School 3	To promote innovation and excellence in teaching and learning
School 4	The department shall provide a quality, values oriented, innovative and technically sound training programme focused on the production of socially responsible practitioners in the building arts
School 5	Train and mentor students with a bias for scientific knowledge and its application on advancement of technology ...

Table 6.4: Philosophy and Distinctiveness

School	Statement
School 1	To be recognised as a centre of excellence in seeking knowledge and disseminating it to a wide spectrum of beneficiaries ...
School 2	To reverse the deteriorating state of architecture in Uganda
School 3	Our multidisciplinary curriculum is designed to foster critical and creative thinking, to enable students and graduates to engage with the environmental, social, and aesthetic challenges of the contemporary milieu
School 4	To be a world class School of Architecture, built on a deep appreciation of African values, engaged in qualitative and meaningful pursuit of knowledge ...
School 5	To be at the forefront of dissemination of scientific research in architecture and the built environment

Table 6.5: Stakeholders

School	Statement
School 1	Two thirds of the students' time and energy is spent on project oriented studio works and one-third is on theory
School 2	To stimulate architects to think and learn more widely about their art
School 3	To graduate men and women who are artistically creative, technically competent, and have an appreciation of social, environmental and historical issues in general, and the built environment specifically
School 4	To produce holistic graduate architects for the construction industry
School 5	To sensitise students on buildable and sustainable designs that continue to use relevant technology as a design determinant

Substantial variations between the schools is immediately evident, a reflection of the disparate origins of the programmes, schools, and in some instances the universities as well. Discrepancies are apparent in the *Statement of Purpose*, and the *Philosophical & Distinctiveness* aspect of Mission and Vision statements. Schools based in engineering faculties or technical universities, had Mission and Vision statements with overt technical leanings, as was evident for School 1, School 2, and School 5 (See Tables 6.2 and 6.3). While being located within engineering faculties or in technical universities, offered benefits for architectural education, with prospects of collaborative engagement across professional disciplines, these advantages were generally not reflected in the Mission and Vision statements. This was also suggested in the focus group discussions, in relation to the architecture programmes themselves.

FG3_2 (T-46:54) - Maybe just to add, this interaction thing. [named university] for example has a School of Architecture that's located within a Faculty of Technology. That exposes it to different departments: civil engineers, electrical engineers, land surveyors, mention all of them in the building industry. Now, the field, in the field these are people we interact

with, but it is very absurd that the programme in [named university] doesn't introduce you to these people. You only meet them later in the field.

Links between disciplines within faculties were rare, revealing the proprietary nature of architectural education in East Africa, with professional education viewed as comprising a fixed body of knowledge to be transmitted unadulterated from instructor to student.

FG9_3 (T-62:05) - [...] our education at an early level, it puts us in a straight jacket. We believe that the teacher is always right, we believe we shouldn't ask questions, we should not, we should not explore, we just wait for the answer and that sort of thing.

Associated with the view of education as the transmission of knowledge, a related area of interest within the Mission and Vision sStatements, was associated with stakeholders (Table 6.5): students, faculty, and the wider community. Across all statements, stakeholders were either excluded altogether, as was the case for School 2, or where identified, this was largely as passive participants: with students as passive receivers of knowledge, or as 'products' of the educational machinery, as was the case for School 4. This reflects a prevalent paternalistic approach to education in the region, and underscored through use of the term 'training' in the *Statements of Purpose* (Table 6.3) and the *Function and Activities* Statements (Table 6.4). 'Training' in the context of architectural education, has connotations of vocational education, or a one-way transmission of information from the 'expert' educator, to novice student - a grateful recipient of this valuable knowledge. Reflecting on the statement made by William H. Ssentooogo (Özkan, 1984), and in numerous documents on architectural education across the region. This perception of professional education as 'training', is deeply embedded in educational vocabulary across Africa, and was a key discussion topic by academics, as seen in the dialogue below:

FG9_4 (T-1:24:04) - Ok there are different models. There is the model of every vocation, after being educated, 70% of the year, during your longest vacation, you get 30% of training. From second year, you do it third year, you do it fourth year, then you finally enter the field, and get trained for some time before you eventually qualify for registration. Then there is the model that [Named University] does of you study, get educated, First year, second year, third year, then you get trained, then you get educated a bit more, and then you get trained for two years, and then you are ready for registration.

FG9_1 (T-1:24:55) - I don't look at it that way ...

FG9_7 (T-1:24:56) - ... I, I, I beg to differ ...

FG9_1 (T-1:24:57) - ... In both contexts, there is both education and training ...

FG9_4 (T-1:25:01) - Yea, they're both their, and they are sleeping together ... (Laughter)

FG9_7 (T-1:25:08) - Training is ongoing ... training is ongoing, and education is ongoing ... parallel.

MO - (T-1:25:16) *Could you clarify, could you elaborate on that?*

FG9_7 (T-1:25:20) - The very, even studio is training (FG9_4 - really) yes, education is more subtle, is more, (FG9_4 - Theory) no not necessarily. It's something that happens I think slowly, but also I think it boards on sit down I talk to you, lecture kind of thing. And I think architecture has all of those things ...

FG9_1 (T-1:26:12) - The difference to me between education and training, of course training like we have said ... , but education is to me is how those interactions develop you. How you begin to see things, see opportunities, but not necessarily the skill you have, you have acquired, but then the way it builds you for both, the way it enables you to move on is to me what the education component of it is.

FG9_3 (T-1:27:01) - I think, the way I was looking at it. Training, makes people, I mean it tells people the way things are done it is rather rigid, and education, to me you give people knowledge, more or less empower them to be able to think outside the box. And basically as you go further make them learned people who have the ability to think through situations. If you look at our technicians we have from our technical institutes, they can design, they an even, well I mean, they can draft, they could design, but if you actually look at what they design, there's an element of, ahhh, what should I call it, ahhh, they're not really exploring whatever ...

FG9_7 (T-1:27:47) - It doesn't come from the soaked in stuff ...

FG9_2 (T-1:27:49) - ... Training is mainly to do with skills, while education is the knowledge. I may know what a good nail in an iron sheet is, but I get the skill of putting it right

Looking further into the Mission and Vision statements, incorporation of activities outside the immediate influence of the schools was evident, indicated in the *Function and Activities*, and *Stakeholder* statements of School 2. This was also evident in the *Critical Self Appraisal* prepared for a recent CAA Validation Visit to the same school, which included in the section, *Special Features of the Course*, information pertaining to alumni holding prominent positions in the local architectural association. This does point to a view of the purpose of education in East Africa, serving an ideological function, beyond that expressed through the *Philosophy and Distinctiveness* statements, and likely influencing the structure of programmes and courses within.

Discrepancies between Mission and Vision statements, and the nature of programmes, did warrant comments from the CAA Validation Panels, indicating that these statements at times did not align with the courses taught (See Table 6.6). These discrepancies were not linked to inadequacies in the statements themselves, but possibly more a consequence of Mission and Vision statements not being reviewed or updated regularly, or not being specific to architecture. This was a consequence of Mission and Vision statements being developed in isolation of actual educational activities. Indeed, for School 2, where the administrative set up of the university made changes to formal documents difficult, resulting in divergences, or at the extreme, a *laissez faire* approach counter to the stated goals

of the Mission and Vision statements. For School 5, divergence from the stated goals reflected the delinking of teaching from broader educational goals.

Table 6.6: CAA Comments on Educational Philosophy

School	CAA Comment
School 2	The School is to define a new vision, strategic direction and objectives for its teaching and research activities
School 3	None
School 4	None
School 5	The Board does not find adequate evidence to support the Department's philosophy of 'An integrated approach to design based on technology and social factors'

For faculty, inadequacies in Mission and Vision statements, were perceived as a threat to the relevance of programmes. Faculty however, did note that the ability to change these statements was often hindered by institutional limitations, as noted by one discussant: "I think that this is especially true for [Named University], it is set within a rigid system" (FG9_7). Mission and Vision statements nevertheless, demonstrated an appreciation of the importance and value of contemporary issues in architectural education. This was apparent with use of keywords such as: 'holistic', 'integrated', 'balanced,'and 'sustainability', presenting on paper at least, a desire for architectural education to engage with contemporary issues. Further, *Statements of Purpose*, along with the *Philosophy and Distinctiveness for all schools* were overtly valiant and all-embracing, indicating lofty ideals for the schools. While this is a necessary character of Mission and Vision statements, how this translated into activities within individual schools was often not clear, presenting a possible disconnect between the objectives as formally presented, and the reality within the schools.

6.1.2 Programmes and Programme Structure

The structure of programmes and courses, could be seen to reflect the specific aims and objectives contained within the Mission and Vision Statements. The relationship of programme structure to teaching and by extension to learning, as presented by Radford (2005), thus becomes a key and visible expression of a school's educational philosophy. This is significant with relation to the design studio, a quintessential component of architectural education, and its situation within the programmes. An appreciation of how the studio is situated within a programme, presented a challenge as universities presented this information in different ways. Some made use of Course Credits, and others Credit Hours, making it difficult to make direct comparisons between programmes. Use of a relative weightings approach acknowledged these differences, and was a way to

derive comparative data from otherwise incompatible information. This approach made use of the total course load at each year level, building a picture of the value of courses relative to each other, thus gaining an overview of how different courses were situated within the programmes. Presented in Figures 6.1 to 6.5 are course layouts for final year of the Part I phase of the different programmes, with course layouts for the full programmes are presented in Appendix 1.

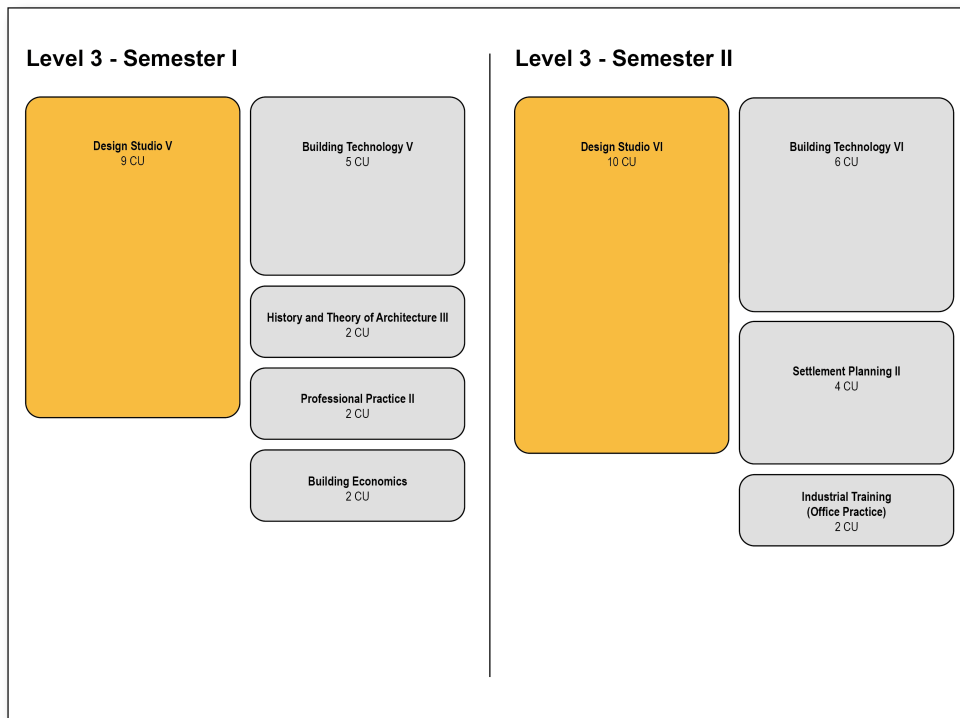


Figure 6.1: School 1 - Final Year of Part I

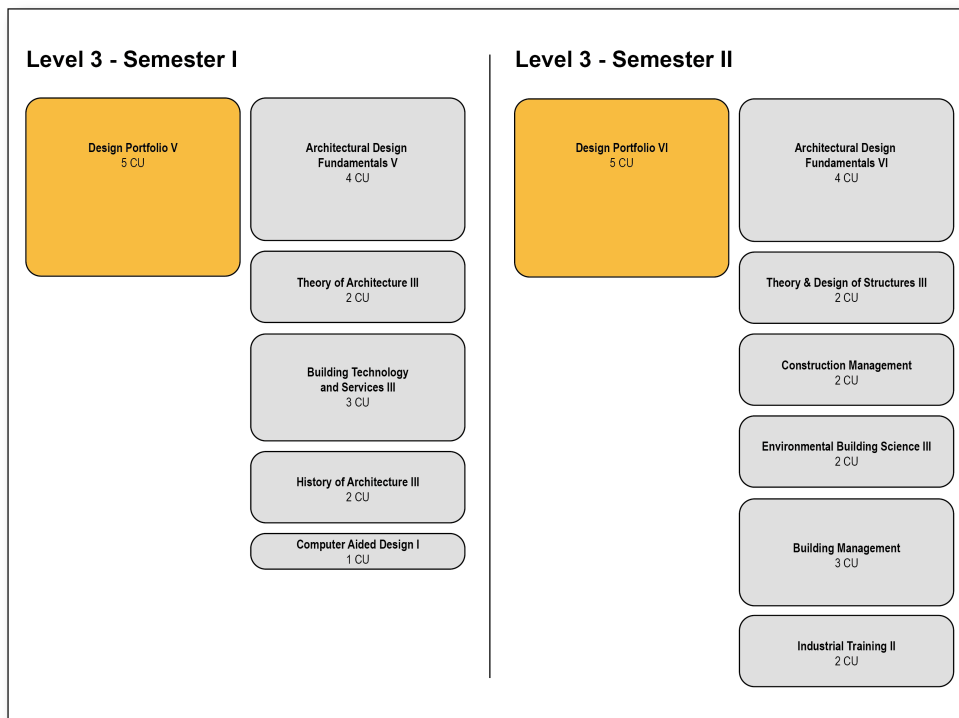


Figure 6.2: School 2 - Final Year of Part I

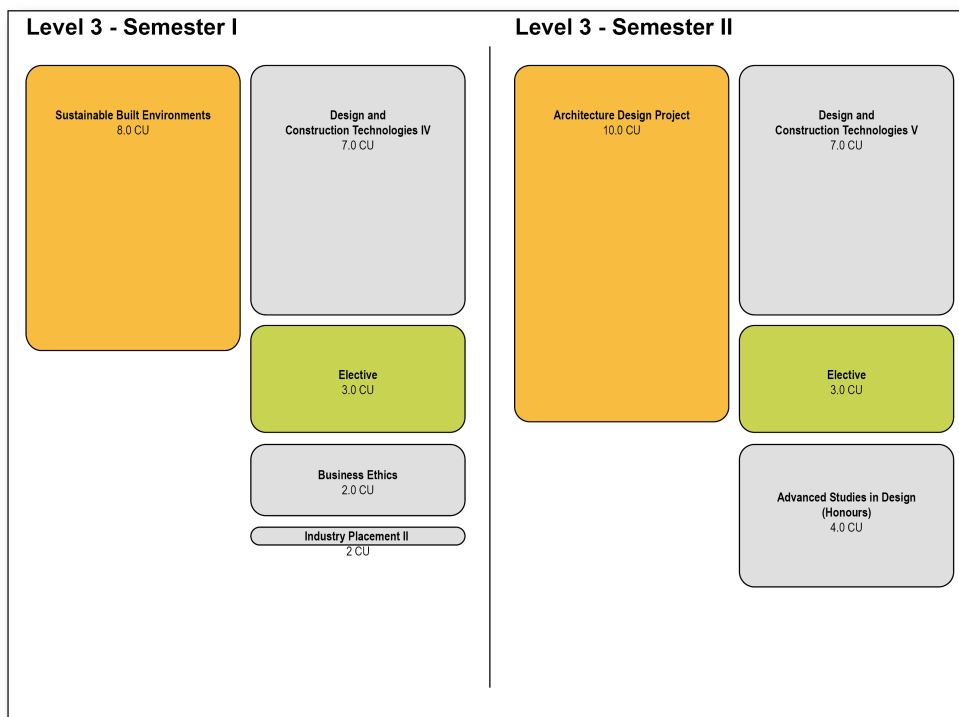


Figure 6.3: School 3 - Final Year of Part I (Exit Level)

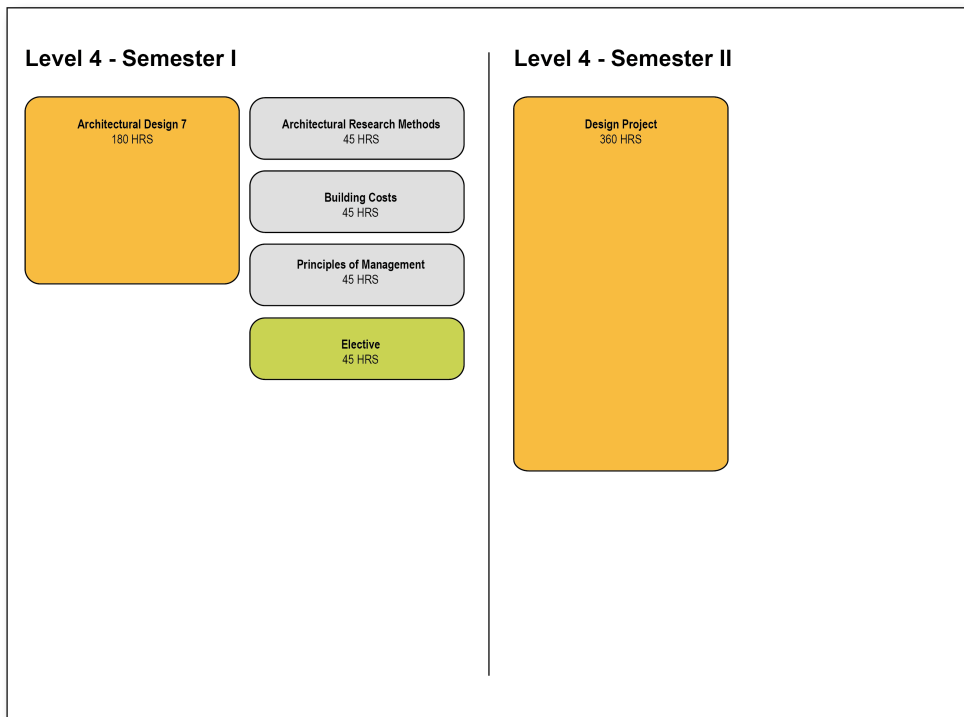


Figure 6.4: School 4 - Final Year of Part I (Exit Level)

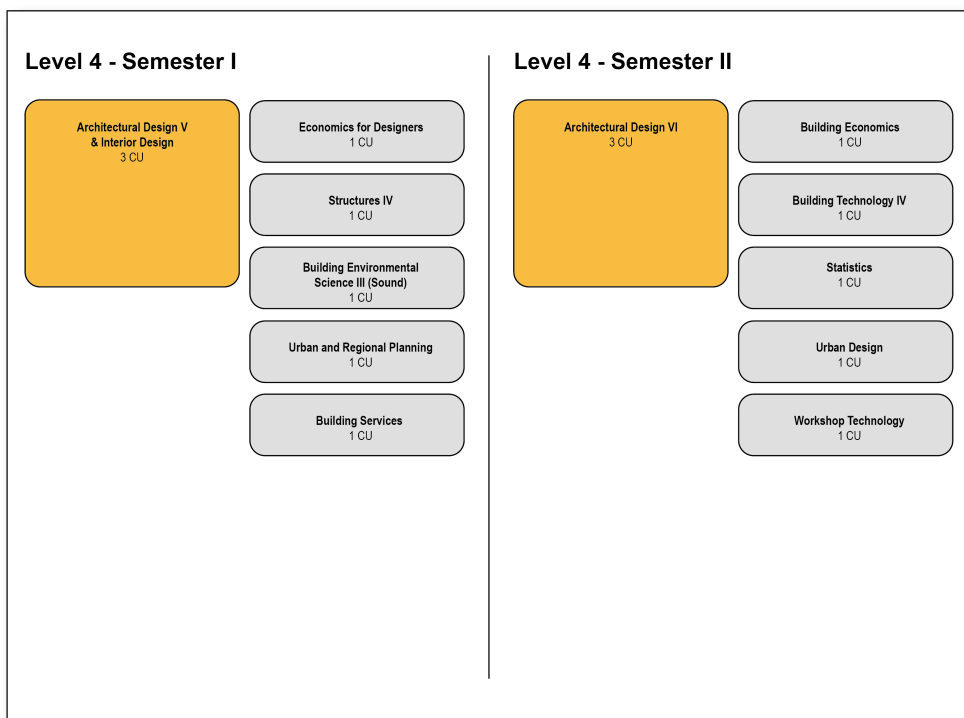


Figure 6.5: School 5 - Final Year of Part I

Across programmes, a significant proportion of course credits were allocated to the design studio, as is common across all architecture programmes. The actual proportion of time allocated to studio ranged from 44% in School 3, to 75% in

School 4. The high weighting for School 4 is a consequence of this being an exit year for that programme; thus a requirement for a capstone project. While the final year of the Part I programme in School 3 was also an exit year, the use of an integrated educational approach made a large capstone project unnecessary at that level. To a degree, the programme layouts reveal an evident separation between studio and support/theory courses, as seen for School 2 and School 5, where a large number of individual courses are seen. While faculty and students did indicate that these support/theory courses ‘fed into the studio’, or at least were supposed to feed into the studio, it was unclear what links were embedded within programmes to make this possible. The schools did not make this information available, neither was it available in official documentation, and only evident through statements made by academic faculty and students.

FG8_6 (T-41:17) - [...] it is your obligation to use what you've learnt in these other courses, that is: law, building technology, building science, to apply them on ah, on the project that you've been dealing with. So it is ah, it is you as a creative person who goes and, ah and fetches (sic) all that information that is relevant to the project [...]

FG10_3 (T-52:41) - [...] I do try to get the, ... whatever they've learnt on the theory to be applicable [...] they need to integrate whatever they did in the theory, especially when it's the technology [...] but is there a formalised way? [...] just that they are assigned, and the ... sequential on the semesters, but whether they need to be related directly, I don't think there is a requirement per-se at least in my experience

School 3 did provide a spreadsheet indicating apparent links between courses for an early iteration of its programme; significant linkages indicated with the use of arrows (See Figure 6.6). It was however, unclear how this rather rudimentary association was effected, or how faculty (and students) made the links between these courses. Again, with no documents providing this information, the indicated links appear to be an ‘ideal’ scenario rather than an indication of actual links, particularly as some of these linkages were across year levels.

	h	pt	Architecture			Building Technology					General Studies		
			skill	theory/ practice	background	general	services	structures	materials	materials	mathematics	language & research	computer literacy
semester 1	301	792	sketch & drawing 1	theory of design 1	history and theory of african architecture	building science (chemistry)	building science (physics)	fluid mechanics	structural geometry	materials (wood)	mathematics (calculus 1)	language & research	computer literacy
A lecture		136	0	10	20	10	10	10	30	20	26	0	0
B practice		165	20	0	0	10	10	0	20	14	26	26	39
Instructor													
semester 2	271	802	sketch & drawing 2	theory of design 2	aesthetics & philosophy	construction 1	building services 1	structural engineering (statics)	topography & surveying	materials (stone)	mathematics (calculus 2)	introduction to ethics	
A lecture		135	0	13	26	12	12	10	10	13	13	26	
B practice		136	20	13	0	30	30	20	10	13	0	0	
Instructor													
semester 3	315	792		portfolio 1	ICAD	building services 2	theory of strength	concrete technology		materials (metal)	management, planning and administration 1		
A lecture		104		0	13	26	13	13		13	26		
B practice		211		90	20	30	26	26		13	0		
Instructor													
semester 4	304	725	physical planning	portfolio 2	history of architecture	construction 2	structural engineering (design of structures 1)			materials (metal)	management planning and administration 2		
A lecture		96	10	0	20	13	13			10	30		
B practice		208	26	90	0	26	26			10	30		
Instructor													
semester 5	285	596		portfolio 3		building services 3	structural engineering (design of structures 2)	design of concrete structures	soil mechanics	materials 5 (diverse)			
A lecture		85		0		13	13	13	13	13			
B practice		220		90		26	26	26	26	26			
Instructor													
semester 6	438	930		portfolio 4		construction 3					general & building legislation	business ethics	dissertation / project
A lecture		82		0		13					30	39	0
B practice		356		90		26					0	0	240
Instructor													

Figure 6.6: Course Linkages - School 3

Reviewing timetables for the different programmes, it became apparent that there were consequential effects in having a large number of individual course units. For School 2, all except three hours a week were formally timetabled at the third-year level, leaving little time for private study (See Figure 6.7). School 2 rationalised this approach to timetabling, arguing that keeping students fully engaged reduced the chances of having distracted or idle students, who should otherwise be dedicated to their education through formally timetabled activities. This view of timetabling may not serve to create an environment to enable students to build linkages, or casual networks between the disparate fields of knowledge within architectural professional education (Schmidt & Boshuizen, 1993, p. 218). The lack of personal time, coupled with significant lecture based instruction, further entrenched the compartmentalisation of courses. Significant also is a failure to acknowledge the need for students to engage in personal reflection, as an integral part of the architectural process, a key aspect aiding the building of links between the various components of the architecture programme.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
09:00 - 10:00	ARC-3101 Architectural Design Portfolio V	ARC-3105 History of Architecture III	ARC-3102 Architectural Design Fundamentals (Fine Art)	ARC-3101 Architectural Design Portfolio V	ARC-3102 Architectural Design fundamentals (Graphics)
10:00 - 11:00	ARC-3101 Architectural Design Portfolio V	ARC-3105 History of Architecture III	ARC-3102 Architectural Design Fundamentals (Fine Art)	ARC-3101 Architectural Design Portfolio V	ARC-3102 Architectural Design fundamentals (Graphics)
11:00 - 12:00	ARC-3101 Architectural Design Portfolio V	ARC-3104 Building Technology and Services III	ARC-3103 Theory of Architecture III	ARC-3101 Architectural Design Portfolio V	ARC-3102 Architectural Design fundamentals (Graphics)
12:00 - 13:00	ARC-3101 Architectural Design Portfolio V	ARC-3104 Building Technology and Services III	ARC-3103 Theory of Architecture III	ARC-3101 Architectural Design Portfolio V	ARC-3102 Architectural Design fundamentals (Graphics)
13:00 - 14:00					
14:00 - 15:00	ARC-3101 Architectural Design Portfolio V	ARC-3106 Computer Aided Design I		ARC-3101 Architectural Design Portfolio V	ARC-3104 Building Technology and Services III
15:00 - 16:00	ARC-3101 Architectural Design Portfolio V	ARC-3106 Computer Aided Design I		ARC-3101 Architectural Design Portfolio V	ARC-3104 Building Technology and Services III
16:00 - 17:00	ARC-3101 Architectural Design Portfolio V	ARC-3106 Computer Aided Design I		ARC-3101 Architectural Design Portfolio V	ARC-3104 Building Technology and Services III

Figure 6.7: School 2 - Part I, Year 3 Timetable

The notion that student time must be fully programmed, is reminiscent of pre-university education in the region, which is strictly timetabled as well, with many schools having limited, or no time allocated to extracurricular activities. This also brings to mind elements of the fit-for-practice debate, which often seeks to ensure students are ‘trained’ to fit into particular professional stereotypes, and thus fed all the information and knowledge necessary to turn them into professionals. This approach negates a key aspect of university and professional education, in which students are groomed to enter a profession in which they will become decision makers, and linked to the availability of electives, as discussed in Section 6.1.3.

Some schools did leave slots on their timetables as free time for students to engage in non-programmed activities. School 3 for example, viewed free time as inherently important in the building of professionals, and thus essential to the architecture curriculum. This was reflected in the programming and timetabling of courses, with more than 37% of the available slots available for students to use for informal learning opportunities and reflection (See Figure 6.8). Students thus had significant ‘personal’ time for non structured learning and academic reflection, and were made aware of the value of this free time in the context of architectural education, not as ‘free’ time per-se, but as a bridge toward self directed learning, and highlighted in course outlines.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
09:00 - 10:00		ENDS 3144 Design and Construction Technologies IV (Lecture)	ENDS 3144 Design and Construction Technologies IV (Lab)	ENDS 3144 Design and Construction Technologies IV (Lecture)	
10:00 - 11:00		ENDS 3144 Design and Construction Technologies IV (Lecture)	ENDS 3144 Design and Construction Technologies IV (Lab)	ENDS 3144 Design and Construction Technologies IV (Lecture)	
11:00 - 12:00		ENDS 3113 Sustainable Built Environments (Lecture)	ENDS 3501 Special Topics in Design (Seminar)	ENDS 3113 Sustainable Built Environments (Lecture)	ENDS 3144 Design and Construction Technologies IV (Lecture)
12:00 - 13:00		ENDS 3113 Sustainable Built Environments (Lecture)	ENDS 3501 Special Topics in Design (Seminar)	ENDS 3113 Sustainable Built Environments (Lecture)	ENDS 3144 Design and Construction Technologies IV (Lecture)
13:00 - 14:00					
14:00 - 15:00	ENDS 3501 Special Topics in Design (Seminar)	ENDS 3113 Sustainable Built Environments (Studio)		ENDS 3113 Sustainable Built Environments (Studio)	
15:00 - 16:00	ENDS 3501 Special Topics in Design (Seminar)	ENDS 3113 Sustainable Built Environments (Studio)		ENDS 3113 Sustainable Built Environments (Studio)	
16:00 - 17:00		ENDS 3113 Sustainable Built Environments (Studio)		ENDS 3113 Sustainable Built Environments (Studio)	

Figure 6.8: School 3 - Part I, Year 3 Timetable

A generic requirement cited by some validation panellist, was for schools to have ‘at least 50% of the academic programme dedicated to design activities’, regarded as the core of architectural education (Commonwealth Association of Architects, 2010; National Council for Higher Education, 2008, p. 13). It was noted that what constituted ‘design’, was never fully elaborated, although, this was often regarded as the activities carried out in the domain of the design studio or related to ‘[D]esign’. To better appreciate how this influenced programmes, two comparative criteria were evaluated; the first taking only studio courses, as defined in the course outlines (Criterion 1), with the second looking at ‘design’ in its broad sense, incorporating all courses related to design and design theory (Criterion 2), as presented in Table 6.7 below.

Table 6.7: ‘Design’ Courses as a Proportion of Programmes

Programme	Criterion 1		Criterion 2	
	Studio Courses	Support Courses	Design' Courses	Other Courses
School 1	41.2%	58.8%	46.6%	53.4%
School 2	35.6%	64.4%	50.0%	50.0%
School 3	51.3%	48.7%	58.3%	41.8%
School 4	58.1%	41.9%	61.4%	38.6%
School 5	47.9%	52.1%	51.0%	49.0%

Characteristically, schools situated in engineering or technical faculties had a lower proportion of studio and design based courses relative to other courses, as was the case with School 1 and School 2. In all cases regardless, the time dedicated to

studio was disproportionately greater than for other courses. This disparity was particularly visible for School 2, with more than 50% of formal contact time for Year 3 dedicated to design studio, but accounting for only 27% of the credit units for the year. Evidence from the focus group discussions and participant observations, indicated that time spent on design studio components was far greater than formal documentation suggested. Students admitted that a significant proportion of their time was dedicated to design studio components, and often at the expense of other courses:

FG2_4 (T-35:25) - A maximum of 8 hours a week of theory, the rest is design portfolio and graphics.

FG6_3 (T-16:37) - [...] We're like we're being over weighed with a lot of stuff at a go. In most cases, um, we get, we hardly get the time to read. We have, most of the time we just we do our subjects, this course called studio. Most times that's what you do. The little time we use it for reading other courses, other, other [...] subjects. [...]

SELT_2012_L3_3 - [...] too many issues to deal with yet limited time. (shouldn't be excuse) work load overwhelming especially because you have to deal with sustainability and have to do extra research. takes up other course units time. [...].

Further, support courses, were often sidelined in favour of completing studio work, described by one student as akin to 'fire-fighting', in which students prioritise tasks based on their perceived value, with studio generally as the most important.

FG6_3 (T-16:37) - [...] most of the time we just we do our subjects, this course called studio. Most times that's what you do. The little time we use it for reading other courses, other, other ... subjects. In most cases we end up, hmm, doing something which we call fire fighting. We stay up the whole night eh, we read and prepare for tomorrow's test.

FG1-1 (T-1:02:32) - Personally what I don't like is when I'm forced to compete doing something not because I have understood but because its time to finish. I feel it is not fair at times. It's just the end, it's the date for submission, so I have to submit ... but I actually feel I could have done better ... and you know you could have done something better, but its time and you just have to submit.

FG4_5 (T-1:32:28) - Time, ... the problem with time management is you have the lecturers set a very rigid schedule without consulting the students whatsoever. So you find that the lecturers would want to see schematic design, final design, and detailed design, you know after lets say six weeks, which is ludicrous ...

While inadequate time is a recurring complaint for students and professionals across the globe, in the context of East Africa, this is further compounded by cultural attitudes toward time, regarded as elastic and infinitely flexible, commonly referred to as 'African Time'. This view of time however comes into direct conflict with the ideals of contemporary architecture practice, and a source of contention

between faculty and students (see Observation 6.1). Time management in the context of architectural education, thus becomes a contentious element, and a source of tension between students and faculty, with the effects evident in late submissions and work undertaken at the last minute.

Observation Note 6.1: Time Management

An ongoing problem for students, was being able to manage their time within the architecture programme. As part of a second year design studio course, students were required to provide outline schedules indicating how they were to use their non-contact time for each week of the course. This assignment was a proactive way to get students to recognise the value of time as a finite resource, but if managed correctly would leave time for work, rest, and play.

Each student was required to submit their schedules as the first assignment, with many beautifully presented and colour coded proposals submitted. Many were optimistic, with all hours neatly accounted for, while others less so, with only the required minimum time programmed. As the semester progressed, and with students beginning to fall behind in their work, it became apparent that these schedules had likely been abandoned. Some students indicated that they hadn't thought that the exercise was real, merely a classroom exercise. Others admitted that they had been overwhelmed with work, underestimating the time required to complete tasks, thus resorting to 'fire-fighting', working to 'complete' and submit assignments, without fully engaging with the issues. Assignments were also started less than a week before they were due, inevitably not subject to critique nor checked for errors or omissions.

The inability to keep track of, and manage time, was a key challenge for students, a consequence of two conflicting but related aspects: students coming from a structured school system, with strictly defined schedules, coupled with a bias toward end of term summative assessment examinations that encouraged last-minute cramming; along with a loose interpretation of time, that permeates much of Africa, described as 'African Time'. Transferred into architectural programmes, this manifests as procrastination by students waiting for their 'eureka' moment, or for all necessary information to be availed, before committing pen to paper.

Programme structure and time issues thus seem to expose the relationship between design studio and support courses, as an overt element of institutional socialisation. Here, students could be presented with a somewhat distorted view of architecture, in which design is separate from what could be regarded as superfluous considerations, influencing ideas and opinions of architectural education. Fragmentation of the architecture curriculum into design studio, and numerous support courses is heightened by the label identifying them - 'Support'Courses. Despite the obvious importance of these courses as 'supporting' the activity of architectural design, this label comes with negative connotations of being secondary to the main element of architectural education, the 'design studio'. This fragmentation of the various components of architectural education, also described as stratification (Stevens, 1998, p. 198), or separation into silos (Hartenberger et al., 2013), appear to instil in students a belief that the

knowledge components presented in support courses are not essential to the design process, merely ticked off as part of the journey to becoming a professional.

FG6_2 (T-1:11:56) - ... Truth be told, um, the theory and the studio don't quite relate, yea, don't quite relate. If, if, if they do, it's on a very small scale, yea, there's not much relationship. ...

FG4_2 (T-1:21:39) - [...] when we were doing some of the course units, like theory of structures, lets say, it was not only independent of those guys, it was also independent of the main studio portfolio project, whereby you would just get into a class, you design columns and beams but there was no practical application on a real project, which would maybe require the other guys to come in. [...].

FG8_6 (T-41:17) - As for that what I can say is that, we, we have what we call studio, if I can interpret what you are trying to say. Um, that is where you do your projects. And it is your obligation to use what you've learnt in these other courses, that is: law, building technology, building science, to apply them on ah, on the project that you've been dealing with.

FG8_10 (T-43:55) - so you find maybe you're been given an introduction to something like, Theory of Structures that is specifically the structural engineering bit of architecture, and then you realise that you don't have the right application to that particular design project. As much as you did theory, you didn't do that.

With courses presented in independent, often disconnected modules, what is suggested is a *Separate Kingdoms* model of architectural education (See Figure 3.4), in which instructor's proprietary subject matter is espoused, without much attempt at linking this content to other courses within the programme. Separation of content was a concern, and noted during CAA Validation visits, detailed in the reports for the different schools, as presented in Table 6.8.

Table 6.8: CAA Comments - Links Between Courses

School	CAA Comment
School 2	While the Board is satisfied with the development of the technical aspects of the projects, it believes that the integration of theory and environmental issues could have been better explored.
School 3	There is evidence of teaching of technical matters in the courses. However, the Board notes, as observed elsewhere in this report, that integration of these matters in the design work of Years 4 and 5 is inadequate.
School 4	The lack of horizontal integration of theory units into the studio design projects needs to be undertaken to create more depth and address the Department's own assessment of this. The Department is not addressing the integration of technology within design studio projects sufficiently.
School 5	The Board was informed that the focus of the technology provision was on buildability and construction. However, the Board was unable to find evidence of this in the studio design projects. There is no integration of technology in the design projects. Similarly, neither were environmental design and sustainability evident in design projects.

The lack of integration, even where this was integral to the philosophy of a school or programme, suggests that the structure of a programme was not a primary factor determining how courses were eventually taught. Of particular interest is the influence of faculty in these decisions, highlighting the importance of cultural capital

in architectural education, with instructors often teaching what they felt was appropriate, and not necessarily what needed to be taught; This is further investigated in Section 6.2.

6.1.3 Availability of Electives

Availability of electives, regarded by Lai, To, Lung & Lai (2012, p. 272) as essential for variety within programmes, was another area of interest, with regard to the educational setting of socialisation. Electives offer students an opportunity to engage with areas of specific interest within the broad sphere of architectural knowledge, and are also a means for faculty to introduce students to their own research interests. Electives thus offer students the opportunity to engage with knowledge content outside prescribed curricula, and where cross cohort courses are possible. This enables cross fertilisation of ideas, often lacking in cohort based curricula models predominant across the region. A review of the programmes reveals limited availability of electives, as presented in Table 6.9.

Table 6.9: Elective Courses

Programme	Number of Courses	Percent of Programme
School 1	2	4%
School 2	2	2%
School 3	5	11%
School 4	2	2%
School 5	0	0%

This scant availability of electives, is partly attributed to perceptions of what constituted architectural education, related to the position that architectural education is ‘training’ architects for practice, in which case electives are extraneous. Lack of electives is also due to a lack of available faculty, as indicated by one instructor:

FG9_6 (T-15:50) - [...] the challenge is we don't have enough instructors, or diversities, or disciplines in those who are instructing, so maybe that is where the challenge falls in.

It is also evident that unavailability of electives, may be linked to the interpretation of validation criteria, which apart from the Australian Institute of Architects Policy on Tertiary Education of Architects (2008), are generally devoid of reference to electives. For the Australian Institute of Architects, electives recognise that architecture as a profession benefits from engagement with diverse subjects, stating that electives contribute to the “awareness of the broader cultural context in which architecture is practised” (Australian Institute of Architects, 2008). A counter position argues that content deemed essential to a programme of study, should not

be presented as electives but as obligatory courses (Mulder, Segalàs, & Ferrer-Balas, 2012, p. 214).

Even where electives were part of the curriculum, there was pressure from students, faculty and universities to replace these with compulsory courses, taught to the entire cohort (See Observation Note 6.2). With education perceived to be where students come to glean knowledge and information from experts, and where the fit-for-practice paradigm predominates, electives were certainly not considered essential.

Observation Note 6.2: We Want Compulsory Electives!

While efforts to broaden course offerings beyond the stated curriculum, this was not always perceived by students as beneficial. Many students had not been given the opportunity to make choices as part of their secondary education, with schools, and subjects taken prescribed by parents, guardians, or teachers.

On average, two elective options were made available to students each semester, for second and third year students, covering topics related to the research interests of faculty. Students were certainly enthusiastic about having electives, and the chance to explore issues beyond the formal curriculum, and for some, to engage in something in line with their growing area of interests.

The availability of electives was however, not always met with enthusiasm, with some students unable to make their minds up about which elective to take; complaining that all offerings were valuable and relevant to architecture. A key challenge for students was their belief that education was where one gained all the necessary information and skills to make you an expert. Further, with students coming from a background where decisions were made for them, a decisions of which elective to take was difficult, if not impossible. Consequently, faced with a choice, students were unable to make a decision, with many asking to have the electives made obligatory, such that they did not take a decision to register for one, or another. Concern for the impact this has on broader abilities in the profession of architecture become apparent.

The limited availability of electives, is not unique to East Africa, with a trend toward less elective offerings across the landscape of architectural education, described by Rittel (1971) as a sustained erosion of the very rationale for placing architecture programmes within the university setting. For Coleman, elimination of electives in architectural education, may over time transform “[...] architects from liberal professionals to technicians by making all modules core, which inevitably leaves little if any room for exposure to other branches of knowledge that might be at least as important to the architectural endeavour as studio design is” (Coleman, 2010, p. 201).

The generally held view of electives, serves to bolster the belief that architectural education is composed of a defined body of knowledge, espoused through compulsory courses. This according to Shannon (1995), serves to build a ‘*dependency syndrome*’, reinforcing student dependence on ‘*expert judgement*’

instead of empowering and helping them build confidence in their own judgement. The limited engagement in courses of their own choosing, suggests that students are being socialised into stereotypical perceptions of architecture, as being a finite body of knowledge that is acquired from within the formal architecture education setting.

6.1.4 Knowledge in Architectural Education

For students, what is regarded as useful architectural knowledge, is linked to their perceptions of architecture and what initially brought them into architectural education. Within architectural education, knowledge serves as a driver for the activity of design, but can also be misconstrued as separate from this activity, a consequence of how it is presented, as was evident with the perception of support courses seen in Section 6.1. Appreciating how knowledge components of architectural education are viewed, took on added impetus given evidence of faculty basing their teaching on their own educational experiences. Reviewed as part of the Questionnaire Study, knowledge categories of the Uganda Society of Architects Education Policy (2006), were evaluated in accordance with their perceived importance in the context of contemporary architecture and architectural education. Both the broad generic categories, and the specific knowledge criteria were ranked as part of the review, with the full results presented in Appendix 5. For the generic categories, as presented in Table 6.10, ‘*design studies*’ was ranked most important, with a weighting of 2.19, more than one point higher than the second highest category, ‘*design integration*’ (3.49). ‘*Implementation studies*’ was regarded as least important, with a weighting of 5.70, below ‘*history & theory studies*’ with a weighting of 4.79. Comparing these with the *hierarchy of curricular prestige* presented by Stevens (1998, p. 198), in relation to architectural education in Australia; Design was the most important, followed by history & theory, with environmental science, structures and building services regarded as least important.

Table 6.10: Overall Ranking of Education Categories

Category	Weighting	Ranking
Design Integration	3.47	2
History & Theory Studies	4.84	6
Design Studies	2.14	1
Environmental Studies	3.89	3
User Studies	5.38	7
Technical Studies	4.45	4
Implementation Studies	5.67	8
Skills	4.79	5
(n=56)		

Reflecting on the intake criteria of the architecture schools, as well as appreciating the historic technical basis of the programmes, the results seem to reflect embedded notions of what architecture as a profession entails. The low ranking of '*history and theory studies*', linked back to the historic origins of the profession in East Africa, having a strong technical bias, to which modernist principles were later added. Through this approach, contextual history was discarded, in favour of the application of what was regarded as 'universal truths'. This, along with a 'great men, great monuments' approach (Kingsley, 1988, p. 21), ignored local contextual issues, effectively entrenching within architecture, a disassociation between design, contextual history & theory, and firming the technical rational elements of the profession, associating the practice of architecture, as being akin to an acquired skill, rather than as a philosophical discipline.

The high ranking of '*Design Studies*' and '*Design Integration*', reflects a universal appreciation of design as a central tenet of architecture and architectural education. The disparate ranking between the current study, and that presented by Stevens (1998), could reflect a key facet of anticipatory socialisation in East Africa; the dearth of history as a core component of pre-university education. With only a few applicants viewing non technical subjects as essential to architecture (See Table 5.7), the danger to architectural education as expressed by Rittel (1971) is certainly evident. The diminished ranking of '*Implementation Studies*' is in line with ongoing discourse with relation to links between academia and practice, particularly where a period of formal post graduation internship (Part III) is required, before sitting a registration examination (Gutman, 2000). This was acknowledged by one respondent:

A significant portion of architectural education continues during practice, graduate architects should apply basic principles and knowlegde (sic) learnt in school in practice. A significant body of knowledge is attained through practice. Students need to be made aware of this and more involvment (sic) of students in field activities (practice, industrial training, study visits outside country, etc) should be encouraged if the gap between practice and formal education is to be narrowed (QR1_16).

The prominence of '*Environmental Studies*' in this ranking, did present as somewhat of a surprise, given anecdotal evidence about attitudes toward this subject, highlighted by poor attendance at environmental design themed CPD sessions. This does however, reflect a growing interest and awareness in this area within architectural practice and education. The ranking of knowledge components does nevertheless, contradict comments by practitioners of graduate architects being unprepared for practice. Being ready for practice not only entails being conversant with the skills associated with architectural practice, but also with key aspects of implementation studies, which were ranked lowest. These rankings

suggest that being 'fit-for-practice' entailed being conversant with all the technical aspects of architecture, confirmed by an ad hoc report to School 3, which stated: "[the programme] should focus ALL students entering into the professional masters course, more intensely on the technical and professional practice areas of architecture [...]." Ironically, this programme already had a heavy technical component.

Reflecting on the perceptions held by incoming students of architecture, as presented in Chapter Five, there is an evident mismatch between what students, and professionals considered as important knowledge components, which is further interrogated in Chapter Seven in relation to contemporary issues in architectural education. This disparity seems to form the basis for some of the conflicts within architectural education, and framing the relationship between students and faculty. At the heart of this relationship is a battle over what knowledge is important, as highlighted by one discussant in reference to an unpleasant encounter with an instructor:

FG4_3 (T-1:05:33) - [...] we had a lecturer, ok an ex soldier, or something, [...] sincerely this is a guy who [Pause] it was like you were competing with him, and [Pause] of course, you don't know, he knows, he is the instructor. And they're pumping their own ideas into your head [...]

The relationship between faculty and students thus emerges as important in the appreciation of knowledge within architectural education, particularly given the vast array of information which constitutes architectural knowledge, as highlighted by Norberg-Shultz:

[...] It is obvious that the architect as a professional man has to possess a complete understanding of his field. This does not mean that he has to know all the facts furnished by historical and actual research. Today this knowledge has become so vast that it is hardly possible for an individual to master the whole field (1965, p. 217).

For students, acquisition of knowledge is influenced somewhat by the pedagogical approach employed. In East Africa, lectures are the predominant means of engagement between faculty and students in most university programmes. This approach, suitable for delivering theoretical knowledge, often fails to provide opportunities to test what was learned. This approach also presents the instructor as a knowledgeable expert, with students often required to give him or her a standard set of responses, or risk failure. This contributes to a reluctance by students to engage in the trial and error approach embedded in architecture studio pedagogy, as described by one student:

FG5_9 (T-46:26) - [...] for a new student really, at first year and second year it's very difficult, cause some have a background in design, some others are, this is the first time they are going to use a pencil, and a very clean paper so they are afraid to draw.

In architectural education, this does not appear to foster students' abilities in translating learning into design solutions (Webster, 2004). This serves to detach students from directly engaging with the design process, and the responsibility associated with learning, becoming willing recipients of whatever is professed. Knowledge is thus transmitted unquestioned from faculty to students, as part of the "[...] uncritical adoption of practices and attitudes" (Rifkind, 2011) presenting as an inherent conflict within architectural education, thus reflecting Eraut's (2000) thesis that tacit knowledge within non-formal learning is a significant aspect of education.

6.1.4 Summing Up

The educational setting presents as the scaffolding for activities within programmes, with educational philosophies forming the basis for this, as contained in Mission and Vision statements. Mission and Vision statements of the schools were however occasionally out of line with actual educational activities within programmes. This was further compounded by use of the term 'training', reflecting historic origins of university education in the region, in technical or vocational training institutions that were transformed into universities. Evidence of this is found in the format of programmes, particularly the relationship between studio and support courses, the timetabling of courses, and the limited availability of electives. The impact this has on students, becomes apparent, affecting how they engage with architectural education and architectural faculty, as well as how they begin to frame what architecture is perceived to be, given this is the first time many were in contact with an architect. Within the programmes, there was a strong bias toward *Design Studies* and *Design Integration* as the basis of the architectural curriculum, evident not only in the programme structure, but also in timetabling, and allocation of time by students. Lastly, the belief that espoused knowledge should be compulsory, also influenced the availability and uptake of electives, across programmes.

Overall, six sub categories are appended to the initial template category, as presented in Table 6.11 below:

Table 6.11: Final Template Categories - Educational Setting

C.	Institutional Influence
	C.1. Educational Setting
	C.1.1. School Philosophy
	C.1.2. Nature of Programme and Programme Structure
	C.1.3. Course Weighting and Linkages
	C.1.4. Timetabling
	C.1.5. Electives
	C.1.6. Engaging with Knowledge

These expanded categories align with some of the principles described in Chapter Three, with regard to sameness and indoctrination, framing architectural education

in East Africa with its pragmatic and traditional outlook, transforming of novices into architects within a strictly controlled or regulated environment. This is regulated less by the bureaucratic structure of universities, but more through activities within programmes, as seen in engagement with knowledge components of architectural education. This raises questions about the educational process itself, and how the contextual backdrop influences the activities of architectural education.

6.2 Teaching and Assessment

‘Cultural capital’ of faculty, has been shown to form a significant element in institutional socialisation, and could be used to (r)enforce a ‘particular brand, style, or approach within the educational context. Further, in architectural education, the close links between faculty and students, presents faculty as significant *Career Shapers*, defined by Bosley, Arnold & Cohen as “[...] the range of people who provide an individual with career support, advice and access to development opportunities, with perceived consequences for the individual’s career” (2009, p. 1489). Two areas of influence thus emerge: the approach to teaching along with the basis for this (pedagogy or andragogy); and, the characteristics of assessment and associated feedback. Of interest in this regard are the Staff to Student Ratio (SSR) regarded as critical to the quality of education; the male to female ratio both for students and faculty; and, background, qualifications and experience of faculty.

As a key factor used to evaluate the ability of schools to deliver educational services, the SSR is generally calculated taking the number of Full-Time Equivalent (FTE) students enrolled in an architecture degree programme, against FTE faculty in the discipline of architecture (Ostwald & Williams, 2008). The SSR for this study, took academic faculty as academics employed to teach in the programme regardless of their discipline, but did not, include teaching assistants, visiting/ adjunct faculty or honorary academic staff.

Table 6.12: Student - Staff Ratio (2011)

Univ.	Sch. 1	Sch. 2	Sch. 3	Sch. 4	Sch. 5
Year I Intake	50	40	25	75	50
Students (FTE)	352	167	92	279	270
Staff (FTE)	36	21	11	29	23
SSR	9.8	8.0	8.4	9.6	11.7

The SSR for architecture schools in East Africa varied from 8.0:1 in School 2, to 11.7:1 in School 5, significantly lower than in Australia (24:1), New Zealand (17:1) (Wallis, Williams, & Ostwald, 2009), or in the United Kingdom (18.9:1) - ranging from 10.5:1 at University College London, to 35.6:1 at the University of the Arts, London

(Anon, 2014). The figures for East Africa suggest good access to faculty; however, both student and staff comments indicate that this was not the case:

FG2_6 (T-43:35) - I think the problem is because of irregularities of the attendance of the tutors. You may find that you, a tutor will just come at any time in studio [...]

FG8_9 (T-1:12:58) - [...] yea, three who come regularly [Laughter] and there are two others who don't really make regular appearances apparently [...]

FG10_1 (T-7:20) - It is really very difficult, because one class of architecture, it has to have, ... we have divided them into three groups. So each groups has two studio teachers. But in those subjects ... theory, theory subjects, they have be taught together, the class of 150 students,. So imaging to teach the class of 150 students, how difficult it is.

With the actual situation being different from that indicated by the SSR, questions arise about the value of the SSR as an indicator of the ability to deliver educational services. More significant are questions related to comments by faculty and students, which indicated inconsistencies between what is perceived to take place in architecture programmes, and the reality experienced by students, as will be further interrogated in Section 6.2.1.

An additional element linked to cultural capital of faculty, is their educational background, and where they gained their education. This relates to what has described as *academic inbreeding*, regarded as “[...] recruitment practice[s] in which universities hire their own graduates as faculty [...]” (Horta, Sato, & Yonezawa, 2011, p. 36). Academic inbreeding could unwittingly affect espoused knowledge and the nature of education, with recruits sticking to knowledge and teaching methods they were exposed to as students as the basis of their teaching. Academics are regarded as falling into two categories: *local faculty* (those who received their primary degrees from the local institution); and, *non-local faculty* (those who received their primary degree from a different institution) (Williams, 1978, p. 244). In this case, the primary degree is taken to be the architecture professional degree, with the findings presented in Table 6.12 below.

Table 6.13: Full-Time Academic Staff Qualifications (Architects)

School	Sch. 1	Sch. 2	Sch. 3	Sch. 4	Sch. 5
Professional Degree from Current School	N/A	4	1	15	7
Professional Degree from Another School	N/A	5	6	1	6
Research Degree from Current School	N/A	3	1	5	3
Research Degree from Another School	N/A	5	6	10	8

As a relatively new school, most faculty in School 3 were non-local, with a ratio of 1:6, while at the opposite end, School 4 had a very high proportion of local faculty, with a ratio of 15:1 of local to non-locals. The situation in School 4 presents an

overt occurrence of academic inbreeding, although its impact is not immediately clear. Across the schools, faculty generally gained research degrees from another university; the high number of degrees from alternative schools exhibited in School 4, suggesting recruitment from within the architecture programme itself, with new faculty given sponsorship to undertake research degrees, a practice widespread across East Africa as a means to entice high performing students into academia.

Also significant, is the female to male ratio of faculty and students in architecture schools, given the close association between students and faculty within the educational sphere. This is known to impact on *disidentification*, as previously described by Griffin (2002, p. 71), and affecting how students relate to their instructors. The ratio of female to male faculty could thus be linked to student performance, as found by Ahrentzen & Anthony (1993) in the USA, and de Graft-Johnson, Manley & Greed (2005, p. 1040) in the United Kingdom. In calculating the female to male ratio, unlike the SSR, all academics were included, with part-time, adjunct and sessional faculty taken as being 0.5 FTE (See Table 6.14 below).

Table 6.14: Gender of Faculty

School	Sch. 1	Sch. 2	Sch. 3	Sch. 4	Sch. 5
Female	4.0	7.0	4.5	2.0	4.0
Male	34.0	14.0	11.5	24.0	22.0
Total	38.0	21.0	16.0	26.0	26.0
Ratio	1:8.5	1:2.0	1:2.3	1:12.0	1:5.5

The number of female educators was generally low, although numbers for School 2 and School 3, were significantly better than the other schools, and with a ratio of 1:12, School 4 fared worst. The average female to male ratio for faculty in East Africa was 1:6.1, compared to a ratio of 1:3.2 in Australia (Ostwald & Williams, 2008, p. 36) and 1:2.2 in the United Kingdom. Significantly, female academics were largely engaged as part-time, adjunct or sessional faculty, with full-time academic positions dominated by males, again consistent with findings in Australasia (Ostwald & Williams, 2008), the United Kingdom (Fowler & Wilson, 2004) and the USA (Ahrentzen & Anthony, 1993; Anthony, 2002).

The predominance of male faculty, reflects a long standing bias in architecture, compounded by a view of architecture as a 'hard' science, unsuited for females who were traditionally steered into more 'female compatible' programmes. The gender disparity among faculty across the East African schools was cited as problematic in Schools 4 and 5, as presented in Table 6.14, in view of the message this conveyed to students.

Table 6.15: CAA Comments on Gender of Academic Staff

School	CAA Comment
School 2	The staff profile in regard to qualifications, gender, experience and length of service is good.
School 3	None
School 4	[...] there is a poor gender balance, with only two women tutorial fellows, and a poor age profile.
School 5	There is a good age range across the staff but the gender balance is poor

It was also evident that most female faculty were *non-local*, having gained their architectural qualifications outside East Africa. This could be a consequence of the historic view of architecture as a hard science, bolstered by local programmes having intake criteria that gave preference to students who had taken science subjects for the HSR. Gaining admission to international programmes was thus an easier option, given the much broader intake criteria across the diverse of schools in Europe, and North America, the preferred destinations for students.

While efforts have been made to redress the low number of females in higher education in East Africa, as noted by Onsongo (2009), the proportion of incoming female students to architectural education is still low. Compared to schools in Western Europe, North America, and Australia & New Zealand, where the female to Male ratio is roughly 50:50. A review of incoming students between 2010 and 2014 indicated a female to male ratio of 1:3.8 for School 2, while School 3 had a ratio of and 1:2.2 (See Appendix 6 - Incoming Students by Gender). The better ratio for School 3 was attributed to selection procedures that took into account a broader range of components than School 2, which relied exclusively on the HSR for selection of incoming students.

6.2.1 Teaching

Reviewing the SSR, and associated comments from focus group discussions, it is evident that inherent contradictions existed. While the SSR suggested generous faculty numbers, this did not necessarily translate to faculty availability for consultation with students. Focus group discussants indicated a lack of faculty during consultation times, attributed to the fact that many academics also ran full-time architectural practices, often prioritised ahead of their academic duties. Indeed, only a few instructors identified themselves as being primarily academics, highlighting the bias toward practice in relation to the five groups of academic faculty as presented by Boyer & Mitgang (1996, p. 51). Engaging in architecture practice by academics is certainly common in many countries, including Germany, Canada and the US, with experiences derived from practice making a valuable

contribution to architectural education. In East Africa, engagement in both academia and practice, is more out of economic necessity, with academic activities often taking a back seat to practice, which is generally more financially rewarding. While there is evident engagement from the sphere of practice, this tends to dominate architectural education activities, given the predominance of practitioners in architectural education. This also contributes to the irregular availability of faculty, leading to accusations of poor commitment as highlighted in the following dialogue by faculty:

FG9_3 (T-1:57:39) - [...] But I think its important to bring out the fact that there may be some people in academia who are not committed. They are there because it can give them bread, but not, you know. So one has to differentiate between some of those people who are there in academia, its just purely a salary.

FG9_7 (T-1:58:08) - At the moment ...

FG9_5 (T-1:58:13) - It also would be great to involve, people who are strictly, who are out there practicing.

FG9_7 (T-1:58:17) - Although not every body ...

FG9_3 (T-1:58:21) - Although I should point out that for example, the CAA acknowledges that academicians who are involved in practice actually contribute greatly to architecture education.

The dominance of practitioners in schools of architecture, also alludes to the dominance of the fit-for-practice canon within architectural education, socialising succeeding cohorts of students into believing the practice canon is the *raison d'être* for architectural education. This is often associated with the acquisition of skills and technical competence as the foundation of architectural endeavours, but in many cases to the detriment of theory (Balcioglu, 1999). The lowly status afforded to academics, further adds to the lack of committed full-time faculty, making academia a particularly unattractive career choice.

FG9_7 (T-1:52:58) - [...] I think also we need to make people who join academics, fully academicians, and by that I don't mean that they never practice, but they become fully academicians. Committed academicians who research, who rotate around, and by research [...]

FG10_3 (T-18:15) - [...] when I came here, I expected the structure to be A - B - C - D, and I found although it says again in the book, in practice it's not again formalised. You have inappropriate support, for us I don't know if it's the budget or what. But as a teacher, I have to find my own table, my own table, my own chair, let alone a computer, [laughter] let alone books to teach with. So that again lack of a system that, ... you know, supportive system, or monitoring system is not there [...]

Students did appreciate the importance of having practitioners as part of faculty, however, they were unhappy with the lack of commitment associated with their double lives. This was seen to negatively impact on students' educational development, as expressed by a student reflecting on a possible career in academia:

FG7_2 (T-1:25:56) - For me what I would do if I get the chance to come back and teach, I will not own a firm and be a studio master here. Like, I'm having my own firm, then I'm also a teacher here, and to make it worse, a studio master of a certain class.

(T-1:26:17) *So what would you do?*

FG7_2 (T-1:26:19) - I'll just teach (FG7_1 - Full-time Lecturer) Full-time lecturer.

For those interested in academia as a career choice, formal introduction to the Mission and Vision of schools was rarely provided, neither were these novices given an overview of suitable or relevant pedagogy or andragogy. In many respects, new faculty were left to their own devices, inevitably falling back on their own experiences as students for knowledge content, and teaching methods.

FG10_2 (T-14:44) - [...] so sometimes you get a chance to get trained, sometimes you don't. So at times you just get into a classroom straight from school.

FG10_3 (T-16:04) - [...] Its based on the learning I guess. When you are teaching, if you took a class, as a student you took a class, and then, you, now you have switched roles, you are the lecturer, what is the teaching based on? Is it just the notes you were given, as a student, or is there an outside input?

FG10_2 (T-16:29) - That's why I said, maybe inspiration. I mean when I started teaching, I taught out of inspiration. I was inspired by one of my lecturers, and actually I teach out of his expertise [...] (FG10_3 - Ahh) [...]

This reliance on past educational experiences for knowledge content, and the basis of teaching methods is significant in institutional socialisation, presenting to students not what they need, but rather what instructors perceive is necessary. This was the case particularly for support courses, where teaching was largely in lecture mode, with limited opportunity for critique of content and methods by academic peers. For studio instruction on the other hand, new studio tutors were usually paired with senior instructors to ensure continuity and consistency, serving to emphasise the high value placed on studio courses relative to support courses, where individual approaches were the norm, but with little effort made to align these to the broader goals of the programmes.

Gleaning teaching material and teaching approaches from past educational experiences, was pervasive in higher education across the region, exacerbated by an absence of formal mentorship programmes, or teaching and learning programmes directed at new instructors, or refresher courses for seasoned instructors. It is thus conceivable that teaching is a key means by which ideas from the past are transmitted, and myths perpetuated, presenting education as static and unchanging, leading to allegations that university education across the region is

irrelevant to contemporary society (Mthembu, 2004, p. 289; Nyamnjoh, 2012, p. 134) (See Observation Note 6.3).

Observation Note 6.3: Ideas from Past Education and Teaching Experiences

While the importance of experience and practice is extremely valuable in the teaching of architecture, at times it can be taken out of context, as was the case with one instructor. In this instance, a fairly senior instructor, taking a third year studio course, arrived one day, with a large bag full of frayed and yellowing drawings, going on to pin these up across the entire studio. These were drawings he had done in architecture school - in the 1960s, plus some from his early career. The instructor then proceeded to lecture students on the value of the work, all hand drawn. While the rationale for this was clear - showcasing the importance of hard work in architecture - the students were not particularly impressed with this show and tell, trying to fathom the rationale for the myriad of "ancient" drawings presented to them. For the students, this served to prove the instructor was out of touch with contemporary architecture, not helped by these being construction drawings, reinforcing the stereotypical view of architecture as the production of construction drawings. This was further exacerbated by the lack of any contemporary work, leaving students with the impression that he was 'past his prime'.

In a different example, while teaching using similar pedagogy and experiences between schools was commonplace, more pervasive was teaching from past educational and practice experiences, or in this case, with goals and objectives of a different programme. In this instance, the instructor revealed that teaching material in use, was the same as used in a similar course she taught in a different school. This was regardless of the overt philosophical and pedagogical differences between the two programmes. Similarities extended beyond the teaching material, to assignments and evaluation criteria as well. This was justified by the instructor by the fact that the students were all doing architecture, ignoring the nature of different courses, and overt disparities in the programme goals. This approach was the norm across the region, with numerous universities, but with only a few academics to take up the load. Many universities are thus little more than teaching centres of larger universities, elevating the possibility of teaching the same course in different universities, regardless of the institutional setting.

With education perceived as the mere transmission of knowledge from instructor to student: knowledge regarded as being fixed, unchanging, readily defined, and easily packaged, reliance on past educational experiences as the basis of teaching, becomes the accepted approach for instructors. For Speck; this does raise concerns, thus he writes: "[...] I am genuinely dismayed at how little they seem to know about what really goes on in architecture schools today. Many of them seem stuck in the era of their own architectural education" (2008). The negative implications of this approach are poignantly highlighted below:

FG1-2 (T-37:05) - [...] you got this lecturer who is telling you what was done in the 1960s I mean, get updated [...]

FG8_6 (T-1:46:04) - [...] As much as our lecturers might be having that experience, maybe your perspective is from the future, and their perspective is from the past [...]

This supports the assertion by Freire (2005, p. 72), that teaching is thus no more than *narration*, with students as passive listeners, absorbing knowledge and

information from learned experts. Espoused knowledge in this situation becomes eminently valuable, highlighting the significant cultural capital wielded by instructors, further heightened by the prevailing paternalistic approach to education. An overt demonstration of this influence, is found in the change in student opinions with regard to the identification of works of architecture between first and second year. (See Observation Note 6.4).

Observation Note 6.4: Student Awareness of Architecture

In the first year of the architecture programme, students generally identified with new buildings within the local context as being good architecture, in most cases citing gleaming glass towers as their favourite buildings as these stood out in the architectural landscape. Only a few students identified international examples as their favourite buildings, but again, newer buildings, promoted in the media. A small minority were attracted to, or identified with buildings constructed more than 20 years before, and even fewer from the ancient world.

By the end of the first year, when asked a similar question, students generally identified buildings that had featured as part of their history and theory courses, and primarily post nineteenth century buildings. The reasons given for these being regarded as 'good' works of architecture were also similar the reasons presented in the lecture and tutorial sessions, be it technical, environmental, or exploration of theoretical or cultural factors. The evident change, from largely local examples, to international works of architecture, reflected the influence faculty can have over students, in this case reinforced by the educational approach that rewards reproduction of information, and in the pattern it was originally presented. It does however highlight how students acquire some aspects of architectural cultural capital within the context of architectural education.

Inevitably, awareness of international architecture and architects, was almost second nature for students, particularly modernist architects such as Le Corbusier and Mies van der Rohe, as well as a sprinkling of contemporary stararchitects, such as Sir Norman Foster, Frank Gehry and David Adjaye. In some respects, modernism was perceived to be where architecture started:

FG6_4 (T-1:22:43) - [...] There were these architects, who were, I think who I should say initiated the whole of the process of architecture, by introducing the architecture of that time, I could call it Modern architecture, using so much of concrete and special treatments, the walls and everything. The likes of Le Corbusier, [...]

There was however a startling lack of knowledge or acknowledgement of local or regional architects and their projects, such as Richard Hughes, Geoffrey Bodgener, and Amyas Connell, although some did make reference to senior indigenous architects such as David Mutiso and William Ssentooogo. Omenya speculated that this was a result of "the inability of the young African faculties (sic) to design programmes, relying on western books and published materials (sic) to train the local architects" (2011, p. 287), or more specifically, relying on tried-and-tested elements as the basis of instruction, in this case, examples from their own architectural history courses. Associated with this, are embedded seniority issues

as an inherent part of educational culture in East Africa, which ensures new faculty are unlikely to be innovative in their approach to teaching. Within this setting, students are socialised into a particular architectural aesthetic, largely mirroring what instructors themselves were exposed to, and generally in line with a ‘great men, great monuments approach’ (Kingsley, 1988, p. 21). This suggested a potential for indoctrination within architectural education, with students obliged to adhere to the will of faculty, who provide them with all the knowledge and skills necessary to transform them into architects. Further, with students coming into architectural education hoping to be provided with all the knowledge and skills to make them experts, this approach to teaching thus becomes an overt element for socialisation.

6.2.2 Assessment

Assessment is generally accepted as being a strong motivator for student engagement in particular tasks or course units, and is in line with the adage, ‘assessment drives learning’ (Wormald, Schoeman, Somasunderam, & Penn, 2009). Assessment tasks serve a number of simultaneous purposes: helping students learn; as a means of reporting student progress; and as a way of making decisions about teaching and what to teach (Ramsden, 2003, p. 177). Reviewing assessment methods employed across architecture schools in East Africa, revealed a narrow range of assessment methods in use, often prescribed by the institutions. These prescriptive requirements stipulated that a substantial proportion of assessment be undertaken as end of semester summative assessment tasks, accounting for no less than 50% of final grades, on top of a limited number of formative assessment exercises (See Table 6.16).

Table 6.16: Examples of Assessment Regimes

School	Architecture Course Assessment
School 2	Each course shall be assessed on the basis of 100 total marks with proportions as follows: Course Work 40% Written Examination 60% Course work shall consist of laboratory work and progressive assessment (assignments/tests) each component assessed at 20%
School 5	That 100% continuous assessment marks for the portfolio examination shall consist of: 50% continuous assessment marks from the interim critique. 50% marks awarded at the internal examination at the end of the second semester.

Prevailing assessment regimes, generally mirrored those found in pre-university education, which have been criticised for encouraging surface learning among students (Webster, 2007, p. 22). Surface learning, has been linked to the idea that passing examinations is an ends in itself, which according to Bray (1985), is as much a consequence of a concentration on *achievement*, rather than on *aptitude*.

Such institution wide assessment regimes suggest an emphasis on the end product above the process, which may be appropriate in some educational fields, but not particularly suitable for architectural education. This approach to assessment, according to Boyer & Mitgang (1996, p. 93), promotes monologues from instructors to students, rather than dialogue, as students look to fulfil assessment requirements, rather than seeking to test and developed though continuous evaluation loop.

FG6_5 (T-1:32:22) - [...] I think, the, the environment that we've been learning, is that there's a certain wind that passes and that's the wind we follow [...]

FG9_6 (T-15:50) - [...] the only way I think architecture education can do that is helping students becoming adaptive, rather than trying to prescribe a way in which architecture should proceed. And the challenge is we don't have enough instructors, or diversities, or disciplines in those who are instructing, so maybe that is where the challenge falls in.

FG9_1 (T-20:04) - [...] I think to some extent, the education environment probably does not, could kill exploration by students, cause I insisted on doing what I wanted to do, but it had many other consequences: in terms of time; in terms of, you know, so many consequences. So in a way the education environment, can actually, it can suppress a persons exploration.

FG9_3 (T-39:27) - [...] I also think that education should not just stop at what the instructors do. We have to train the students to be able to train them, to teach them, to educate themselves.

FG10_4 (T-30:56) - But I think as lecturers maybe we, we are normally mistaken when the only thing that we want is the final product. And, this is wrong because for an Architect, I think what matters most is the ideas and the process (FG10_3 - Yes, we need to focus more on the process). That is what matters most.

For architectural education, the result is projects with little theoretical depth, due to inadequate exploration, undertaken at the last minute with little opportunity for any critique. This approach links back to admission criteria, which also emphasise the importance of achievement through the HSR, as opposed to an aptitude for architecture, which is generally more difficult to ascertain. In response to the need to succeed through achievement on personal merits, students sought feedback for their work after-hours, without the inquisitive eyes of their peers, in a phenomenon described in the context of pre-university education as '*shadow education*', defined by Stevenson & Baker as, "a set of educational activities outside formal schooling that are designed to improve a students' chances of successfully moving through the allocation process" (1992, p. 1640). The growing evidence of shadow education is showcased in Observation Note 6.5.

Observation Note 6.5: Shadow Education

Shadow education, is rife across pre-university education in the region, where competition for places, and to succeed was of prime importance. It is characterised by after hours tuition and coaching, designed to assist students achieve higher scores to enable them to get better grades, that would give them better opportunities at the higher levels of education. This activity is increasingly evident in the university setting, with a growing number of students seeking extra attention, but outside stipulated office and consultation times. For architectural education, this trend could have a detrimental effect on professional engagement, with an increased reliance on feedback from instructors as gatekeepers, and less opportunities for students to develop their own ideas through discourse and collaboration with their peers, a key part of studio pedagogy.

Observations over the course of a year, indicated how this phenomenon is increasingly being used by students, taking advantage of the collegiate atmosphere fostered by the school, and the fact that most instructors were present in their offices late into the night. Inevitably, students took advantage of this, with many seeking to make after hours appointments to seek feedback on their work. Many of these students had failed to come to formal studio sessions, seeking instead to have private crit sessions after hours. For some instructors, irregular visitors were accommodated, a means to ensure the students were keeping up with the rest of the class. However, over time, some students took advantage of this goodwill, with more frequent visits, and for some, these replaced the formal sessions altogether. One particular student in a third year course, consistently came after 5pm, and on weekends, despite being warned that this practice was unacceptable, and should only be used once in a while. In this case, the instructors had been available all day, and had endeavoured to see students during the formal studio times. He had been absent from the studio, and when he did eventually come in, had told the instructor he did not require any assistance.

An inevitable consequence of the prescribed university wide assessment regimes, were end of semester presentations geared to fit the institutional requirements. In some schools, presentations thus represented the entire semester's work, often filling an entire room - showcasing work from initial concept and site assessment, through design development, and on to construction drawings - with over sixty (60) A1 sheets being presented in a single twenty (20) minute oral presentation (See Figure 6.9). While producing hundreds of sheets for a senior level architecture design project is not unusual, these are usually part of an end of year portfolio reviews. The idea of a portfolio review as the mainstay of the architectural examination process is somewhat fallacious, as recognised by some instructors, noting that, "If you compare the portfolio classes, you know even when you are presenting to your lecturers, you have the portfolio presentation. It is not the same as it is in the firms, in the architecture firms. It is very different" (FG9_4).



Figure 6.9: End of Semester Presentation

The lack of variety in assessment tasks was noted in the CAA Validation reports, with comments related to assessment highlighting the heavy reliance on examinations, and limited feedback given to students, a key trait of summative assessment (See Table 6.17). School 3 did seek out a broader array of assessment tasks, beyond what was prescribed by the university. This included a greater mix of formative and summative assessment tasks, reflecting its stated educational objectives.

Table 6.17: CAA Comments on Teaching and Assessment

School	CAA Comment
School 2	[...] review the course assessment policy, including investigating shifting to a higher proportion of assessment on assignment work for non-design subjects.
School 3	[...] has produced a flexible approach by the teaching staff, resulting in acquisition and command of good graphic skills and communication styles without compromising the course content.
School 4	[...] reliance on examinations which are mandatory across the University students received no written feedback on work, only a grade, although there has been an experiment with written student feedback in year 2 of the BAS.
School 5	[...] students should also receive written feedback on assessment using a proforma.

Alluded to in the CAA comments, was the nature of feedback received by students. The bias for summative assessment, meant students received minimal feedback during the all important development process, as noted below:

FG2_1 (T-15:08) - [...] along the project you work blindly and I quote 'blindly', and they argue, it's like, you are supposed to enjoy the project by working blindly, without a very clear goal to achieve.

FG10_2 (T-10:32) - You don't get any real feedback, and you don't even get trained to be able to explain your work, because you just submit your studio project, and ... I mean architecture is never supposed to be like that.

For students, assessment tasks served to present instructors as gatekeepers, rather than mentors, with the teacher-expert a dominant feature across the educational landscape, emphasising the dependency condition, as highlighted by Shannon (1995), and somewhat linked to a learning approach derived from pre-university education. Instructors in this context are perceived as always being correct, and whose advice and assistance is the only one that mattered, negating the value of the design studio as a place of discourse and peer review. This served to reinforce power relationships in architectural education, with faculty stamping their authority on student development, and work output, negating a fundamental goal of professional education; the ability to foster engagement with critical discourse, quashed by large personalities, as noted by one student:

FG4_2 (T-1:08:53) - [...] there were times when some instructor would openly declared, 'I am going to purge these kind of students'. There is one who declared, and I appreciated that instructor for that, because, at first I thought, 'what is wrong with this man' and then he declares 'I am going to purge, these kinds of people, and these kind of people I will lift'

Within individual courses, designated values for assessment are known to be significant motivators for students. Such information is generally provided in Course Outlines and associated Evaluation Matrixes, and regarded as being useful in supporting students' learning. In many cases, such documents were not provided to students, under the guise that students needed to attend formal sessions to get the necessary information.

FG6_5 (T-29:52) - I don't recall, since I came in first year, if a teacher came in and said, I'm going to mark your, your, your studio works using A, B, C, D, E. They would just come with the papers; you wouldn't even see.

FG5_8 (T-11:05) - I think sometimes, it would be better if there was like a set standard of how work should be marked.

A key argument, which did have merit at face value, was that students would restrict themselves to the narrow range of issues explicitly stated in evaluation matrices, thus failing to explore ideas beyond self imposed boundaries. Nevertheless, in School 3 and 5, which did make Evaluation Matrices available to students, there was evidence some students did use them to determine their work priorities, although the overwhelming nature of the design challenge often saw students neglecting the stated goals of the studio, engaging in 'fire-fighting' to

complete tasks. In the context of the architectural design studio, this resulted in students striving to have complete buildings, rather than looking to resolving the issues being explored at a particular project stage. The motivational nature of assessment was highlighted as part of Student Evaluations of Learning and Teaching (SELT), exemplified by the following statement: “results do motivate people therefore it would be good if results were pinned up after each assignment” (Yr_3).

In all, activities embedded in the prevailing approach to assessment served to strengthen the inherent power relationships within architectural education, entrenching long standing conceptions of faculty, who wield immense cultural capital and authority, as teacher-experts from whom students seek knowledge. Assessment reinforced this relationship, by acting as a gateway, or hurdle to student engagement, akin to enforced conformity.

6.2.3 Summing Up

It is evident that teaching and assessment impact on the educational process, a consequence of the way programmes are framed, taught, and how students are evaluated. Of significance is the nature and background of faculty, many coming into architectural education with limited appreciation of educational pedagogy, or the broader goals of architectural education. This was magnified by a lack of formal procedures to initiate new faculty into the schools, and to introduce them to educational pedagogy. Faculty were largely left to ‘find their own way’ through the nuances of knowledge and educational pedagogy, invariably resorting to their student experiences as the basis of teaching, and a source of teaching material. What is taught in this context, is often not subject to critical review, emerging as the reiteration of dogmas, and serving to skew student ideas and opinions toward particular conceptions of architecture, and serving to perpetuate the status quo. Further, with many faculty reporting their primary occupation as practitioners, making students fit-for-practice: conversant with the technical aspects of architecture (read able to prepare construction drawings), stood out as an entrenched objective for architectural education in East Africa.

The somewhat paternalistic approach to teaching, served to reinforce embedded power relationships within architecture and architectural education, through dominant faculty within the educational setting. The general dissatisfaction with availability of faculty, linked to their engagement in activities outside the university, was contrary to what was suggested by the SSR data, which indicated a good ratio between faculty and students. The few faculty that were available, thus wielded immense cultural capital, making them significant career shapers within architectural education. Further, it was evident that assessment regimes were largely

constrained by university regulations, coercing schools into assessment schemes not particularly suited for architectural educational pedagogy. This also served to negate the processes of architecture, promoting architecture as image, and reinforcing in students the view that creativity is the simple application of form and colour.

Returning to the initial template, the findings of the study suggest several institutional influences related to teaching and learning can be appended to this group, as summarised in Table 6.18 below.

Table 6.18: Final Template Categories - Teaching and Assessment

- C. Institutional Influence**
 - C.2. Teaching and Assessment**
 - C.2.1. Composition of Faculty
 - C.2.2. Background and Experience of Faculty
 - C.2.3. What Faculty Profess
 - C.2.4. Approach to Teaching
 - C.2.5. Approach to Assessment / Feedback
 - C.2.6. Shadow Education

The teaching and assessment aspects of institutional influence, do have a significant impact on how students engage with architectural education, particularly on how and what they learn. Teaching and assessment are thus significantly influential on socialisation of students within architectural education, more so as these act as a foundation for participation in architectural education, as will be explored in Chapter Seven.

6.3 Summary

This chapter sought to derive answers to the second research question, which asked: *How does the environment of architectural education impact on socialisation within architecture schools?* The findings as presented in this chapter, suggest that institutional influence does affect the socialisation of students in architectural education, creating a framework within which educational socialisation can occur. The educational setting, for the most part, relied on tried-and-tested approaches as the basis of activities; from teaching, to availability of electives, and even assessment. These were often transplanted from other disciplines, serving to highlight the difficulty in getting architecture educational pedagogy accepted, ironic, given elements of this approach have been incorporated into medical education (See Kiguli-Malwadde et al., 2006). With regard to teaching and evaluation, the teacher centred approach, presents as a significant socialisation factor, and a major source of conflict between students and faculty arising from differences in anticipatory factors, and found in Chapter Five, and Institutional factors in the

current chapter. This is further compounded by a strong fit-for-practice agenda as the dominant canon within architectural education, serving to frame architectural education as a techno-rational agenda, inevitably clashing with the broader goals of architectural education.

Institutions thus appear to reinforce, and perpetuate a stereotypical view of education, as being somewhat akin to indoctrination, with notions of university education as ‘training’. This affected not only how education was perceived, but also how it was undertaken. The expanded template categories summarised in Tables 6.19 and 6.20 below, highlight the broad based nature of institutional influences which affect architectural education, and provide a framework for institutional socialisation within the schools.

Table 6.19: Educational Setting.

	Emphasis
C.1 EDUCATIONAL SETTING	
C.1.1 School Philosophy	+
C.1.2 Nature of Programme	+++++
C.1.3 Course Weighting and Linkages	++++
C.1.4 Timetabling	++
C.1.5 Course Electives	+
C.1.6 Engaging with Knowledge	++

Table 6.20: Teaching and Assessment.

	Emphasis
C.2 TEACHING AND EVALUATION	
C.2.1 Composition of Faculty	++
C.2.2 Background and Experience of Faculty	+++
C.2.3 What Faculty Profess	++++
C.2.4 Approach to Teaching	+++++
C.2.5 Approach to Assessment / Feedback	+++++
C.2.6 Shadow Education	+

Making reference to the comparative weightings as introduced in Table 4.5, it is evident that within the educational setting, significant weight is placed on tangible elements, i.e. those aspects that can readily be quantified. In this case, the weighting of courses, and the overall nature, or structure of programmes were given greater emphasis than less tangible elements, such as the philosophy of the schools, or availability of electives. The high weighting of the approach to teaching and assessment, suggests links to perceptions of university education, and ideas of education garnered from pre-university education. In this case, emphasis was related to elements that influenced progress through the system, which could account for low emphasis on faculty related elements - as students generally progressed regardless of faculty, or for shadow education, a hidden component of education, prevalent in pre-university education, and increasingly found within university settings. What was emphasised, demonstrated some continuity between anticipatory and institutional socialisation, which also serve to influence the educational process, that will be interrogated in the following chapter.

Inside Architectural Education

"Competency models have questionable outcome effects in terms of professional understanding and professional performance."

(Martin Talbot, 2004)

VII

7.0 Educational Socialisation

This chapter seeks to answer the final research question, which asked: *"What are the effects of socialisation within architectural education?"* As suggested in the literature, socialisation is influential in determining the outcomes of architectural education: a consequence of a long educational process, through which students are exposed to different aspects of the profession. This exposure is through purposely engaging with the nuances of the profession, albeit in an educational environment. Emerging from the literature, as well as the questionnaire study, were two broad areas within which this engagement with the nuances of the profession occur: Architectural foundations; and, Building professionals (See Table 7.1).

Table 7.1: Initial Template Categories - Educational Factors

- D. Educational Factors**
 - D.1. Architectural foundations
 - D.2. Building professionals

It is contended that educational socialisation forms a significant component of architectural education, occurring prior to students' entry into the professional realm as graduate architects. During this stage of the educational process, students demonstrate their abilities as budding professionals, through increasingly greater involvement in educational aspects that reflect their growing abilities, as well as their commitment to the profession. According to Stevens (1998), such activities serve as the social foundation of architecture, and are thus significant in the socialisation process.

7.1 Architectural Foundations

While foundations for student engagement with architectural education, can be found in anticipatory socialisation, the educational environment is where students build a foundation for actual participation in the profession. This investment is associated with an increased sense of belonging, and familiarity with the nuances and ideas of architecture as a profession. Through this process, students increasingly associate with what they perceive and know architecture to be, mimicking whomever and whatever is deemed influential or important. It is through this process that students develop relationships deemed as beneficial, taking on values and attitudes taken to be the hallmark of being an architect. How students build their architectural foundations, is explored in the following subsections, relating to two pertinent factors: the design studio as the quintessential heart of architectural education; and, the social interactions inherent in architecture schools.

7.1.1 The Design Studio

As the quintessential element of architectural education, the design studio is not only a physical space, but also a crit space, a place to work, and where ideas are born and nurtured. It also serves as a social space, providing a base or 'home' for students, where they spend considerable time interacting with their peers and with faculty (Anthony, 1991, pp. 11-12). For some students, the purpose of the studio, beyond a space just for crits, was somewhat lost; lack of engagement often attributed to inadequate space and furniture to accommodate the growing student numbers, as well as the unavailability of faculty during designated studio times, as reported in Chapter Six. While concerns for the lack of space and furniture were certainly warranted, with observations revealing furniture in many studio spaces in various states of disrepair, this did not account for the totality of the decline in students use of the spaces. It was acknowledged that space limitations were particularly acute, with one school having to make use of a cafeteria as its studio space. Further, at School 1, the increase in the student intake, from 50 in one year, to 150 the next, greatly exacerbated the space crisis in that school, necessitating additional studio slots in the evenings, invariably impacting on staff morale.

FG10_1 (T-07:20) - It is really very difficult, because one class of architecture, it has to have, ... we have divided them into three groups. So each groups has two studio teachers. But in those subjects ... theory, theory subjects, they have be taught together, the class of 150 students. So imaging to teach the class of 150 students, how difficult it is.

Under such conditions, the studio became little more than a drop-in-centre, with students only in the studio to present work at specified times during the semester. The studios were largely empty at other times, as there was no real sense of

ownership by students, as the sharing of the spaces removed the ability to personalise or own the studio. Further, use of computers compounded the problem, allowing students to work anywhere, and nowhere in particular, consequently deserting the studio, in the process contributing to its perceived irrelevance. This, along with irregular attendance of faculty, did not impress upon students the value of the studio as a valuable learning environment, as expressed by some discussants:

FG2_6 (T-43:35) - I think the problem is because of irregularities of the attendance of the tutors. You may find that you, a tutor will just come at any time in studio, so ... you may find a student who wants to maybe work from elsewhere, and a tutor will pose it as a threat to the class that, if I don't see your work, I am not going to mark your work. So it's like, you have to stay in studio the whole day, just waiting for maybe a tutor to turn up, maybe in some few hours, then he gives you his 10 minutes, he looks at your work.

FG5_6 (T-55:44) - [...] For me architecture is really a practical subject, so, ok, I don't really seem to understand why most of our hours are really spent in studio. If I was an instructor, maybe I would encourage the students to actually go, like if we are talking about construction, you go to a site, and see what is being done, of you are talking about different materials, we go and see them, instead of you know, its not really helping, anyone if everything is in theory, and you don't actually get to see it or to experience it. It doesn't really stick in. I guess that is what I would change.

The design studio as a physical space, and as an integral part of architectural education in East Africa, is thus under threat as it is across the world: a fight that some universities have already lost, with some schools in Australia stripped of their studio space altogether. Ironically, the quest to increase student numbers in architecture programmes, has exacerbated the problem, with students not seeing the value of spaces that could not be 'owned', thus only using it for formal crits. Indeed, a review of architecture studio spaces by H. Tumusiime (2013) suggested the studio was a neglected space, with its value not appreciated by students. Students felt the sharing of workspaces allowed intrusion into their personal activities, which affected their design progress. The following two quotes from students interviewed illustrate this:

"Sometimes you are stuck with your work, so you stay in studio hoping to get inspiration but all you see around you is white walls...you look outside and no one is passing by. If I was allowed to, I would paint the walls bright in some places and dark in others."

"I feel inconvenienced when I have to go to studio just for a lecture and then go back home. It is not a place that I look forward to going to especially to spend most of the day like some of my classmates. There is no furniture, not even a stable internet connection. Sometimes when my classmates are not going for the lecture, I also don't attend it. Maybe I also have another job to do." (H. Tumusiime, 2013)

Such statements suggest the benefits often ascribed to the studio environment, such as engaging in collaborative work, thus helping break from the stereotypical view of education as an individualist endeavour, were gradually being lost. For some faculty, seeking to retain or enhance these benefits as part of architectural education was important, and thus sought out means to engage students in activities beyond just formal crits. In one case, faculty looked to engage students in activities that promoted the studio as a key part of the design development process. This is showcased in Observation Note 7.1, in which faculty deliberately emphasised the social value of the studio crit, as being integral to the general learning objectives of architectural education.

Observation Note 7.1: Design Crits and Design Juries

How juries were set up, varied across the semester, and revealed attempts to transcend the hierarchical paternalistic approach embedded in traditional design juries. While the traditional jury format was still evident, two additional arrangements were worth documenting:

Format 1 - The Student Led Crit: The student led crit, was used in the final year of the undergraduate programme, and the graduate professional programme as part of the mid-semester studio presentation. This set up was to encourage students to critique their own, as well as the work of their peers, with faculty seated in the background, a reversal of the traditional jury format. Students provided the primary feedback to their peers, which at times was superficial, and avoided critiquing the work itself; a possible reflection of what students desired from traditional crits. In only a few cases did some students provide comments and suggestions that could be used to improve designs. Faculty refrained from commenting on individual student work, only giving overall comments at the end of the session, and largely discussing the feedback given by the students. This approach was to ensure students were actively engaged in critical analysis of work. as a key part of the process of architectural design, and to encourage students to engage in their own peer review process, reducing reliance on crits from faculty as the basis of progress. An unexpected outcome of this setup, has been the introduction of peer review sessions, with students from different year levels coming together at various times during the semester, to critique projects of any student willing to present their work, undertaken in an informal and open setting.

Format 2 - The Course Specific Peer Crit: The Peer Crit was initiated to ensure students in one design course, were engaged in this vital aspect of the design studio. It was evident that students generally worked individually, and with limited interaction with their peers throughout the semester. To foster dialogue, instructor required all students to provide proof they had engaged in peer review before the design tutors gave their comments and advice, with evidence being journal entries documenting this dialogue. While students were initially reluctant to do this, by the second year, it was noted that students were more engaged with this activity, and it had been somewhat formalised, borrowing some elements of the student-led-crits as well. These student crit sessions which were carried out in the evenings, were both lively and engaging.

Postscript: On a number of occasions, students set-up presentation spaces for their crit sessions; most times ensuring their instructors were placed at the front, which was regarded as the norm. More significant, was the placement of a table between them, and the jury, which could be interpreted as a subconscious means of providing a barrier between them and the jury. On many occasions, the jury had the tables removed, symbolically removing the barriers between students and faculty.

Regardless of efforts to ensure the studio was upheld as a key component of architectural education, its overall decline reflects a broader assertion by Cuff (1991, p. 251), who suggested this was an indication of a general neglect of architecture as a social practice, and the promotion of the myth of architects working as independent autonomous practitioners, with the lone-ranger designer becoming the norm within architectural education and practice. As a physical space, the studio on its own does not enhance collaboration, evident in the activities of students who did work in studio. These students exhibited traits similar to those who worked away from the studio, and while students were physically present in the space, the way they arranged their spaces, gave an indication of strong individualistic ideals. In the context of the studio, the backdrop of computer screens replaced the physical walls of individual rooms, with student laptops prudently placed on drawing boards, creating a barrier to interaction between students. This reflecting what Boyer & Mitgang observed as “[...] an unwritten code of silence among students themselves” (1996, p. 94) (See Observation Note 7.2). The studio it seemed was regarded as a work space, but the approach to this work, was dictated by attitudes towards technology, and the individualistic work ethic carried from pre-university education.

Observation Note 7.2: Talk to The Screen, or Individuality in the Design Studio

Growing individuality in education, is noted as a threat to a key element of the design studio, its collegiality. This is heightened by use of computers as the mainstay of architectural documentation and presentation. The increased ubiquity of social media and online content, further contributes to diminished interaction between students within the studio. The use of computers and CAD as the medium of choice for students, and with students rarely printing their progress work, meant design development rarely shared or reviewed by peers, even in the open space of the design studio. This has effectively taken away an opportunity for casual, but meaningful interaction as a repertoire in the design process. Further, students increasingly spent long hours staring at their computer screens with earphones on, updating Facebook™ pages, watching YouTube™ videos, and ‘chatting’ with friends, almost oblivious to activities around them. While students are physically present in the studio, they were mentally disengaged from it, and from the critical discourse it could potentially offer. The increased individuality thus diminished the essential role of the studio, which in the broader context may contribute to the growing presence of the ‘solo-virtuoso designer’ in architectural education, and into practice.

With growing prominence of individuality within the studio as the heart of architectural education, it is increasingly apparent that architectural education in the context of East Africa is evolving in the same way as it has across the world. It is however unclear what will eventually emerge out of this evolution, given the preeminent role of the studio as being an ‘equaliser’, bringing together students from different backgrounds in pursuit of a common goal. What is evident, are conflicts that separate students and faculty, likely a consequence of different values

toward the studio, and what it represents in architectural education, and the profession.

7.1.2 Social Interactions

While it is accepted that the design studio is where strong social connections between student and faculty can, and should be developed, there are suggestions that this is not the case. The discrepancy between the reported SSR, and actual faculty availability, coupled with student perceptions of the purpose of the design studio, suggest that the relationship is not always cordial. This was further heightened by a paternalistic approach, which served to build tensions in this largely unbalanced relationship, described by one student as a “Master-Slave” relationship:

FG3_2 (T-17:41) - My experience in [named school] gave the impression that you guys have a more cordial relationship, where you guys interact really, whereas in [named school] it's still the same old traditional kind of institution like arrangement, where there are gods and servants, subjects and slaves, you know, masters and slaves. You guys interact on a more, you are kind of in one plane [...]

FG3_1 (T-18:50) - What FG3_2 is saying, is actually true, to an extent, cause like, during presentations, you [Pause] you find that, [...] there's an air of, ... the atmosphere is very thick, it's [Pause] people are very tense, especially the person presenting. It takes of course a lot of time to get used to, after some time you get used to that kind of environment, and maybe find ways to counter it. But the mood is, is, is a very tense one, it is not relaxed, as such it limits the creativity [...]

What is implied here, is a teacher centred teacher-knows-best approach to education, with students occasionally having to kowtow to requirements of instructors or risk failure, as reported by one student: “It has been trying for us, students trying to defend their ideas. But at the end of it all, you want the marks [Laughter] and it's the tutor who has the marks” (FG2_2). This is also apparent in the dialogue below:

FG2_4 (T-15:13) - [...] So that is the conflict, and so as students it's either up to you to either take it in, or go against and stand your ground. So that is the major conflict people find. But many a times, its [...] changes, you also change, and you know like FG2-2 said, its the marks you want at the end, because ... we are at a point somewhere down the road, after having these fiery presentations, it's just about getting the marks and being done with the project, rather than fulfilling the design energies out of it.

FG2_1 (T-17:25) - The only thing I would want to add on to that, is that the rigidity of the tutors in the end may come, at times shuts our innovative, how can I call it, qualities in a way, at times you get to fear them so much, that you fear that they can mess up your marks, so you end up having to take their suggestions.

FG2_4 (T-18:00) - As architectural tutors, I don't know if I can call you tutors or lecturers. When does it stop being, 'hey your supposed to do this', or 'this is how its supposed to be done', or 'do this or don't pass'. Cause that is the major conflict.

Tensions in crit sessions, appear to exemplify the strained relationship between students and faculty, more so as there was a perception that crits were where students' abilities as 'designers' were challenged, and thus needed to be ardently defended. Stevens described such a scenario as placing students "[...] in a permanent state of insecure expectation" (1995, p. 119), but also a means by which they could gain acceptance. This appears to exemplify the instructor-student relationship, with students employing whatever tactics available at their disposal to get through the process without "getting killed" (Webster, 2007, p. 24). Students effectively treated crits as judgements on them, and not as critiques of their work or the design process, heightened by crit sessions that occasionally became personal, entrenching the idea of disidentification, as described by (Griffin, 2002, p. 71).

From this situation arose accusations of 'witch-hunts' and 'purging', reinforcing an 'us-versus-them' scenario, and serving to perpetuate the myth of architects as domineering, defending their ideas and designs at all costs, in the mould of Howard Roark in *The Fountainhead* (Rand, 1994). In the context of contemporary architectural education, the power relationship between students and faculty is particularly significant, in light of student expectations of architectural education, and their pre-university experiences. This could be seen to intensify the dependence on instructors within the educational process, thus embedding within architectural education the same power hierarchy now entrenched in pre-university education. For Webster (2007, p. 26), such asymmetrical power relationships generally favour faculty, but nevertheless play a significant part in the learning approach adopted by students. There is therefore support for the assertion by Sara & Parnell, that "the present culture [of architectural education] seems to be more about fear, than learning" (2013, p. 123). While some students engaged in heated debates, many were merely looking for approval of their work from instructors as the custodians of architectural cultural capital, and whose opinions were the ones that mattered (See Observation Note 7.3).

Observation Note 7.3: Affirmation and Approval

The teacher centred educational approach, which is prevalent across East Africa, drew attention to why students seek out affirmation and approval from faculty. The impact this had on the architectural design process was rather startling, to an extent hindering development of student projects. Students believed that this affirmation and positive feedback from design tutors, was an endorsement of their design abilities. However, giving students positive feedback had one major drawback, interpreted by students as having achieved the goals of the project, thus bringing exploration to a halt at that stage. Indeed, if this positive feedback was given early in the design process or early in the semester, faculty had difficulty getting students to explore new ideas beyond that point. This situation created a dilemma for faculty, who were keen to give positive feedback, however, the evident consequences to the design development process weighed heavily on their engagement with students, creating what faculty described as a 'Positive Feedback Conundrum'. The need to ensure students continued their explorations affected the nature of feedback given, with design tutors moving away from overtly praising student projects, to giving more circumspect comments and queries, aimed at provoking students into reflecting on their designs, and challenging them to look at their projects through different lenses, and at greater depths of detail.

The notion of students largely seeking approval from their instructors, and using this feedback as the key indicator of achievement, or for some, the only indicator of progress, presented other effects on student engagement. It was also observed that student presentations, were increasingly given as pre packaged monologues, not open to change or modification, an approach that suggests work being undertaken to please the instructors, and thus carried out through a check box approach, rather than seeking to appreciate its intrinsic elements. This approach did mirrored that used by some faculty who were not open to questions or challenges, taking a paternalistic 'do-as-I-say, not as-I-do' approach (See Observation Note 7.4). In this approach to teaching, inquisitiveness is not encouraged, which in the context of architectural education, further serves to mystify the design process, and one that does not need to be explained, making the mystery of architecture even more overt, and key to entry into the exclusive profession of architecture.

FG3_1 (T-18:50) - [...] Another think I don't like about the programme, I don't know if it happens at [Named University], is the business of giving marking guides. It has come up at [Named University], where they say you can give a model ten percent, sections, what, elevations, site plans, services. Of course these things are necessary, but when you, ... the trend that has come up now is that people now start, ... the marks become the important thing. Cause now a guy says, ha models have been given five percent if I do a site plan it's thirty marks, function and concept forty-five percent, so you focus on that. As such, because model actually suffers, they give it less than ten percent in most cases.

Observation Note 7.4: Architecture as Monologue

A tendency by students to present their work as rehearsed monologues, largely showcasing presentation drawings, rather than giving justification for their design decisions was evident. These rehearsed monologues, were largely a series of points, which reflected a check box approach to working, demonstrating how students had met the quantitative submission requirements: 'here is my floor plan, my elevations, and my sections, etc'. These presentations generally did not engage with the performative or qualitative design requirements, also exhibiting a somewhat narrow perspective of projects, by not going into the development processes that lead to particular decisions, nor the potential that they presented. A further challenge of these monologues, was evident when students were pressed for time: when asked to skip to the salient points of their designs, students were unable to adjust, as many had crammed their presentations, needing to present in a particular sequence, leaving them unable to adapt to changing conditions. This approach to presentations had other consequences, evident with students viewing formal presentations as a place where they 'defended' their work, rather than as part of a process of developing a design approach and to develop presentation skills. This view saw students viewing feedback as inconsequential, as they already had presented or defended their projects, thus failing to engage in dialogue on how they could improve the process or the final output.

While it was evident that some interactions served to reinforce entrenched power relationships within architectural education, for some students, relations with faculty were, on the whole, positive, and non confrontational:

FG1-2 (T-55:21) - The best part about this is exposure, we have so many lecturers all with different experiences, from different fields, and you soon get a wider scope of what architecture involves, and at the end of the day, the fact that these guys explain in different ways [...]

FG4_5 (T-1:14:16) - I was especially intrigued by one of the lecturers. She helped me especially, to develop thought. [...] So the guy you only chat within the studio, you had to be very professional about it. Then the guy, or the lady you could chat with outside studio, then you would learn more from that one ...

FG8_9 (T-1:04:38) - So it makes learning easier because the lecturers are approachable, you feel you can learn comfortably, and ah, ... what else do I want to say ... [Laughter]

The mixed sentiments toward social interactions between students and faculty, were evidently a key factor within educational socialisation in this study. Intriguing as it was, further investigations of how these interactions varied across different year levels, was not touched on for this thesis, thus presenting as a future area of exploration from the collected data. It was however necessary to probe into the influence these relationships had on student interactions, explored through the following evaluation of teamwork and working in groups.

7.1.3 Teamwork and Working in Groups

Teamwork, and working in groups are key component of architectural education, and geared to enable students to build confidence and skills in collaboration and

negotiation among other things. Nevertheless, it was evident that students generally detested formalised group projects and teamwork exercises, with strong sentiments expressed against it.

FG2_4 (T-1:34:35) - Limiting at times, ... normally in a team, you find that there is one person doing all the work, or in a group there is one person who is doing everything, and people are on the bandwagon.

FG6_5 (T-1:07:14) - So I think the efficiency of group works is very low, and why is it very low, because of the way we perceive group works. I think group works are, are meant to, to, to, to, to make us as interactive as we can be (FG6_2 - Yea!). But, the kind of perception that we have of group work is that teachers want few papers to mark, they want less time to listen to presentations, and things of that sort.

FG8_4 (T-1:27:00) - For studio work, it's mostly individual work, even if you do it together in the studio, everyone does their own thing.

Negative attitudes towards teamwork, and working in groups, was heightened by a belief that architecture was about individual creativity, best expressed through solo design projects. Working in groups was thus regarded as stifling to creativity, and only a way for faculty to reduce their own workload, as opposed to being an important part of the educational experience. Such attitudes to teamwork, and working in groups were pervasive across the region, highlighting the influence of pre-socialisation, with individualism now an integral part of pre-university education. Nevertheless, the value of working in groups and teamwork, eventually did become evident to students, as revealed through the SELTs for School 3, pointing out that this was a particularly important aspect of the learning experience (See Table 7.2).

Table 7.2: SELT Comments on Teamwork / Working in Groups

Year	Responses
Year 3	"I learnt that teamwork is very important" "learnt how to work with people" "The group work i love my group mates"
Year 2	"The group presentations. Group work skills" "Teamwork is important" "more individual presentations should be recommended more than group"
Year 1	"Two heads are better than one" There are many ways of approaching a problem to find a solution" "Relevance and difficulty in Group work" "To work with others" "That u learn more from classmates"

Appreciation of teamwork and working in groups, often came after concerted efforts were taken to illuminate the inherent benefits of this process, which unfortunately was not always done. This likely was a result of instructors not always being keen to engage with this area of architectural education, particularly as 'soft skills' were generally not part of the explicit curriculum, although regarded as essential to being a successful architect.

FG9_4 (T-33:59) - [...] very few architect who know how to handle resources, even to work together, because that affects partnerships, and people coming together to handle specific projects. The issue of money, if you have not learnt how to deal with money, to deal with success, to work with other people as a team, a real team, not the teams in 4th year (at [Named University]) where you work on a specific project, then you wash your hands of the whole thing when you are done, but the real life teams where you work for 35 year, 50 years together, and you can handle money, and you can handle people and there is no crisis.

Observation Note 7.5: Teamwork /Working in Groups

Teamwork and working in groups, appeared to be poorly appreciated by students, who generally perceived this to be more of a chore than a valuable learning or working experience. This could be attributed to pre-university education which promoted individual success above team and group exercises. To encourage and promote working collaboratively, all courses had a teamwork component, at various stages of the design and documentation process, depending on the year level. For many students, working in groups meant having to deal with people with diverse opinions, agenda and abilities, which in their opinion, impacted negatively on both the process of the activity being undertaken, and the quality of the final product. This slowed the process, as they had to deal with argumentative individuals, slow learners, and 'free loaders'. Further, there was a belief that this was a means for instructors to reduce their work load, by having fewer assignments to mark. In relation to design, students believed that working in groups impeded 'creativity', a consequence of the struggles associated with the 'design-by-committee' approach often adopted, with students not willing to 'offend' anyone. Group exercises were generally poorly executed, neglected by students, even though it was made clear that collaboration was essential for the profession. A result of the lacklustre attitude towards teamwork and working in groups, was generally seen in lower grades in group projects, than for individual endeavours.

It is ironic that community and collaboration, taunted as key elements of traditional society in East Africa, was generally lacking within architectural education. This presented a delinking of societal activities from educational endeavours, which appeared to exist in parallel to each other, but did not necessarily intersect. Nevertheless, some elements of traditional society did cross over, with the lack of confrontation, unwillingness to challenge their peers, or the reluctance to take on leadership roles within teams or groups in fear of being branded as domineering, was overtly evident in group sessions. These nevertheless made it difficult for students to fully engage with their peers.

For students, acceptance into a peer group, formed a key part of their transition through architecture school, and in some way linked to the formal and informal rituals that students inevitably go through to gain their stripes. This right-of-passage embedded within professional education, is for architecture, embodied in the long nights in the studio, as an architectural institution, with only a handful of students able to get through architecture school without at least one *all-nighter*. While significant, this does fall short of the extreme hazing rituals as found in medical education (Baldwin, Daugherty, & Eckenfels, 1991; Cousins, 1981). All-night sessions do however come with bragging rights: with students boasting of the number of nights spent without sleep, or how effective they could still be on only a

couple of hours of sleep, mirroring sentiments across the international landscape of architectural education (Coleman, 2010, p. 209; L. N. Groat & Ahrentzen, 1997, p. 283).

FG3_3 (T-12:09) - I remember in first year, see when we came in first year, the studio, studio just seemed to be a monster, it was just treacherous, like you would always have to stay up and I think maybe the lecturer we had at that time was a little tough, or a little demanding, anyway maybe because that was first year, your first time doing this, or your first time being treated as an adult, or being expected to act as one. [...]

Among the labyrinth of issues that constitute peer socialisation within architectural education, all-nighters are a means by which students begin to bond and identify with their peers. All-night work sessions, add to acquired nuances, such as the dress and architectural jargon, as key drivers in the development of the culture of architectural education. This is reinforced by instructor's utterances such as, "you live and breathe architecture." While these do have some merits in the context of the profession, there are several negative consequences of this process, affecting the wellbeing and performance of students, as presented in Observation Note 7.6.

Observation Note 7.6: Negative Peer Influence - Herd Mentality

Although Teamwork and working in groups were generally despised by students, a surprisingly strong element of student peer groups, was related to peer pressure, or what was described within the school as a 'herd mentality'. An overt example of this peer influence, was connected to submission of course work, generally subjected to strict submission times. Dates and times for submissions were fixed at the beginning of the semester, and indicated in all course outlines were given to all students. In a number of cases, it was found entire groups of students ignored these submission deadlines, failing to appreciate that time was a key part of the assessment criteria. It was found that this failure to submit work was instigated by a few students, who persuaded their peers to ignore submission deadlines, under the guise that penalties would be less severe if the majority of students were involved. This herd mentality was quickly picked up by students in lower years, who used this as a means of seeking recourse from their instructors. This approach to collective bargaining appears to go against the grain of competitive practices of the studio, with students seeking to outdo each other. In this case, the opposite appears to be the norm. Ironically, while students trust each other to not hand in work, they do not trust each other when there is work to be undertaken in teams or in groups.

The relationships between faculty and students, as well as between students, certainly has an impact on the activities within the schools, highlighting the toxic nature of professional education, as alluded to in some previous studies (Karnieli-Miller, Vu, Holtman, Clyman, & Inui, 2010, p. 132). Nevertheless, collegiate type activities do emerge occasionally, such as formalised peer crits as found in School 3, with students across year levels engaging in peer reviews before the formal crits, as a means of helping hone presentation skills. What is overtly evident in the context of interpersonal relations, are incidents of informal learning that occur not

only from faculty to students, but also among students as well, making social interactions a significant modifying element in educational socialisation.

7.1.4 Summing Up

For the most part, the relationship between faculty and students, was strained, as suggested by the terms used: ‘master-slave’ and ‘gods-servants’, among others, resulting in tensions between faculty and students. This added to an already poignant hierarchical system, which permeated the various aspects of architectural education, and thus perceived by students to be the norm. This lead into an overt element of educational socialisation, the transmission of beliefs and values to students through what faculty profess, with students only retaining what they regarded as important. The dependance of students on faculty, serves to bolster the influence faculty exert on students, mirroring findings by Shuval (1975) in the context of medical education.

With regard to the design studio, perceived by students as anything, from a mere physical space, to a place for crits, but increasingly less as an educational environment, the declining influence of the studio as a feature in architectural education is apparent. This was also identified in peer relations, and engagement with teamwork and working in groups, which students found extremely difficult at best. This in part was a consequence of pre-university education that prioritised individuality above collaboration. Studio spaces were often devoid of students, particularly where alternative work space was available, limiting engagement with collaborative learning, and the benefits of impromptu crit sessions with peers and faculty. The final template categories that emerge, as presented in Table 7.3, suggest educational socialisation is heavily influenced by personal activities within the process of architectural education.

Table 7.3: Final Template Categories - Architectural Foundations

- D. Educational Factors**
 - D.1. Architectural Foundations**
 - D.1.1. Sense of belonging / Acceptance
 - D.1.2. Right of Passage
 - D.1.3. Peer pressure / Competition
 - D.1.4. Teamwork / Working in groups
 - D.1.5. Conflicts and tension

These template categories reflect the overt link architectural education has with its socio-cultural context, particularly to pre-university education, and expectations of both students and faculty. The identified categories also relate somewhat to the value goals and motivational factors for engagement in architectural education. This

serves to build tensions between faculty who wield cultural capital, and the uptake (or rejection) of desirable cultural capital by students.

7.2 Building Professionals

Building of professionals forms an essential element of socialisation, with students vying to demonstrate their competence and abilities under the watchful eye of faculty. The values of building professionals generated considerable discussion within the focus groups and conversely where tensions, and resistance were likely to be found. Two issues stood out in particular: activities that demonstrate competence in architecture; and, engagement with contemporary issues, notably: Environmentally Sustainable Design (ESD); and, Computers in architectural education. These emerged as key discussion elements related to what were perceived to be the essential components of being professionals.

7.2.1 Attitudes, Values and Societal Links

Attitudes, beliefs and values garnered through architectural education are arguably as important as the knowledge aspects as defined by the educational system. As a consequence:

A major proportion of the energy that is devoted to education in building goes to forming the value systems of the students. This effort would be better guided by a consciousness of value systems through a study of the values involved and their formation, examining past and present value systems held by different groups (Pultar, 2000, p. 168).

Thus, exposing students to value systems of the profession, is a key purpose of professional education. This aspect of architectural education, is largely absent from the explicit programme, almost exclusively picked up through the hidden or implicit aspects of the curriculum. For the most part, there was no obvious reference to the growth and development of values and attitudes evident in documents provided by the schools. One final year course, did state: "...This course aims to further develop the students' critical design thinking, [...] and heighten their awareness of the social, ethical, and environmental responsibilities they carry as future architects" (Uganda Martyrs University, 2014, p. 73). Lack of reference to values in the education of architects, except in the context of professional practice courses, generally undertaken in the final year of programmes, failed to acknowledge the importance and significance of this aspect within architectural education. This does suggest marginalising of this aspect, delinking of the architect's role from the social, and building construction process, and is consistent with the statement presented in the second paragraph of this thesis,

which stated: “I don’t remember ever being taught to be in-charge of health and safety on site in all my architecture courses.”

The subdued emphasis on values and ethics within architectural education, was evident in the questionnaire study, with values and ethics ranked particularly low (7th out of 9 items) within the Design Integration category (See Appendix 5). The low ranking of values, and the indifference of some stakeholders, presented a dilemma for some faculty, as the values espoused in some instances conflicted with the desires expressed by society and students, as identified by academic faculty:

FG10_2 (T-25:22) - [...] I think the biggest problem is what they see happening in the field is not exactly what we teach them. Because what we teach them is very formal (FG10_3 - Yes). We give them training that exposes them to procedures that follow the rule of law. But what happens in the real world is not like that [...]

Such divergent attitudes thus form a visible element of educational socialisation, with three discernible tracks; i) values as fixed principles; ii) students and their inherited views of architecture and architectural education; and, iii) conduct in the professional realm of architecture practice. These three tracks are at the heart of how students engage with values as part of architectural education. While divergent ideas within these tracks could be attributed to the generation gap, it was also evident that there was more involved in the formulation of students’ values than is often alluded to within architectural education.

Attitudes and values are often formulated early in architectural education, or in some cases, brought with students from pre-socialisation experiences, the latter often difficult to change, having been built up over a number of years and garnered from numerous influential persons. How, students take on new values or seek to reconcile newly acquired values with their own preconceived ideals proved to be a source of internal conflict. For some, this conflict resolved fairly easily:

FG5_9 (T-22:39) - Personally I think, when you make that step, or you decide to take architecture for your course, as a professional course; you need to adjust your attitude. You need to adjust your attitude towards the people you meet, towards the criticism that you get, and that is the only way that you will be able to make it in this course. If you have the right attitude.

However, not all students could take this route, a consequence of the social-cultural context of architectural education and the inherent hierarchical structure of East African society. This could imply that students may be subject to a degree of indoctrination, more so as faculty were regarded as the custodians of knowledge, and wielded immense cultural capital, which students came to university to acquire. It was thus easy to see how students could be caught in a strong teacher centred approach, in which:

[...] the student's values and experience are negated, while those of the tutors' and the schools' are given authority. In this scenario, where knowledge and values are teacher-centred, the students' freedom is devalued (Brown & Moreau, 2002, p. 6).

The teacher centred approach does not enable students to develop a clear and consistent set of values, which instead are formulated by instructors, and imposed on students. In this context, linked somewhat to the teacher-knows-best approach, there was little room for discussion and debate between students and faculty. Consequently a number of students reported dissatisfaction in relation to this view of values in architectural education, largely attributed to the top down approach being used (See Table 7.5).

Table 7.5: Statements relating to Indoctrination in Architectural Education

Category	Sample Participant Response
Faculty	(T-33:58) FG9_4 - if we are going to educate architects, and we want them to be a certain way, then there are certain skill we have to impart on them.
Students	<p>(T-1:05:33) FG4_3 -we had a lecturer, ok an ex soldier, or something, sincerely this is a guy who, ... it was like you were competing with him, and ... of course, you don't know, he knows, he is the instructor. And they're pumping their own ideas into your head, ...</p> <p>(T-21:17) FG5_8 - In the earlier years I felt like they were imposing their opinions on us, to some extent.</p> <p>(T-44:30) FG5_6 - ok it's kind of a mentorship programme, the lecturers basically pass on their ideas and experiences to you.</p> <p>(T-26:57) FG6_5 - They would, they, they have some sort of eclecticism, how to, how to put it. The things that are towards themselves are what they will go for. 'I don't like glass, your design doesn't have glass, I mean has glass, so I don't think your design is nice. So there, there, I don't know what exactly are the standards that would, would, the Lecturers, or the Instructors has to have to assist us in our course of study.</p>

With regard to student views on architecture and architectural education, it emerged that a somewhat rationalist view of value acquisition existed, with students anticipating building a fixed set of values provided to them by instructors, who after all were the custodians of architectural cultural capital. While this was the expectation of students, tensions arose when their views of value acquisition, met with the somewhat less prescriptive nature of architectural education, where independent thoughts and ideas were encouraged in the context of fostering aesthetic judgement, or more specifically, when views of different faculty were not consistent as was often expected. For students, this was contrary to what they had come to expect, not only from the pre-university education system, but also from the hierarchical social structure. This placed architectural education itself on a collision course with society, and a cause of conflicts, as seen in the divergent views between faculty and students in Table 7.4:

Table 7.4: Divergent Views on Values

Category	Responses
Faculty	<p>FG9_5 (T-27:02) - I like to think that one of the biggest, the missing ingredients is a sense of ethics, let me use the word social intelligence, social intelligence, knowing that when I'm in school, and this definitely cuts across all the education, it's not just about going out there and being the best, I don't know what, or doing this, but I have a role to play in the society.</p> <p>FG10_2 (T-25:22) - I think the biggest problem is what they see happening in the field is not exactly what we teach them. Because what we teach them is very formal. (FG10_3 - Yes) We give them training that exposes them to procedures that follow the rule of law. But, what happens in the real world is not like that.</p>
Students	<p>FG4_3 (T-1:05:33) - we had a lecturer, ok an ex soldier, or something, sincerely this is a guy who, ... it was like you were competing with him, and ... of course, you don't know, he knows, he is the instructor. And they're pumping their own ideas into your head, ...</p> <p>FG4_2 (T-1:08:53) - there were times when some instructor would openly declared; 'I am going to purge this kind of students'. There is one who declared, and I appreciated that instructor for that, because, at first I thought, 'what is wrong with this man' and then he declares 'I am going to purge, these kinds of people, and these kind of people I will lift'.</p>

To a degree, divergent views showcased the different perspectives of students and faculty; with students concerned for their immediate educational achievements, and faculty with wider concerns for the broader goals of architectural education and the profession. These disparate views built conflicts and tensions within the educational process, resulting from students having to grapple with both new value sets, and having to examine, and reconcile these with their own preconceived ideas and ideals.

The third component of this discourse on attitudes and values, overtly linked architectural education with wider society, bringing it into contact with clients, family and friends, or what Olesen & Whittaker termed 'non-official vendors' (1968, p. 8). These non-official vendors were instrumental in students' decisions to take up architecture; and, as the key stakeholders requiring architectural services. Along with the official vendors, which comprised of architecture professionals and instructors, these non-official vendors were equally influential in the development of values in students, contributing to the educational process itself.

Within the educational realm, the interface with non-official vendors, was largely through students formally (and at times informally) engaging with architecture practice. This acknowledged a key element of professional education, related to the fact that "career-related work experience at university also may play a major role in structuring graduate expectation" (Scholarios et al., 2003, p. 183). Formal work placements were the norm across the schools, geared to ensure students engaged with 'practical' aspects of architecture as a profession. These activities were undertaken at various stages of the programmes, as presented in Table 7.6.

Table 7.6: Requirements for Work Placement

	Sch. 1	Sch. 2	Sch. 3	Sch. 4	Sch. 5
Part I					
Before Yr II	8 Weeks (IT)	8 Weeks (T)	8 Weeks (A)	8 Weeks (A)	8 Weeks (A)
Before Yr III	8 Weeks (A)	8 Weeks (C)	8 Weeks (A)	8 Weeks (A)	8 Weeks (A)
Before Yr IV (Only Kenya)				8 Weeks (A)	8 Weeks (A)
Part II					
Before Yr I	8 Weeks (A)	26 Weeks (A)	8 Weeks (A)	8 Weeks (A)	8 Weeks (A)
Before Yr II	8 Weeks (A)	None	8 Weeks (A)	8 Weeks (A)	8 Weeks (A)
A = Architecture; C = Construction; IT = Information Technology; T = Travel					

Formal work placements, were generally only eight (8) weeks long, and viewed by both students and professionals as not particularly useful, given their short duration. This short engagement prevented interns from fully engaging with the nuances of office practice and architectural design, with many students admitting they were engaged largely as drafting technicians, just ‘watched’, or were merely used as office assistants. This highlighted a challenge in effecting this desirable experience for budding architects, but which at times served to reinforce the stereotype of architecture as drafting.

FG3_4 (T-1:12:07) - [...] first of all there are few firms that have any places for interns. And the majority of places you go to, they just see you as a work horse that is not going to get paid.

The frustrations that came with this interface with practice, were however not enough to dissuade students from taking on their own commissions. For a number of students, knowledge of CAD programmes, was all they required to begin seeking architectural commissions of their own, highlighting a deep-rooted view of architecture as merely the drafting of plans:

FG5_7 (T-56:29) - [...] now that I am in sixth year, through the attachments that I have gone, you find that most of the offices that, you find that even the employer will say a Diploma guy can produce this work, why should I bring in an architect, a graduate architect [...] yet I can get a diploma guy [...] and they will do the same job.

This idea of architecture as drafting, was certainly not isolated to students, as discovered as part of the interview process of incoming students at School 3, with applicants who had completed a Diploma in Architectural Drafting, unable to differentiate between architecture as a formal profession and architectural drafting, with their comments noted below:

Applicant_002 - “[...] the course in architectural drafting is five years of architecture compressed into two years [...]”

Applicant_005 - “I have worked with an architect for the last six months, and the difference I find between architects and architecture draftsmen is that architects are able to give instruction.”

Students taking on architectural commissions as soon as they were able to use CAD packages, raised a number of legal and ethical questions, related to requirements for architecture practice. It was also unclear whether students appreciated the fact that they were operating illegally, as laws across East Africa stated that only registered architects could produce architectural documentation for the purpose of construction. Student engagement in architecture practice, thus contributed to ambiguities in the formation of values within architectural education, highlighting what Scholarios et.al. (2003) described as 'idiosyncratic events'. These serve to confuse both budding architects and their clients about the bigger picture of architecture and architectural education. What is suggested by these activities, was a poor appreciation of the consequences of engaging in such work. This again showcases a delinking of architectural design as an educational endeavour, from architectural design for the purpose of construction. Taking responsibility for just the drawings produced, and neglecting consequences arising from these drawings, is an overt example of how engagement with society influences how myths of the architect's role in society are not only sustained, but perpetuated (See Table 7.7).

Table 7.7: Ideas on Links to Society

	Comments
Students	<p>FG1-4 (T-52:08) - Its not a mismatch, its more a missing link, as in the society is not exposed to what we are exposed to, like, as they educate us, I think we should also, sort of like, not exactly community outreach, but broaden their way of thinking, they would be more receptive.</p> <p>FG5_7 (T-56:29) - [...] from my own observation, architecture to me is more or less for the rich. I don't know how it was formulated from the beginning. In that it is on those top guys out there, the guy who can afford to build, that is where the architects go. (History of the profession - rich patrons) You go to the suburban (rural?) areas in Kenya, you more or less get maybe one architect, the majority are in Nairobi. Maybe some will talk of maybe slum upgrading, but so far I have been here for six years, and I have not yet experienced the same. So I don't know how it can be done, in that, to be channeled, to the BOP, the Bottom of the Pyramid, whereby you address the issues for the guys on the ground.</p>
Faculty	<p>FG9_1 (T-05:20) - [...] so if I were to look at architecture education in that perspective, I would think that it should be giving a training to individuals so that they can go into society and fill in the gaps, yea, and be of value to society. Where are the, the challenges in the society now, where are the needs of society, where does society what to improve. And the training should be geared to that direction in a nutshell. And the contribution I think of the current education system, is in my opinion has not performed very well.</p> <p>FG10_2 (T-25:22) - I think the biggest problem is what they see happening in the field is not exactly what we teach them. Because what we teach them is very formal. (FG10_3 - Yes) We give them training that exposes them to procedures that follow the rule of law. But, what happens in the real world is not like that.</p> <p>FG10_4 (T-57:10) - In my opinion, architecture education is necessary. ... Especially if we want to, to solve the housing problem in these countries, ok. Let not the building be the domain of the rich people only, in a country where more than 80% are poor rural dwellers, ok. And the poor rural dwellers, actually the poor people, rural and urban, ok, do not employ the services of qualified architects. And the qualified architects do not even offer their services to those people.</p>

An evident lack of engagement with the fast growing, but poorly served rural population of East Africa, further emphasises the quandary as presented above. With most architects based in the major urban centres, limited linkages exist between architectural education and the wider society, as lamented by one member of faculty:

FG9_5 (T-66:41) - [...] what relevance are the people we are training, are we just recycling the same kind of thing and it is going to go on like this, or does Africa, because education ideally is a solution to a developing country. Education should empower an individual to add value to his society, it should, it should not make him just go out there and do something, [...]

While practitioners adamantly stated, “Architectural education should prime student architects for practice [...]” (QR_16), it is apparent that the banal fit-for-practice approach conflicts with the broader goals and values of architectural education. What is evident, is a continuation of the traditional role ascribed to architecture during the formative years of the profession in East Africa, geared to dealing with urban issues. This engagement between the architecture profession and the wider society, is far removed from the needs of general society, as was highlighted by Odeleye (1991). The values espoused through architectural education, and how students engage with these values, takes on added impetus in light of growing concerns for societal, and environmental issues.

7.2.2 Environmentally Sustainable Design

The importance of including Environmentally Sustainable Design (ESD) in architectural education is undeniable; not only in the context of environmental concerns associated with the construction industry, but also related to considerations for regional and contextual architecture. In this light, the CAA Validation criteria indicate that validated courses should ensure “an adequate knowledge of the means of achieving environmentally sustainable design” (Commonwealth Association of Architects, 2008, p. 13). Reviewing published documents from the schools, revealed limited effort to include ESD in programmes, with only a handful of courses with ESD related content, and largely in stand alone lecture based courses (See Tables 7.8). In two schools (School 3 and School 5), there were attempts at incorporate ESD within the design studio, and integrated with the design process. Where ESD was included in programmes, this was often a result of the enthusiasm and determination of individual instructors, and not a conscious decision by a school to include it as part of the curriculum. One particularly disgruntled instructors did not hold back in his sentiments to this:

FG10_4 (T-55:16) - ZERO! Ok, Zero in the sense that, even when I want, ok, even when the students what, sometimes the academic, fellow academic staff can be the obstacle, ok.

Table 7.8: ESD Related Courses

School	Year Level	Course Name
School 1	Level 3 Level 4 Level 4	Building Technology VI (L) Landscape Design (E/L) Architectural Science (E/L)
School 2	Level 2 Level 3 Level 4 Level 4	Environmental Building Science II (L) Environmental Building Science III (L) Landscape Design (L) Environment and Development (E/L)
School 3	Level 1 Level 1 Level 2 Level 3 Level 4 Level 4	Natural and Built Environment Systems I (L/Se) Natural and Built Environment Systems II (L/Se) Buildings and the Environment (St) Sustainable Built Environments (St) Landscape Architecture/Urban Design Studio (St) Architecture Studio A (Environmental Design) (St)
School 4	Level 3 Level 4 Level 5	Landscape Design I (L) Architectural Design 7 (Landscape Architecture) (E/L) Sustainable Design (L)
School 5	Level 1 Level 3 Level 5 Level 5	Environmental Behaviour Study (L) Landscape Design (L) Environmental Impact Assessment & Environmental Audit (L) Architectural Design VIII (St)
		L = Lecture Based St = Studio Based Se = Seminar Based E = Elective

This lack of enthusiasm for ESD within architectural education, demonstrated a nonchalant attitude toward change, particularly in the context of existing administrative frameworks, which are often regarded as static and unchanging - ‘W have always done it this way’. Where ESD was integrated into the curriculum, this was a consequence not only of the determination and enthusiasm of individual instructors, but through a buy-in by faculty, who appreciated the need for this revised approach. Given the prominence of ESD in the CAA validation criteria, the limited availability of ESD courses, was a point of concern for the various validation panels, as presented in Table 7.9.

Table 7.9: CAA Comments: Technology and Environmental Studies

School	CAA Comment
School 2	learning outcome should be expanded to ‘apply knowledge’. student work and presentations displayed evidence of sustainable issues. there are concerns regarding planning, sustainability issues, and the integration of building construction technology.
School 3	student work and presentations displayed a good understanding of sustainable design principles and the relationship between people and the built environment
School 4	need for a greater level of integration of technology (environmental design, structures, construction and sustainability) in the studio design work.
School 5	little evidence of integration of technology, environmental design and sustainability in the design projects

In the context of East Africa, engagement with ESD thus appeared as an overlooked component in contemporary architectural education, separated from the ‘main’ element of architectural education, the design studio. Lack of ESD related courses, could be seen to reflect a wider challenge, linked to prior experiences of

faculty. Many had only received limited exposure to ESD as part of their own education, and virtually no engagement with the same in professional practice, as there was “no demand from clients.”

FG10_4 (T-46:45) - [...] Sustainable design [...] this concept hasn't been accepted yet. (FG10_3 - In Tanzania, it's not ...) ok, and some even, you find some of the big professionals just refusing outright ... “No no, go away, let me finish with them, if I call you, we will find if you have ...

Consequently, faculty were largely unable to fully engage with students in this knowledge area, ironic as both students (through the focus groups) and professionals (through the questionnaire study), acknowledged the significance of ESD as part of contemporary architectural education and practice. Just as pre-socialisation of students was key in how they approached learning, it was also a significant factor in how faculty approached teaching; in this case neglecting contemporary issues, in favour of tried and tested ideas and approaches. What was reflected here are two determinants of educational goals: a perception of knowledge aspects of architecture being fixed and static; and, the needs of current practice being the basis for what was taught. Nevertheless, despite the low enthusiasm for ESD by many faculty, this view was not shared by some students, who regarded ESD as a trending issue in architectural practice, making it an area that any budding architect should be familiar:

FG1-4 (T-26:15) - [...] the major concern right now is about sustainability, and there has been a move towards sustainable architecture so, like the role of the architect today is conserving natural resources, finding ways of showcasing their creations in a good light.

There however were trepidations about the application of these issues in local practice, given the wider architectural profession, and the bureaucratic planning structure were still reluctant to fully embrace ESD principles.

FG1-2 (T-31:34) - [...] when you talk about green materials, green way of doing things, you know there is also the risk of will my plans be approved, or will the client welcome these ideas [...].

What emerges from this discourse, is the perception of ESD, as not being essential for local architecture practice, despite its evident significance to the future of architectural design. What this highlights, is the strength of the fit-for-practice mantra within architectural education, which presents existing practice and existing approaches, as the epitome of what the profession of architecture is, and should be. This however neglects a vital role of architectural education; to act as a critic to architectural practice, and for the production of architectural knowledge in the quest to advance architecture as a profession and a discipline (Till, 1996).

7.2.3 Digital Divide - Computers in Architectural Education

The importance of computers in architectural education, has been recognised since the 1960s as noted by Pohl (1975, p. 919), and today, it is clear that “[...] students who graduate without computer skills will be seriously handicapped in the job market; and schools that fail to provide their graduates with these tools will risk their status as accredited degree programs” (Weisman, 1996, p. 280). In contemporary architecture practice, computers are used for numerous tasks; from communications, and billing, to project management, Building Information Modelling (BIM) and for a host of simulation activities. This makes it essential for students in architectural education, to have an idea of tasks that could be undertaken with this technology.

In addition to the specialised software often highlighted in discourse on computer use in architectural education, computers form a key part of teaching and learning, and according to Weisman, “[...] as tools for learning, computers [...] dramatically change both the locus of information and the traditional role of the teacher as oracle versus the student as passible recipient of hand-me down knowledge” (1996, p. 281). This changed role, is reflected in revised approaches to teaching and learning, most notably in the way knowledge is perceived. It was noted however, that faculty often lacked the necessary knowledge and skills to engage with these new digital technologies. This affected their ability to offer appropriate instruction to students, at times even in the most basic tasks. On the other hand, students were open to the possibilities presented by computers; their desire to engage with computers reflecting global use of computers in architecture publications, at times contrasting with what faculty advocated. The lack of computers in architectural education in East Africa, highlights the cultural divide between those who are computer aware - *Digital Natives* (Prensky, 2001, p. 1), and those who are not - *Digital Immigrants* (2001, p. 2). For Mitgang, “[...] it borders on educational malpractice that so many faculty members have yet to master computers well enough to teach it comfortably in studio” (Mitgang, 1997, p. 125).

Looking closer at the various programmes, it was evident that penetration of computers in architectural education in East Africa was somewhat limited: while all programmes did offer computer related courses. These were largely for computer literacy or basic drafting and representation. Only a few courses engaged with the use of computers as part of the design process, as a design tool, or for building performance simulation and analysis (See Table 7.10).

Table 7.10: Computer Related Courses

School	Year Level	Course Name
School 1	Level 1	IT (Computer Practice) - Drafting
School 2	Level 2 Level 3 Level 4	Introduction to Computers - Using Computers / Hardware Architectural Computer-Aided Design I - Drafting Computer Aided Design for Architects II - Drafting / 3D Modelling
School 3	Level 1 Level 2 Level 3 Level 4 Level 5	Computer Skills - Word Processing / Spreadsheets / Presentation Buildings and the Environment - 3D Modelling Sustainable Built Environments - Simulation Architecture Studio A - Drafting / Simulation Architecture Studio C - Drafting / BIM
School 4	Level 2 Level 2 Level 5	Architectural Design 3 - Graphics / Presentation Architectural Design 4 - Drafting / Presentation Advanced Architectural Computing - Representation / Animation
School 5	Level 2 Level 3	Introduction to Computer Science - Using Computers / Hardware Computer Aided Design (CAD) - Drafting

The use of computers for drafting and 3D Visualisation, dominated not only computer course offerings, but also student computer based activities. This stemmed from perceptions of what architecture was often presented to be - primarily drafting; "It's design and drafting, it's the same" (FG2_5); as well as for a 'sexy' aspect of architecture, creating 'artistic impressions'. In some schools, use of computers was actively discouraged, based on the assertion that hand drawing, formed the basis for understanding and appreciating architecture.

Architecture Education should emphasis the use of the drawing board [traditional method of drawing] in the formative years and the electronic means in the last 2 years. The drawing board allows more ability to think creatively. The computer tends to reduce one's ability to think especially when they have not yet grasped the basic design principles (QR_31)

FG3_2 (T-50:45) - In the schools of architecture, for example [Named University] which I very well know, up to third year, CAD is taboo, despite CAD being taught as a course unit for the first three years, using it for an assignment or anything is taboo.

FG4_2 (T-1:41:59) - At [Named University] we started to use computers after the third year, it was not a strict rule, that don't use computer, but there were serious repercussions of using a computer, between first year and third year, you had to be really good.

Architecture design in this scenario, was taken as occurring outside the digital environment, with the computer serving only as a tool for representation. Apprehension to the use of computers, generally emanated from older faculty who lacked the necessary computer skills, not having been exposed to computers as part of their own education. A study by Okany-Dimoriaku, in Enugu State University of Science and Technology in Nigeria during the early 2000s, found that of twenty faculty in the architecture school, only one knew how to use AutoCAD (2004, p. 70). A similar situation was found by Çil & Pakdil (2007) in Turkey, where architecture

educators expressed a fear that computers would lead to the loss of authenticity in students' work. This anxiety was similar to that expressed by faculty in East Africa:

FG10_4 (T-32:48) - Well, my finding is students love to produce materials by computers because it enables them to forge, so [laughter] (FG10_3 - yes: FG10_2 - plagiarise, plagiarism; FG10_3 - copy-paste, copy-paste ...). That's it, so in this case, in my classes I discourage completely the use of computers [...]

While challenges of copying without understanding, and the possibility of an increase in plagiarism, were indeed fine arguments, they were not necessarily linked to use of computers per-se. Cheating and plagiarism were present well before computers existed, and while computers may have made these vices easier to achieve, it did not necessarily follow that computers should be banned as a result.

A more critical point that did emerge from this discourse, was related to the socio-political reality of many students, with suggestions that many came into architectural education with no experience in the use of computers. This was a consequence of many rural schools having neither instructors, nor resources to teach computer courses. This does suggest that students from rural backgrounds were more likely to be left behind with regard to computer use, starting of from less than equal foundation, which did raises a somewhat compelling argument against use of computers within architecture programmes in the region:

FG10_4 (T-36:58) - [...] Well, our students see computers for the first time, here at the university [Laughter] you see. And outside the academic life, they don't even meet computers in ordinary day life outside universities. So the way we relate to computers is completely different from the way our colleagues in industrialised countries relate to them, you see. For those people, computers are like domestic animals, ok. Now if you tell a Masai chap here about cows and goats, ok, they will know a lot about the information, about how to handle them, ok, and the way they can use them in life.

A counter argument, suggests that students who have not used computers should be given greater computer exposure during their early years in their programmes. This would help build their confidence in this area, enabling a possibility to 'leapfrog' the inherent challenges of existing educational approaches, which at times could serve to stifle creative opportunities in students. Nevertheless, the argument of students coming into architectural education with little or no experience with computers, could not be evaluated, or verified from the gathered data. However, evidence from School 3, which did monitor computer use among incoming students, found that the number of students coming into first year with no prior exposure to computers dropped from 70% in 2006, to less than 10% in 2013. It was also suggested that the 'unsophisticated (African) clientele', called for less slick presentations, so as not to alienate potential clients:

FG10_4 (T-36:58) - Computers for us are still something exotic, one. Two, in the, ... on the market now, our customers are not yet that demanding, see. We have a gap of customer sophistication, ok. So, this guy talked about 3D's, ok. Because our unsophisticated customers love to see coloured images and all these, you know, things that can move around, I mean, computer effects are sometimes more attractive than the design itself, ok.

It is however, unclear how valid this assertion is. Nevertheless, the debate related to the approach to be taken is strong across the region. Even within particular schools, this forms a key point of contention between faculty and students: in this case related to how computers should be used, and the outcomes of this process. This formed the basis for debate related to pedagogical goals of the school, and the perceived ideas of architectural education, as seen in Observation Note 7.7.

Observation Note 7.7: Analogue versus Digital Output

Two different studio projects were observed: Year 2, which made use a traditional pen and pencil representational approach; and, Year 3, in which students were to use at least 50% computer based work. This approach was to enable students to appreciate different modes of producing and presenting work.

Second Year Studio: Students in this studio were required to use traditional pen or pencil to complete their presentation drawings, but were required to use computer based analysis tools to undertake solar shading and thermal performance simulations for their designs. While students were initially enthusiastic, this quickly faded with each subsequent submission. Changes with each subsequent submission were not particularly dramatic, and progressively became merely cosmetic. It was found that students took each submission as a 'the final' proposal, rather than a progressive development of ideas. Students spent a considerable amount of time creating polished and neatly drafted presentations, rather than highlighting development of ideas. Consequently, students contended that the process of (re)creating drawings was laborious, and were thus unwilling to make changes once they had a recognisable building. This was often accompanied by a defensive attitude toward suggestions, as this meant additional drafting work.

Third Year Studio: In this studio, computers were to be used as part of the design process, and in the presentation of final proposals. Initially, as with the traditional approach, students were enthusiastic, believing they had much more freedom to produce what they regarded as 'advanced' architecture explorations, which for the most part comprised 3D visualisations, but with limited explorations of architectural issues. 'Design' was perceived to be space planning, or graphic presentation, regardless of what was espoused as part of the course. The reluctance to make changes in the traditional approach, was replaced by an urge to continually make (inconsequential) changes up to the time of submission, affecting the ability to complete projects within the stipulated time. In this case, the sense of freedom presented by the virtual environment of the computer, gave students a false perception that it was possible to continue tweaking presentation to make them look good, but not adding to the value of the design. The largely cosmetic changes: adding frivolous detail (encouraged through the use of the zoom function, gave the impression of the need for additional detail), including door knobs, or numerous indoor plants, furniture and cars, under the guise that this was 'architectural design'.

In both scenarios, engagement with pertinent architecture design issues was superficial, highlighting challenges with both approaches, but related somewhat to what students perceived as architecture.

Reviewing the state of computing within architectural education in East Africa, the CAA Validation Panels noted deficiencies in some approaches to computing in some programmes, as presented in Table 7.11.

Table 7.11: CAA Comments on Computing

School	CAA Comment
School 2	<i>No Comments</i>
School 3	the quality of work exhibited ranged from adequate to advanced in terms of general graphics. The skills utilised were of a professional standard. The works revealed an understanding of the latest software, problem-solving, and the ability to work with other disciplines.
School 4	need for a resolution to the issue of traditional representational graphics versus CAD work. CAD is introduced late in the programme
School 5	If the integration of technology in studio design projects is to be the focus of the Department as promoted in the philosophy then the Board would strongly advise the Department to develop its CAD provision.

A noteworthy finding regarding computer use, and increasingly cited by students, was the possibility of using computers to get around their inherited lack of confidence in the use of analog production methods. This in part was attributed to students not being exposed to art and graphic representation in pre-university education, although perceptions of architecture as the drawing of plans, may also present as a strong motivator for this attitude. While students did believe they had good ideas, their inability to draw (as opposed to drafting), was perceived as a hindrance, arguing that computers provided an opportunity to express these ideas, or more specifically, the ability to visualise what they perceived as architecture.

FG1-2 (T-1:29:29) - [...] not everyone is good at hand drawing, and architectural education like in first year, if you let somebody do CAD because they can't do their hand drawing very well I think it should be done, not trying to make everyone try to draw yet, they are just not good at it. Its a win, win situation for everyone.

FG3_5 (T-54:19) - [...] some students are weak, and in my opinion, it is easier to learn how to use a CAD programme, than to learn how to sketch well. That's just my opinion.

For faculty, use of CAD compounded this problem, allowing students to produce pretty graphics, enabling students to bypass key aspects of the design process through which they could appreciate the nuances of architectural design. With computers also being used largely for visualisation - the proverbial architects impression - serving to reinforce the perception of architecture as the drawing and representation of buildings

In all, the low penetration of computers in formal teaching, provided an indication of the influence instructors can have in the socialisation process. In this case by relegating computers to the periphery of architectural education, served to socialise students into an antiquated idea of architectural activities, to which they readily

rebel. In the context of East Africa, this suggests an additional category in computer users, with ‘*Digital Phobic*’, as a possible addition to *Digital Natives*, and *Digital Immigrants*, in this case related to the less than enthusiastic uptake of computers. The result is an increasingly remote relationship between espoused ideas of architecture practice, and engagement with some essential tools as part of architectural education (See Table 7.12).

Table 7.12: Engagement with Computers in Architectural Education

Category	Participant Response
School 1	<p>FG6_5 (T-1:38:32) - It's just a tool, which people do not understand. They think it's something that will help you design, helps you, comes up with creativity and stuff like that, but it's a tool.</p> <p>FG10_3 (T-31:34) - we were told as lecturers when we are, ... all the final presentations, if everything is done in CAD that is a fail automatic, especially if it's a fifth-year student. If everything is done in CAD it's a fail, we don't, we should not even even sit, continue with that presentation.</p> <p>FG10_4 (T-36:58) - I mean, whatever the students are doing, they are trying their best. The staff themselves, the academic staff, ok, are also not as conversant with computers ...</p>
School 2	<p>FG3_2 (T-50:45) - up to third year, CAD is taboo, despite CAD being taught as a course unit for the first three years, using it for an assignment or anything is taboo.</p>
School 3	<p>FG4_1 (T-1:47:00) - we were introduced to CAD in our first year, which I think was a very big mistake. Cause what we did, definitely we threw away the drawing boards, and we started concentrating on the computer. And obviously that affected you know, your thinking process, it affects your design process, we threw away our sketch pads basically.</p>
School 4	<p>FG8_6 (T-51:04) - ... at the same time you are being introduced to computers, you are being discouraged to use them, um because of now what you, you called initially architectural science, because there is a certain belief that goes very strong, that um, architecture begins with hands, that is sketching and drawing.</p>
School 5	<p>FG5_9 (T-33:31) - Our year master told us, if you use computer, you are going to fail, in fact, he could hold your laptop as if he was going to crush it. Then immediately after marking, he comes and tells us, you guys you have to appreciate technology, we don't want sketches. Yet, the day before he was almost crushing our computers, then he comes and says you should have used CAD. All those guys who used their hands, they were told to repeat, those were sketches.</p> <p>FG5_7 (T-35:43) - I cannot call it CAD, I can call it CAP - Computer Aided Production. Because we are not taught how to design on ..., using the software, we are taught how to produce</p>

While computers are an essential part of the architecture profession, it was evident that attitudes toward computers in design education, do have implications to not only the education of architects, but also the profession as a whole. Looking to the future, Milne (2007, p. 14) indicated that there is a shift from the ‘Information Age’ to the ‘Interaction Age’, emphasising the importance of digital technologies in education. Thus, limited exposure to digital technologies, may in the long term lead to a widening gap between the schools of architecture, and the profession. Resistance to the anti-computer stance of faculty is thus breaking from the stereotypical top-down approach, and could represent an overt example of a *cultural inversion*, although the context in which this inversion is found, may itself raise additional questions of the educational process.

7.2.4 Summing Up

As part of 'building professionals', students were exposed to key aspects of the profession, largely through interaction with faculty. It was noted however, that this interaction was not always mutually beneficial, as observed through student engagement with non-official vendors, or with contemporary issues in architecture. This did reveal the complexity that is architectural education, which is far more complex than is suggested in the built-from-the-ground-up approach, in which students as empty vessels are slowly filled with acquired knowledge. Indeed, resistance to espoused values, suggested that some elements within architectural education, or even encountered before entry into architecture school, may have a significant impact on the educational process. Particularly important, was student engagement with values, which suggested a disconnect between espoused values of architectural education, and what students had come to expect, or believe architectural education entailed. Variations between values espoused by faculty, and what students perceived architecture was, or should be, thus formed a key challenge within educational socialisation. This was overtly presented in embedded attitudes toward contemporary issues in architecture, as well as in the persistence of the fit-for-practice canon, as a dominant feature of architectural education.

In some respect, what emerged from the study, was what C.L.M. Olweny (1994) referred to as '*value-re-standardisation*', which acknowledged that ethics, and ethical values, are not static, but are part of the evolutionary process of societal transformation. Value-re-standardisation was particularly apparent with relation to students' reflections on their experiences in architectural education, and how this influenced their perception of what architectural education could be. Comments given by students, were in themselves particularly revealing, serving to highlight areas of concern for students, as presented in Table 7.14.

Table 7.14: Student Reflections on Architectural Education

Issue	
Student-faculty relationships	<p>FG3_2 (T-1:06:52) - [...] Removing that Student - Master divide, which is traditional in our educational institutions. [...] I would also endeavour to take tutors, or new recruits for tutors, through a kind of an eye opener into the criting (sic) process, cause if that is not done well, it has a lasting impact on students, and how they view the whole system.</p> <p>FG7_2 (T-1:25:56) - For me what I would do if I get the chance to come back and teach, I will not own a firm and be a studio master here.</p> <p>FG8_12 (T-1:54:57) - Basically I have two things that I would. I would advocate for ... the school to ... to change. One of them is the, ... the approach, the, the student approach of the, of the entire department. I think we should try to ... we should try to ... to be very close to each other, ah, so that we, ... we can actually exchange ideas. It might be there, but its not really ... working out as eh, the way it should. You find it very hard to find some other, sixth years, you rarely see them actually. So, that's one thing that I would advocate, to create team building in the, ... in the entire department of architecture.</p>
Peer relationships	<p>FG8_10 (T-1:52:59) - f[...] less of competition, and more of competition where you're all competing yes but you're helping each other.</p>
Assessment and Feedback	<p>FG6_2 (T-1:45:12) - I think I'd, I'd do my best to give ah, to give the students as much feedback as they need, as as much, you know, especially ... Ok, I'd do my best to give them as much feedback as possible and try to encourage a good relationship with, teacher - student relationship.</p>
Contemporary issues	<p>FG2_1 (T-1:08:45) - The rigidity of the curriculum, the idea of we are following the 1990 something curriculum, with this changing technology levels, and global trends to save the environment, am even the way they distribute the course units around. The thing that fails me most is the idea that Computer Aided Design is given ok, is it one or two credit units, and its like what is happening in the field? Everybody in the field is using Computer Aided Design to do buildings. They just, ok are so rigid!</p>

Juxtaposed against the broader goals of architectural education, both positive and negative elements of educational socialisation were evident through the study. This challenged the notion that the cultural divide between students and faculty was merely related to age, but was linked somewhat to ideas about architecture and architectural education. On the part of students, some faculty, and even institutions, the prevailing perception of education, as a place where people go to gain all the knowledge and skills they need to make them experts, served to place architectural education in a precarious position vis-à-vis its overall goals, which generally transcend merely graduating students who are fit-for-practice. This is apparent when viewed in the context of the urban bias of the profession in East Africa; thus, what emerged as part of the final template are issues that shape budding architects, but are also key in linking architectural education to place.

Table 7.13: Final Template Categories - Building Professionals

D. Educational Factors

D.2. Building Professionals

- D.2.1. Acquiring values and ethical positions
- D.2.2. Indoctrination / Predetermined value positions
- D.2.3. Links to society / Societal expectations
- D.2.4. Engagement with practice / Links to practice
- D.2.5. Attitudes to contemporary issues
- D.2.6. Cultural inversions / Clash of cultures
- D.2.7. Future proofing architectural education

These categories poignantly highlight the adage by Walt Whitman: “Nothing is different but everything has changed.” While the needs of society and the architecture profession have changed, as have needs of architectural education; unfortunately, how novices are engaged with these issues appears to delink architectural education from its core goal, to prepare students for a largely unknown and unfamiliar future, and to address challenges that require suitable and appropriate solutions for a particular context.

What is recalled here, is the notion of unlearning, as presented in Chapter Three, however in this case, related to academic faculty. While no doubt having considerable experience and a desire to teach, the capacity to empathise with students, is derived in part from the ability to unlearn entrenched teaching styles, and notions of what is, acquired from their experiences in architectural education. Just as it is accepted that students’ backgrounds do shape their views and perceptions of architecture and architectural education, ensuring faculty acknowledge their own backgrounds and how this influences their inherited values and beliefs, becomes a critical element in educational socialisation, and should be open for further scrutiny.

7.3 Summary

This chapter sought to derive answers to the third research question, which asked: *What effect does socialisation have on architectural education?* The findings suggest that educational socialisation is not only pervasive, but may be somewhat more influential on architectural education outcomes, than the formal or stated curriculum. What emerged from this discourse, were key areas that showcased tensions stemming from differences between students’ pre-conceived ideas and ideals of what constituted architectural education, and those of faculty. To some degree, these were linked to engagement between the key stakeholders within architectural education, overtly evident in student activities at the interface with professional practice, and society.

The final template categories thus indicate the broad range of factors that influence educational socialisation, revealing the somewhat tenuous relationship between those who teach architecture, and those who seek to become architects. Further, some factors considered peripheral in the traditional view of architectural education, occasionally emerged as important elements. These largely implicit elements, suggest that socialisation is a key component in the transition from novice to architect. However, far from reducing idiosyncrasies, architectural education appears to accentuate them, more as an unintentional effect of the tacit curriculum.

What was clear, were a series of elements that form the foundation for activities within the educational realm, as well as those that served to establish positions within architectural education, and beyond into practice. The summary of these factors, and the associated comparative weightings scale, as introduced in Table 4.5, are presented in Tables 7.15 and 7.16 below.

Table 7.15: Architectural Foundations.

	Emphasis
D.1 ARCHITECTURAL FOUNDATIONS	
D.1.1 Sense of belonging	+++++
D.1.2 Right of passage	++
D.1.3 Peer pressure / Competition	+++++
D.1.4 Teamwork / working in groups	+++++
D.1.5 Conflicts and tensions	++

Table 7.16: Building Professionals.

	Emphasis
D.2 BUILDING PROFESSIONALS	
D.2.1 Acquiring values and ethical positions	+++++
D.2.2 Indoctrination / Predetermined positions	+++
D.2.3 Links to society / Societal expectations	+++++
D.2.4 Engagement and links to practice	++
D.2.5 Attitudes to Contemporary issues	+++++
D.2.6 Cultural inversions / Clash of cultures	+++
D.2.7 Future proofing architectural education	+++

While serving as a foundation for future practice, these elements of educational socialisation, simultaneously build on the ‘culture shock’ as experienced by many students entering architecture school, as well as reinforcing the trepidations that come with this. This presents conditions favourable for indoctrination, derived in part from traditional approaches to education, as well as building on inherent paternalistic views inherent in East African education. Consequently, the effect this has on architectural education, may be far more complex than previously acknowledged, having a more profound and far reaching effect on students than was previously believed to be the case. With existing rhetoric suggesting students should accept their place within the established pecking order of architecture and architectural education, what was discovered in the context of educational socialisation in East Africa, was not entirely consistent with this view. Although there were certainly situations of enforced socialisation, there were also elements of ‘push-back’ from students, as well as a limited level of two-way engagement (or negotiated socialisation) between faculty and students. This suggests possible beginnings of what Ogbu termed a *Cultural Inversion*. Defined in the context of ethnic minorities, a cultural inversion was defined as:

“[a] tendency for ... minorities to regard certain forms of behavior, events, symbols, and meanings as inappropriate for them ... At the same time the minorities value other forms of behavior, events, symbols and meanings, often opposite, as more appropriate for themselves. (Ogbu, 1992, p. 8)

In the context of architectural education, push-back from students suggests the cultural clashes within architectural education may be a form of cultural inversion, and one that may influence the future of architectural practice and architectural education at a future point in time.

Discussion and Conclusion

A modern profession needs to be mobile, to adapt to change, to respond to new opportunities, to develop trajectories or its individual members and shifting demands of its context.

(Colin Stansfield-Smith (Sir) et al., 1999)

VIII

8.0 General Discussion

This thesis explored socialisation in architectural education, with reference to East Africa. The study sought to appreciate this often misrepresented and misunderstood aspect of architectural education, and its attendant outcomes. The study investigated general conditions that shaped socialisation, through investigations carried out in five established architecture schools across East Africa. As part of the process, the study deliberated on three aspects of socialisation: Pre-Socialisation, associated with entry into architectural education; Institutional Socialisation, providing the framework within which educational socialisation takes place; and, Educational Socialisation, looking at the activities within formal architectural education. As an ethnographic study, investigations were carried out through a mixed methods approach, necessary to ensure findings could be cross referenced through triangulation. Methods used included: Document analysis, a questionnaire study, focus group discussions, and participant observations.

Based on the findings of the research, this final chapter consolidates the key findings presented in this thesis. The chapter further expands on the findings of the research questions, seeking to qualify the learnscape of socialisation as presented in Chapter One. Section 8.1 reviews the findings of the research study, reflecting on the questions posed at the beginning of the thesis. Section 8.2 brings the findings together in a discussion of how these can be consolidated within architectural education. Section 8.4 revisits the research questions posed at the beginning of the thesis, with methodological reflections, and procedural limitations presented in

Section 8.3. Recommendations for further research are made in Section 8.5, with Section 8.6 presenting the general conclusions related to the thesis.

8.1 Engaging with Socialisation

It was evident that societal views formed a crucial component of pre-socialisation stimuli, underscoring the significance of stereotypical views of architecture and architectural education on incoming students. Reflecting on the reasons students join architectural education, as exemplified by Nelson's (1974) 'Value Goals', it was evident that incoming students had a limited appreciation of what architectural education entailed, and thus were unprepared for the rigours of architecture school. Nevertheless, aspirations of students, expressed through perceptions of architecture and architectural education, contrasted with the characteristics of the schools, and served as a vehicle for the inevitable cultural clashes, conflicts, and frustrations that eventually emerged. With students generally entering university with high expectations for their selected career path, such clashes become hindrances, inevitably leading to a decline in student enthusiasm, a consequence of the disparity between their anticipation, and the experienced reality. This mismatch between expectations of incoming students, and the realities of architectural education, heightened the possibility of *Role Failures*, an outcome for which the system itself is not prepared to absorb, or to respond.

For the majority of students, the drop in enthusiasm for architecture is thankfully only temporary. This group of students have found a way to navigate the tenuous system into which they entered, and discovered a means of reconciling the differences between their perceptions of architecture and architecture education, and those professed by faculty, and the schools. Navigating the system often entailed realigning personal goals and expectations, seeking to match these with what was espoused within architectural education. Such realignment was not always possible, with some students resigned to the fact that their ideas would not necessarily map onto those being professed. Nevertheless these students did continue through the educational system, as they did not have any real alternatives. For the schools, realignment was also a possibility, although this was not easily achieved, given it entailed adjustment to the curricula, pedagogical approach, or even philosophical positions. Regardless, the upswing in student zeal and vigour, forms a key element in educational socialisation, and how students participate in the educational process, should they seek to get through the system. This is visualised on a modified commitment curve, adapted from Graham & McKenzie (1995), presented in Figure 8.1, and which relates to key phases within professional education.

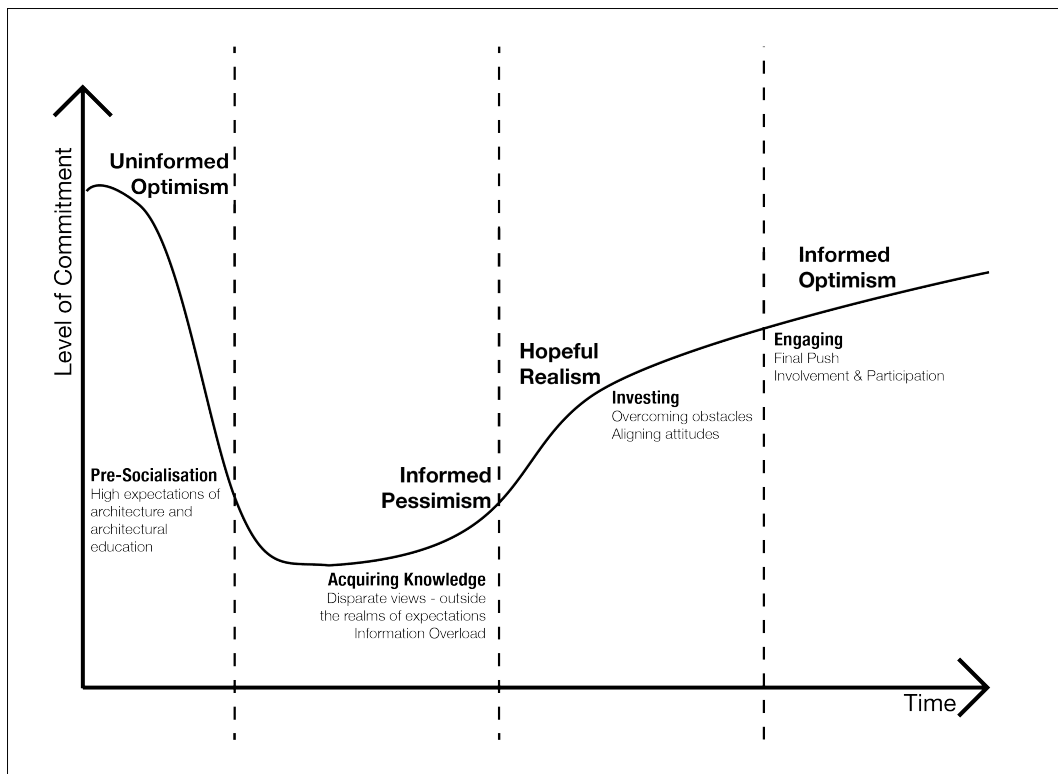


Figure 8.1: Socialisation Engagement Curve (Adapted from Graham & McKenzie, 1995)

The adapted Commitment Curve, or in this case, a *Socialisation Engagement Curve*, reveals the transition from novice to graduate, involves a complex myriad of ideals, conflicts and compromises. The drop in enthusiasm, after the initial euphoria phase of pre-socialisation, was likely a result of what Becker et al. (1961, pp. 35-36) present as a ‘short-term perspective’, generally a result of an idealised and simplistic view of professional endeavours, which were often far removed from the realities associated with a ‘long-term perspective’, for which detailed knowledge and information is usually required. Regardless, the representation, which is from the students’ point of view, presents a somewhat serpentine process, different from that suggested by the traditional inputs-outputs view of socialisation, as presented in Figure 3.2. In this case, the juxtaposition of the original elements of the commitment curve by Graham & McKenzie (1995), with the relational aspects of socialisation, expresses the idea that it (socialisation) is more a convoluted system of interrelated elements. This also acknowledges that socialisation is a “continually interacting system” (Trigwell & Prosser, 1997, p. 242), with links forward - toward expected outcomes; and, backwards - reflecting on prior experiences.

Within architectural education, the interaction as presented by Trigwell & Prosser (1997), operates at different levels: linked in the first instance to faculty, who were

generally adamant that there was no link between prior experiences of students, and their abilities within architectural education. In such cases, students were treated as empty vessels, having little or no knowledge relevant to what was taught in architectural school. On the other hand, incoming students felt they were adequately prepared (and for some, even over qualified), due to the subjects they had taken for the HSR, bolstered by grand visions for the future, which no doubt did showcase confidence and enthusiasm, but often founded on a limited appreciation of the profession. The desires of students to participate in a future idealised profession, in this case clashed with the mundane and rudimentary nature of architectural education, with strong roots in the past, strongly expressed through conservative faculty. The influence of the schools, emerging as a visible manifestation of institutional dominance in socialisation. Further, within the context of East Africa, the patriarchal nature of society, lends weight to architectural faculty being the authoritative custodians of knowledge and architectural cultural capital. Within the educational system, power and influence are emphasised as being integral to architectural education, through stringent power hierarchies, that serve to perpetuate the elitist view of the architecture profession. Ironically, this is what motivated many students to turn to architecture as a career choice, attracted by its hegemonic ideals, to an extent derived from the origins of the profession in East Africa, and reinforced by post independence nationalist agenda.

As the basis for curricula and pedagogical endeavours, existing practice requirements, along with previous educational experiences of faculty, and a general reluctance to explore issues outside their comfort zones, reflected a historicised approach to architectural education. This also served to frame architectural education as the mere transmission and reception of knowledge, which could be termed *Gathering Education*. While *Gathering Education* does suggest a conscious activity on the part of students, making deliberate decisions to particular key knowledge elements, there was an evident lack of syncopation between the somewhat disparate knowledge components. *Gathering Education* suggests a lack of defined linkages between knowledge elements, unlike *Scaffolding Education*, whose basis is the building of connections between new and old knowledge, geared to forming a better and deeper understanding of issues (Pea, 2004, p. 430). It is acknowledged that gathering education does not enable students to move beyond the 'Competence Level' of Dreyfus' (2004, p. 178) five-level model of skill acquisition, and thus does not serve the broader needs of architectural education, evident in engagement with contemporary issues within the educational process.

With regard to contemporary issues in architectural education, the overt conflicts in the teaching of CAD and ESD, demonstrated the corrosive nature of architectural

education, with friction resulting from skewed emphasis on garnering knowledge, and developing traditional skills. This was often based on what faculty themselves regarded as important, often derived from their own educational experiences, somewhat encapsulated in the opening statement, “Architects don’t design bridges,” which presents an outmoded view of architectural education, but still evident today. This approach also comes up against the needs of contemporary practice, which requires students to be prepared to use computers, highlighting the inherent contradictions between architecture education and practice, which was still unresolved even within the fit-for-practice mantra.

It was evident through this study, that despite the significance of the implicit aspects of the curriculum, this element of architectural education was considerably marginalised. Conversely, limited attention was afforded to the development of attitudes and values within the educational process, as these were not ‘visible’ aspects of architecture practice. Lack of engagement with values, also had implications on how students engaged with the philosophical aspects of architecture, largely related to synthesis and critique. While not immediately evident through the educational process, largely concerned with the pragmatics of building, this eventually could influence the nature of architectural practice. Education thus becomes self referential, built on past influences and experiences. Indeed, as Ray points out:

“I don’t believe they (students) set out to exercise dominion, to rule the world, or impose arrogant form on the passive population. There are plenty of disciplines that encourage that! These distortions begin in the schools and mature in practice” (Ray, 2005, p. 63).

In the context of East Africa, where students generally come into architectural education with a limited understanding of what architecture entailed, this lays a foundation that serves to either reinforcing, or break down the overt differences within the educational realm. Socialisation in this context serves as an essential component of this process.

8.2 Acknowledging Socialisation

Given its significance in the educational process, how socialisation is factored into contemporary architectural education, becomes an important issue for educators, and the profession as a whole. The study highlighted the difficulty in viewing architectural education independent of its tacit elements, rather than being formally acknowledged as an integral part of the architectural education process. Given the nature of disparate factors, this is a challenge in itself, showcasing the need to qualify (and quantify) teaching and learning beyond just the explicit curriculum.

Seeking to recognise these elements, has seen the proliferation of *Graduate Attributes Mapping*, often presented alongside Course Learning Outcomes, and defined as:

the qualities, skills and understandings a university community agrees its students would desirably develop during their time at the institution and, consequently, shape the contribution they are able to make to their profession and as a citizen (Bowden, Hart, King, Trigwell, & Watts, 2000).

These generic skills relate to the development of values within students, acknowledging that education, particularly university education, is more than the mere acquisition of knowledge and skills (Barrie, 2007; Bath et al., 2004; Shannon & Radford, 2010). Interest in how values are acquired as part of the educational process, emerges as a key step in this awareness, and a move toward exploring educational elements beyond the easily documented explicit components of education. This would also be a logical step in appreciating the broader qualitative elements related to architectural education, and how these link back to the educational process. Visualising this process is through an adapted 3P model, as presented in Figure 8.2 below. This model addresses students as the output of the educational process, acknowledging the influences at the various educational stages, with relation to socialisation.

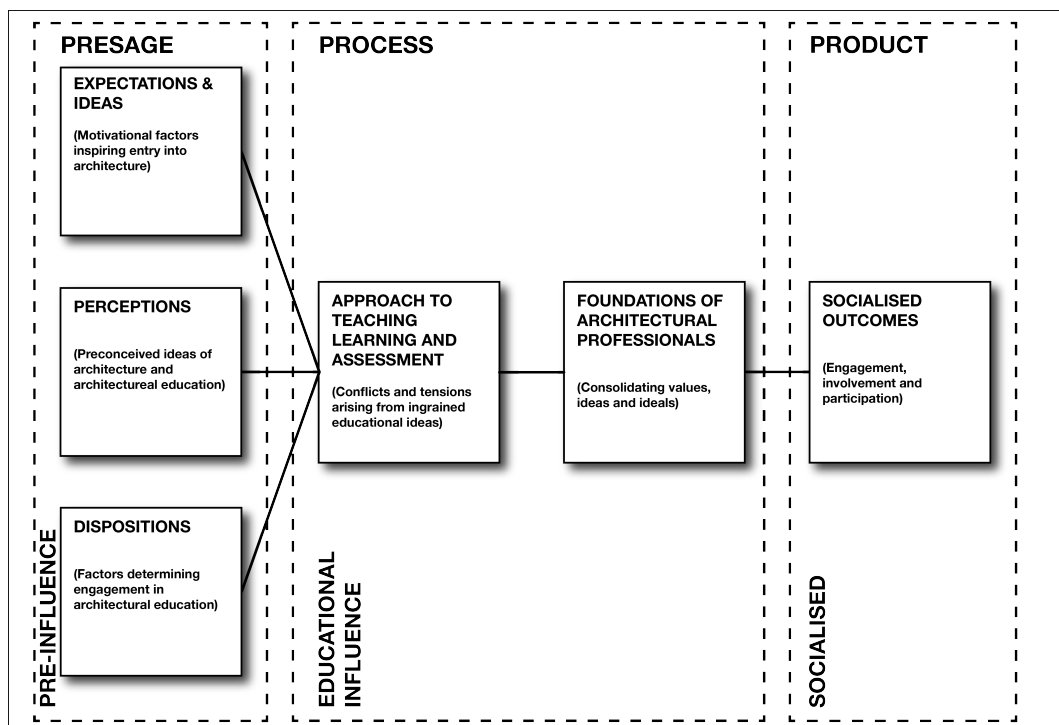


Figure 8.2: Linkages in Educational Socialisation (Adapted from 3P Model by Biggs (1985))

Within existing architectural education, the tacit aspects found to be crucial to

architectural education were often sidelined, perceived as being irrelevant to the development of professionals, despite their evident transformative value. Values themselves were often perceived as being personal, or taken-as-given, under the presumption that values were inherent within a society. Within architectural education, the idea of a transformative education is linked to learning, or more specifically unlearning, which emerges as an essential component of this process, and key to building of new or reconceptualised ideas, as presented by Kember & McNaught (2007, p. 39). At a base level, is for students to unlearn preconceived notions of what architecture entails, challenging perceptions of architecture as being the drawing of plans, and architectural education as the acquisition of a finite set of skills and knowledge. For faculty, unlearning relates to their past experiences, often perceived as the epitome of architectural education, and the basis of pedagogy and a source knowledge content.

At a broader level, socialisation may enable students (and faculty) in the (un)learning process. This would be through what Hager (2004, p. 6), presented as an 'emerging paradigm of learning', which changes both the learner and the environment in which they are situated. In this case, building on students' anticipatory socialisation experiences, as complementary, rather than a hindrance to the development of a transformative approach to architectural education. This would acknowledge the inherited challenges brought about by pre-socialisation experiences, in line with the '*enriched mission*' for architectural education, as presented by Boyer & Mitgang (1996). This evidently would require a supportive and nurturing environment, unlike the largely patriarchal approach embedded in existing architectural education pedagogy, necessarily transcending the status quo approach, and providing an education that can "[...] free the architect from the shackles of his traditional orientation [...]" (Odeleye, 1991, p. 6).

In the context of architectural design, as a visible output of architectural education, appreciating socialisation as an inherent part of the educational process, may necessitate a move from an approach that promotes '*Designing for*', to one that embraces '*Designing with*' (Tovovich, 2009). '*Designing with*', makes use of the inherent qualities of socialisation, and is in line with the concept of '*situated learning*', as proposed by Lave (2009, p. 207), acknowledging that knowledge and experiences are constantly evolving, unlike the static finite approach inherent in the traditional approach to education in many schools. This however may cause clashes with cultural norms, through challenges to the prevailing approach to architectural education, particularly with regard to the development of architects as advocates of change. For Roberts, this would usher in "[...] a shift in attitude from the architect as creator to that of facilitator" (2009, p. 2), an approach that is in line

with a pertinent aspect of African indigenous educational philosophy, as presented by Teffo:

In Africa, philosophy is expected to be pragmatic and to render a 'service'. It must contribute effectively towards the amelioration of the human condition [...] (2000, p. 111).

In this context, the hierarchical paternalistic approach, with origins partly in the African invented traditions (Hobsbawm & Ranger, 1992), comes under scrutiny, as highlighted in definitive African literature, in this case by Chinua Achebe:

Age was respected among his people, but achievement was revered. As the elders said, if a child washed his hands he could eat with kings" (1958, p. 6)

Building on the musings of Achebe, indigenous traditions may present a means to evolve a revised approach to architectural education: making use of the embedded strengths of these traditions, through which achievement was revered, and from which a sense of belonging is enabled. Epistemological justification for this was found in the African philosophy of Ubuntu, which "[...] focuses on human relations, attending to the moral and spiritual consciousness of what it means to be human and to be in relationship with an-Other" (Swanson, 2007, p. 55). Within the approach espoused by Ubuntu, education is a negotiated transaction, between the mentor (facilitator), and the student (learner), and not merely the transmission of knowledge to willing recipients, which does not account for the tenacity of role failures within the educational system. This reflects Gitari's (2008, p. 50) concept of knowledge adaptation, in which education, and the educational process, are mediated by the context in which they are located. The concept itself had been introduced by Weisman (1996, p. 281) as a *Shared Authority* and *Shared Knowledge* approach, which would:

[...] introduce students to architectural design via their own or closely related cultural traditions is [...] teach[ing] students to respect and value their own architectural traditions and so to view them as living traditions and a continuing source of inspirations (Abel, 1995, p. 85).

This deviates significantly from the emphasis on individuality, and the idea of architecture as a solo activity, based around the cult of the 'Star-Architect' (Maritz, 2008), 'Solo Virtuoso Designer' (Weisman, 1996, p. 280), 'Individualistic Prima Donnas' (Howieson, 2000, p. 155), or, the 'Lone Ranger Master Architect' (Briggs, 1996). This approach compels students to aspire to design genius, and artistic superiority, but often detached from the local context, an approach, which according to Mills & Lipman (1994, p. 214), is disabling and frustrating for students, and serving to perpetuate myths of what constitutes architecture. These myths are sustained by the fact that the 'myth-makers' themselves (educators) are sold onto the myths that they create and pass on (Ballantyne, 1995; Upton, 1991). This also

serves to highlight the effect uncritical consumption of ideas and ideals can have on the educational process, with the negative aspects of socialisation an overt illustration of this state of affairs.

8.3 Research Questions Revisited

Revisiting the key research questions posed in Chapter One, this section seeks to tie together the different elements of the thesis. The primary aim of the thesis was to *Investigate the nature of socialisation within contemporary architectural education in East Africa*, guided by three research questions that were investigated in Chapters Five to Seven. The first and second research questions explored in Chapters Five and Six, investigated anticipatory socialisation and institutional influences on the educational process. The third research question, explored in Chapter Seven, related to educational socialisation, as both a process and as an outcome.

Reflecting on the first research question, which asked: *'What are the perceptions of architecture and architectural education, which influence students' expectations of architectural education?'* It is evident from the study that incoming students' perceptions of architecture and architectural education, were out of line with those of faculty. These perceptions were largely derived from friends and family, with few students seeking information from architects, or even the schools, prior to application or entry into the programmes. Tied to the mismatch in perceptions, were high expectations of what the students would achieve on graduation, with many viewing the educational process as a means to achieve occupational prestige. The pseudo-ideas of architectural education, thus served to create cultural-shock for incoming students, affecting student engagement within architectural education. It is evident from the ideas and perceptions of students, formed prior to entry into architectural education, were largely related to occupational prestige, but little to do with the actual schools or the programme of study. The findings do answer the question as set, giving an indication of the values held by incoming students.

Looking at the setting in which socialisation takes place, the second research question asked: *How does the environment of architectural education impact on socialisation within architecture schools?* The findings of the research suggested that the setting of architectural education, represented by procedural elements related to the schools and the different programmes, as well as the approach to teaching and assessment, provided the framework within which stakeholders interacted, and within which socialisation occurred. It was apparent that inherent socio-cultural, and educational traditions played a significant role in framing the

educational process. Overall, the findings suggested that the environment of architectural education, was more than a mere backdrop for main educational activities, but in some regards, were a driver for the nature of socialisation within the schools. This was particularly evident with relation to teaching and evaluation, and thus linked to student progress. This indicated a significant influence on socialisation from the environment in which architectural education took place.

The final research question sought to appreciate the outcomes of socialisation, asking: *What are the effects of socialisation within architectural education?* Educational socialisation, it emerged, was extremely influential in the educational process. The tenuous relationship between those who teach architecture, and those who seek to become architects, serving as a basis for conflicts and tensions that made educational socialisation, and the attendant implicit curriculum, possibly more influential than the explicit or stated curriculum. Further, the conflicts and tensions were found to have a profound impact on students, not only as part of the educational process, but potentially into practice as well. It was also noticed that the nature of engagement within architectural education, could indicate a possible cultural inversion within the educational process. Educational socialisation, as a consequence, does significantly affect the educational process of architectural education, and is a key means by which professional values and ideals are established.

While there were some challenges, the findings of the study do indicate that questions posed at the beginning of this thesis were appropriately answered, with the key goal of the thesis achieved. Regardless, there were a few limitations that emerged through the study, as are highlighted in the following section.

8.4 Limitations and Methodological Reflections

Given the context of this study, the research design was necessarily pragmatic, using a diverse range of methods to gather data. It was however acknowledged that there were a number of limitations influencing on the study and its outcomes. In this case, a primary consideration was related to the cross-disciplinary nature of the research, which required an appreciation of literature and research approaches from somewhat divergent fields: education; architecture; and, architectural education. Initially, this proved a methodological quagmire, given a general unfamiliarity with educational literature, resulting in a drawn out initial research cycle. It however did present an opportunity to build a case from the ground up, avoiding the pitfalls associated with being deeply attached with the subject matter.

Further, the few architecture schools spread across the vast territory of East Africa, provided a challenge for data collection. Successful completion of the study, was thus dependant on a myriad of external factors, including: time - related to the availability of students and faculty; the ability to get to the various schools during the investigative phase of the research; and, dealing with organisational bureaucracies, which restricted access to vital historical data, regarded as 'privileged'. These impediments nevertheless provided opportunities to look beyond conventional methodological approaches. In this case, focus groups and participant observations, emerged as convenient and effective means of gathering primary data across the diverse cultural landscape of architectural education in the region. This allowed for a broad array of participants, as well as a greater diversity of responses than would otherwise have been possible through a questionnaire based study. Collection of focus group data for the study was however, only limited to audio data, and interviewer notes. While video recordings are generally recommended for focus group discussions, and would have significantly enhanced the quality of data, it would have added a significant logistical complication in data collection and analysis. Nevertheless, a decision to make use of template analysis, rather than micro-analysis coding, was also significant in the decision not to use video. In so doing, it was accepted that some fine grain data would not be availed, although the participant observations somewhat made up for the lack of video data.

Another pertinent area for reflection, was linked to possible inconsistencies in data collection and analysis. With data being collected from multiple sites, across geographic (and cultural) divides, and over an extended period, an immediate question related to the possibility of inconsistencies and omissions, and even influences from earlier interactions filtering into subsequent studies. It was however the case that the nature of communication across East Africa, a result of socio-political challenges making cross border interaction somewhat limited. However, the possibility of inconsistencies due to multiple sites, emerged as a strength for the study, serving to reinforce the findings, and more important ensuring a key methodological element, triangulation was realised.

As the first comprehensive study of architectural education in East Africa, it is acknowledged that the study presented only a snapshot of the nature of architectural education in East Africa. Although expansive, the findings of the study could benefit from alternative readings; in particular undertaking further participant observation studies across the different schools, which would add to the richness of the findings, which was not feasible in the current study. Further, with the study presenting only a snapshot of architectural education, it is evident that this could be significantly enhanced through a longitudinal study, looking at particular cohorts, as

they made the transition from novices entering architectural education, to graduates. This would be a critical study that fully exposes the nature of the socialisation experience in architectural education. Regardless, while these were evident elements missing from the current study, the findings nevertheless significant on their own, and form an important basis for any future followup studies that could take on these and other research opportunities.

8.5 Implications and Future Prospects

This research study presented a general understanding of the complexity of socialisation in architectural education in East Africa, thus providing an insight into the implicit elements of architectural education. Nevertheless, a few intricate issues, could benefit from further interrogation. Of primary interest, would be a longitudinal study, which could potentially reveal changes in students (and faculty) during the course of architectural education. This would enable an evaluation of the relationship between different socialisation elements within architectural education, and the key stakeholders. The relationship between teaching pedagogy and student learning within the educational process, would be of particular interest, providing an important reference to the transition through architectural education.

An important, but often neglected issue, is the effect socialisation has to female and male students within architectural education. Given the predominantly patriarchal socio-cultural setting of East Africa, how this influences socialisation of the different genders would be of interest, as would the links to students socialisation with regard to the low number of female faculty. In addition, two poignant elements of socialisation could be further interrogated: the design studio; and, the associated design jury. The design studio stands out as important, being the quintessential heart of architectural education, although it is apparent through this study, that its place within the schools is somewhat fragile. This places significant emphasis on the relationship between faculty, and students, and its influence on educational outcomes. Indeed, the description of this as a 'master-slave' relationship, suggests a strained relationship that is not conducive to reflective practice, nor towards a collegiate approach, as presented by Webster:

Only when experts begin to see themselves as co-learners engaged in a collective project to continually question and reconstruct architectural discourse, rather than as prophets whose role is to convert students into disciples, will architectural education become truly student centred (2007, p. 26)

Investigation of relationships and the influence would necessarily have to extend beyond the confines of the architecture schools, taking in the broader effects on students from other departments or faculties, as well as from practice. Further,

while this study did not directly investigate the transition into the workplace, student perceptions of life after architecture school did provide some indication of the possible ramifications of socialisation on post graduation activities. With many students indicating lofty goals on graduation, such an investigation would form a substantial study on its own. Further, while some aspects of the study sought to compare positions of faculty and students, this was not fully investigated in this study. Notwithstanding, positions of faculty and students, as part of the socialisation process, may provide an intriguing perspective on the processes of socialisation in architectural education. A final, but particularly important area for investigation, relates to an indication of a possible cultural inversion within architectural education, which could make for an important investigation of the formulation of subcultures within professional education.

8.6 Summary

This study has provided an appraisal of socialisation in the context of architectural education in East Africa. Through a mixed method approach, the research uncovered several pertinent factors that affect socialisation within architectural education, but linked to this particular socio-cultural context. The relationship between stakeholders, and the nature of socialisation that emerged, formed an essential part of architectural education in the unique setting of East Africa, occasionally taking a dominant position to the explicit curriculum; thus, perpetuating established and deep rooted ideals. The study also exposed a significant divide between expectations of architectural education, held by those seeking entry into architectural education, and what was professed by faculty, or the wider architecture community. Indeed, lack of clarity about what architecture entailed, and more important, the lack of a clear idea of the roles ascribed to allied professionals, contributed to the socialising of students into a scenario of educational obsolescence. This finding aligns with those of similar studies across the globe, as was evident through the literature review.

Acknowledging that architectural education is more than just the unquestioned transmission of knowledge and skills associated with the practice of architecture, but is also about the effective growth and development of individuals, formed a key element in this discourse on socialisation. The importance of the tacit aspects of the educational process, key to the socialisation of individuals thus emerges. As noted by Eraut, “implicit knowledge can be very powerful indeed even when, [...] explicit knowledge is available by the bucketful” (2000, p. 122). In the context of East Africa, where a strong patriarchal approach persists within education, a narrow antiquated view of architecture was found, into which students were being

socialised. A key question that must be asked, related to the impact this process could have on the the architecture profession, for which Weisman points out:

The fundamental question facing architecture education and practice today is not how better to train further architects to compete against one another in a diminishing job market and professional role; but, rather, how to improve the quality of architectural education and practice as inherently, life-affirming models for understanding the world at large, and each person's special 'belongingness' to it (1996, p. 273).

In this regard, the findings of this thesis support the proposition by Hartenberger et al. (2013, p. 67) who called for greater attention to tacit skills in built environment education, recognising that these aspects of education may be of greater significance in the development of behaviour and long term activities of professionals, than the explicit elements of architectural curricula. Further, as knowledge and ideas are constructed based on our experiences and education, emphasis on an unchanging and static educational system, effectively created a perception of the future as:

[...] a conservative extrapolation of the past. In this mindset, everything changes slowly, linearly, and predictably. This perspective encourages a strong adherence to inherited beliefs, methods, technologies, and social rules. Education means to reproduce the time honoured model of the world. Teaching is the handing down of existing knowledge to the next generation (Bermudez, 1999, p. 3).

In a related proposal, Boyer & Mitgang suggested such an approach be replaced, calling for a shift from architectural curricula “[...] organized not so much around blocks of knowledge, as around modes of thinking - discovery, application, integration, and sharing of knowledge” (1996, p. 63). In the context of East Africa, this would imply a change to the relationship between key stakeholders in architectural education, particularly between faculty, students, and professionals. As a means of redressing some of the evident challenges revealed through this investigation of socialisation in architectural education, this could encourage a move toward a transformational learning environment as presented by Chilcott (1987).

As a key factor in the formulation of students' values, both prior to entry into architectural education, and as part of the educational process, serving to build conflicts and tensions among stakeholders, socialisation within architectural education should not be taken for granted. An appreciation of socialisation, is thus not only crucial in the understanding of the inherent processes that occur within architectural education, but is also an important means of evaluating the success of professional architectural education. Socialisation in this thesis, was found to be an integral part of architectural education, and far from being a puzzling phenomenon that is ignored and taken for granted, should be actively engaged with as a fundamental and integral component of architectural education.

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9.0 Bibliography

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Appendices

Appendix 1: Structure of Architecture Programmes

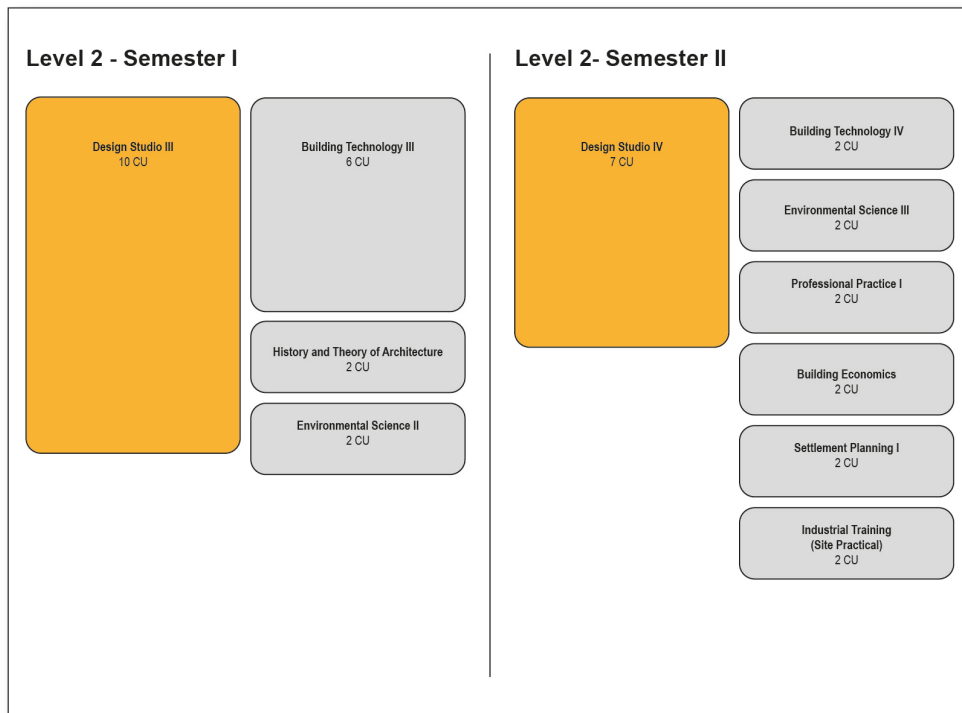
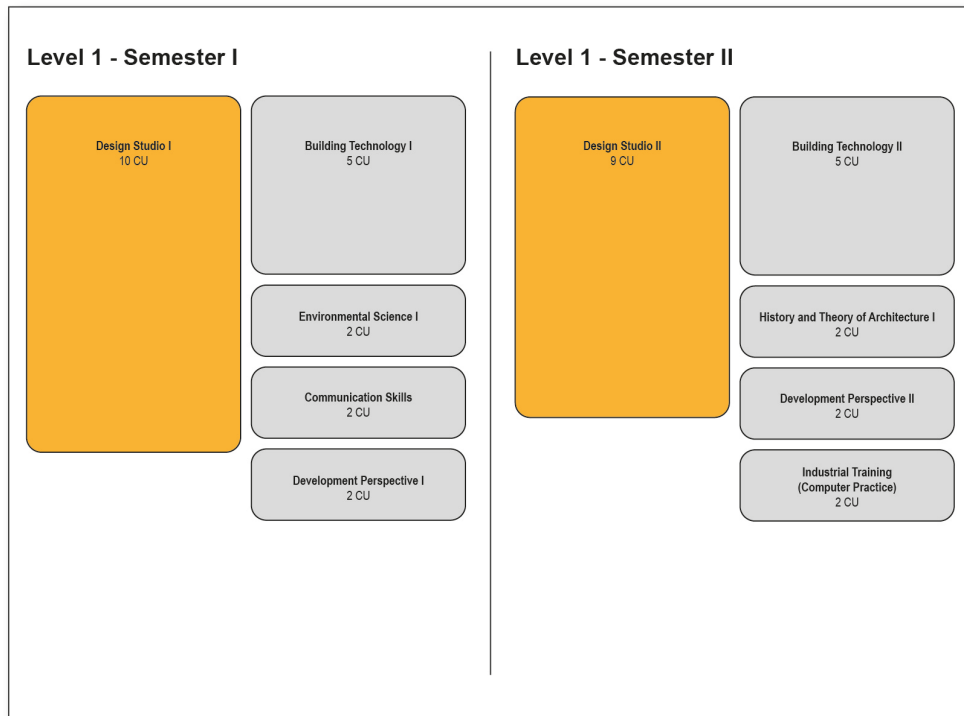
School 1 - Course Units

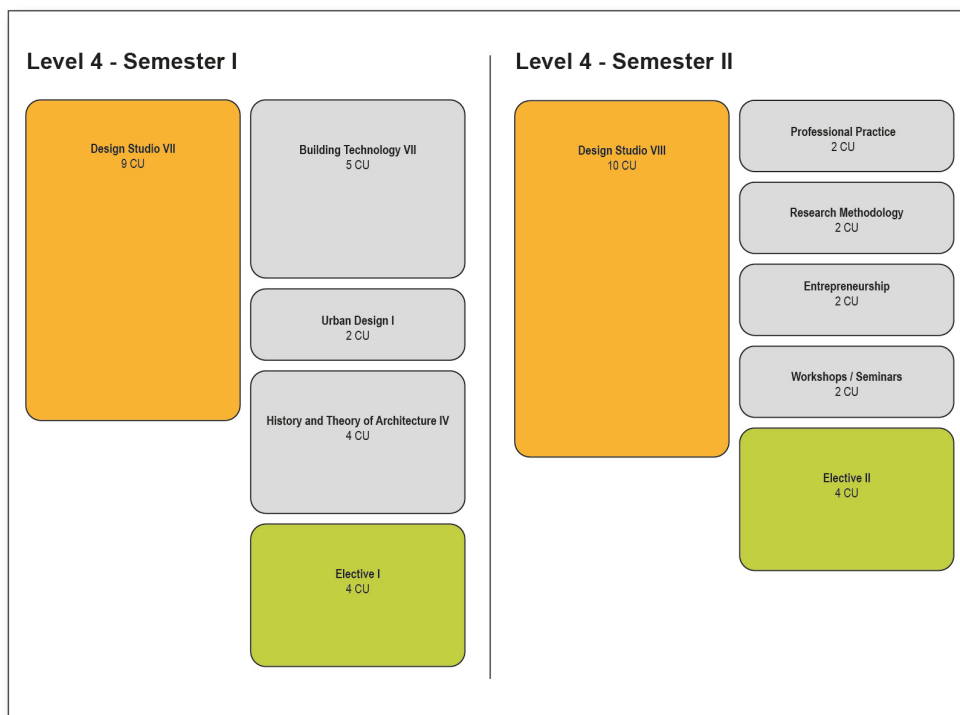
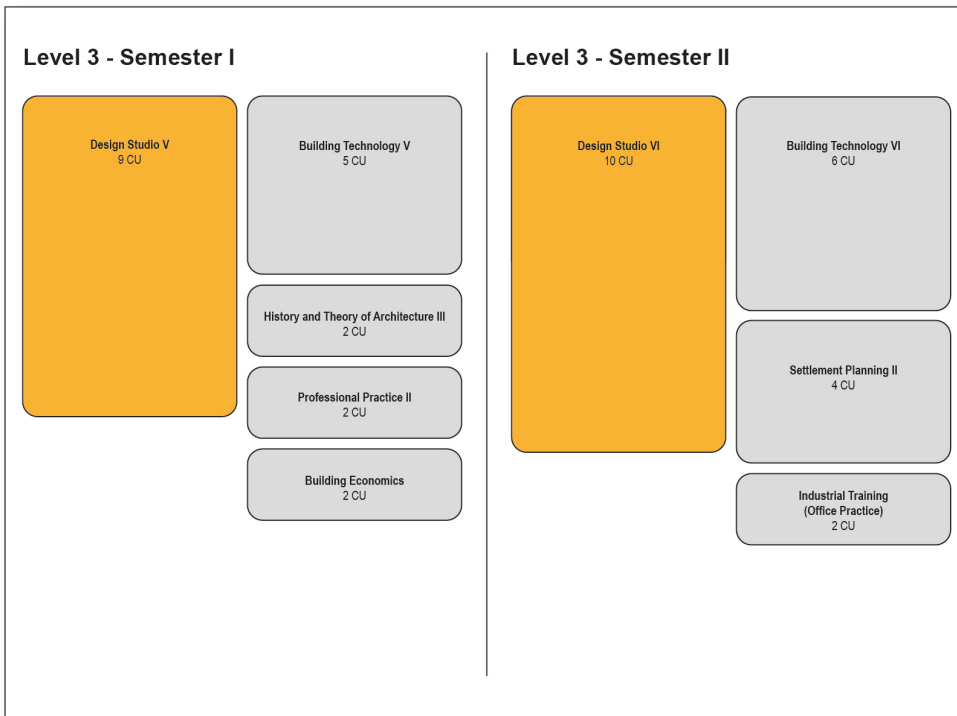
B.Arch. (Five Years) - Part I & Part II

YEAR	Semester I	CU	Hrs	Semester II	CU	Hrs
I	Design Studio I	10	300	Design Studio II	9	270
	Building Technology I	5	75	Building Technology II	5	75
	Environmental Science I	2	30	History and Theory of Architecture I	2	30
	Communication Skills	2	30	Development Perspective II	2	30
	Development Perspective I	2	30	IT (Computer Practice)	2	30
II	Design Studio III	10	300	Design Studio IV	7	210
	Building Technology III	6	90	Building Technology IV	2	30
	History and Theory of Architecture	2	30	Environmental Science III	2	30
	Environmental Science II	2	30	Professional Practice I	2	30
				Building Economics I	2	30
				Settlement Planning I	2	30
				IT (Site Practical)	2	
III	Design Studio V	9	270	Design Studio VI	10	270
	Building Technology V	5	75	Building Technology VI	6	80
	History and Theory of Architecture III	2	30	Settlement Planning II	4	60
	Professional Practice II	2	30	IT (Office Practice)	2	
	Building Economics II	2	30			
IV	Design Studio VII	9		Design Studio VIII	10	
	Building Technology VI	5		Professional Practice	2	
	Urban Design	2		Research Methodology	2	
	Elective I	4		Entrepreneurship	2	
	History and Theory of Architecture IV	4		(Workshops/Seminars)	2	
			Elective II	4		
V	Design Studio IX	6		Dissertation Part II	15	
	Dissertation Part I	9				

School 1 - Course Structure

B.Arch. (Five Years) - Part I & Part II





Level 5 - Semester I

Design Studio IX
6 CU

Dissertation I
9 CU

Level 5 - Semester II

Dissertation II
15 CU

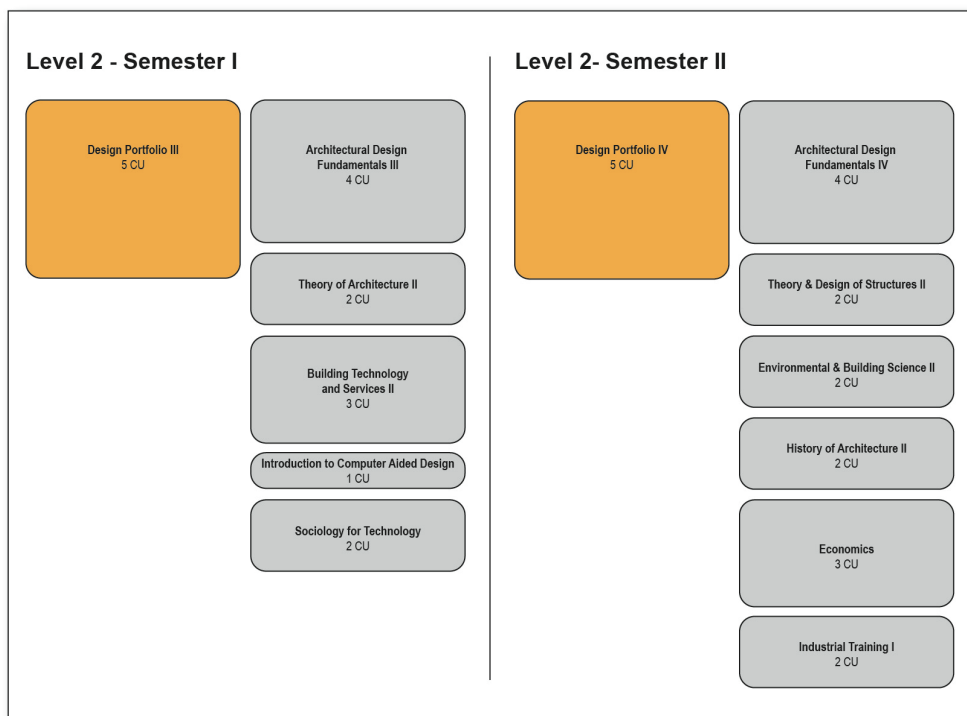
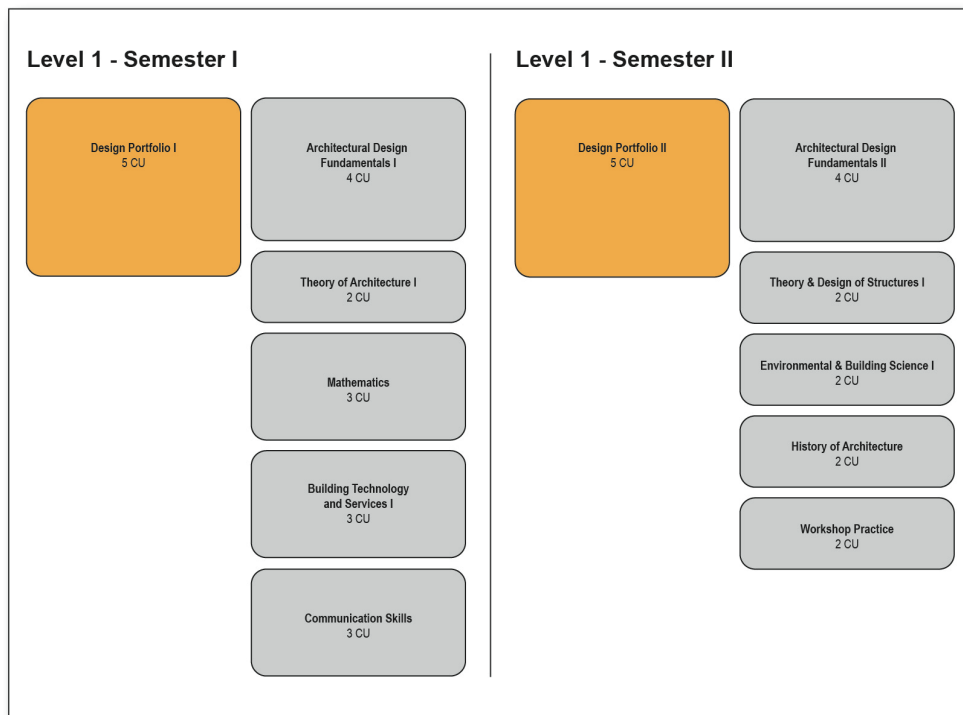
School 2 - Course Units

B.Arch. (Five Years) - Part I & Part II

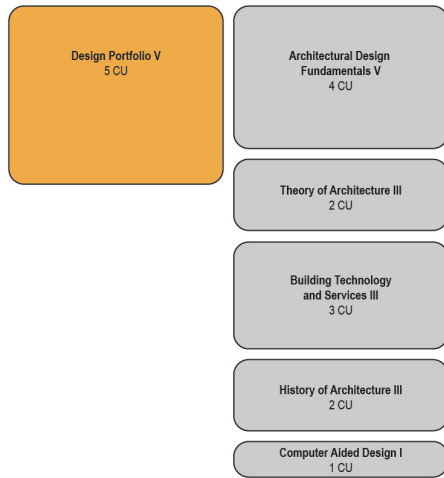
YEAR	Semester I	CU	Hrs	Semester II	CU	Hrs
I	Design Portfolio I Architectural Design Fundamentals I Theory of Architecture History of Architecture I Building Technology and Services I Communication Skills		75.0 60.0 30.0 30.0 45.0 30.0	Design Portfolio II Architectural Design Fundamentals II Theory & Design of Structures I Environmental and Building Science I Economics		75.0 60.0 30.0 30.0 30.0
II	Design Portfolio III Architectural Design Fundamentals III Theory of Architecture II History of Architecture II Building Technology and Services II Introduction to Computer Aided Design Measured Drawing		75.0 60.0 30.0 30.0 45.0 15.0 30.0	Design Portfolio IV Architectural Design Fundamentals IV Theory & Design of Structures II Environmental Building Science II Sociology		75.0 90.0 30.0 30.0 30.0
III	Architectural Design Portfolio V Architectural Design Fundamentals V Theory of Architecture III Building Technology and Services III History of Architecture II Computer-Aided Design I Industrial Training I		75.0 60.0 30.0 45.0 30.0 15.0 30.0	Design Portfolio VI Architectural Design Fundamentals VI Theory & Design of Structures III Construction Management Environmental Building Science III		75.0 60.0 30.0 30.0 30.0
IV	Design Portfolio VII Urban and Regional Planning Landscape Design Computer Aided Design II Elective Industrial Training II		90.0 60.0 30.0 15.0 30.0 30.0	Design Portfolio VIII Interior and Furniture Design Building Economics Elective		90.0 60.0 45.0 30.0
V	Written Thesis Professional Practice Architectural Project Management Industrial Training III		150.0 30.0 30.0 30.0	Design Thesis		225.0

School 2 - Course Structure

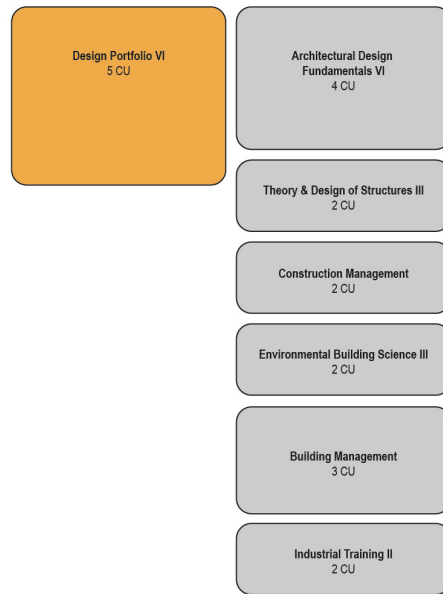
B.Arch. (Five Years) - Part I & Part II



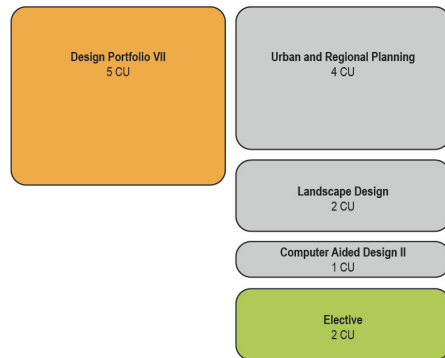
Level 3 - Semester I



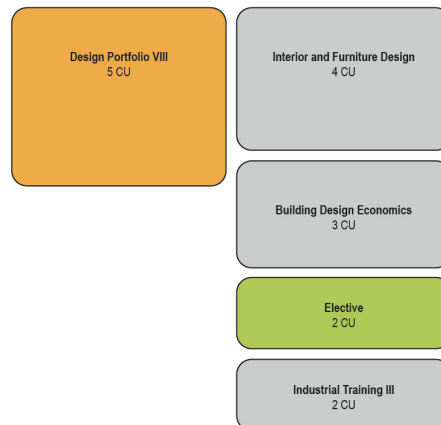
Level 3 - Semester II



Level 4 - Semester I



Level 4 - Semester II



Level 5 - Semester I

Architectural Project Report
10 CU

Professional Practice
2 CU

Project Management
2 CU

Level 5 - Semester II

Design Thesis
15 CU

School 3 - Course Units

B.Envi.Des. (Three Years) - Part I

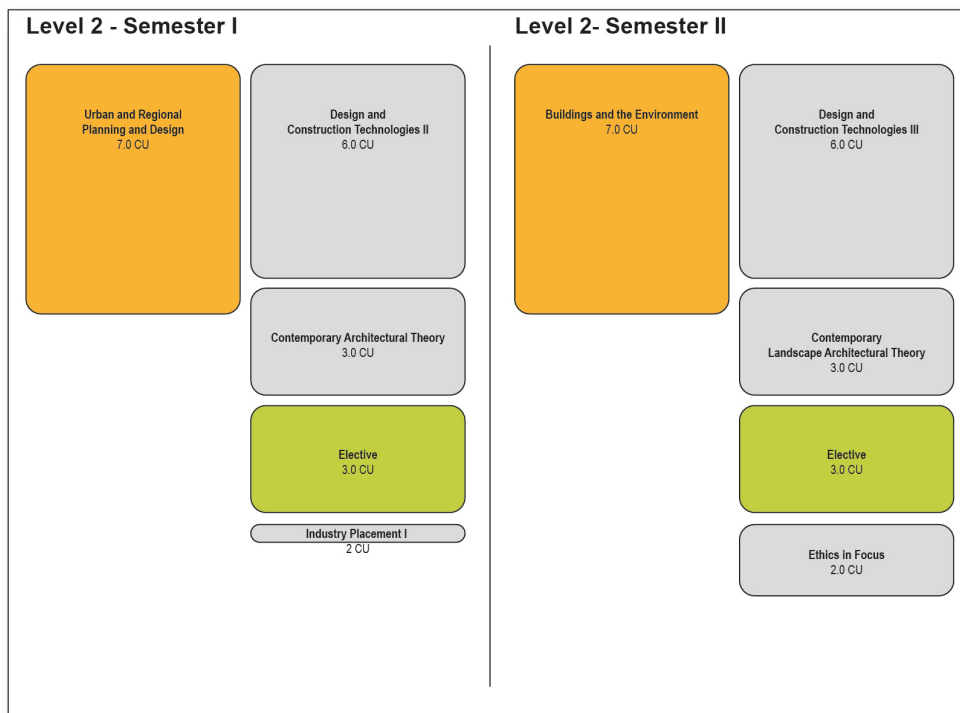
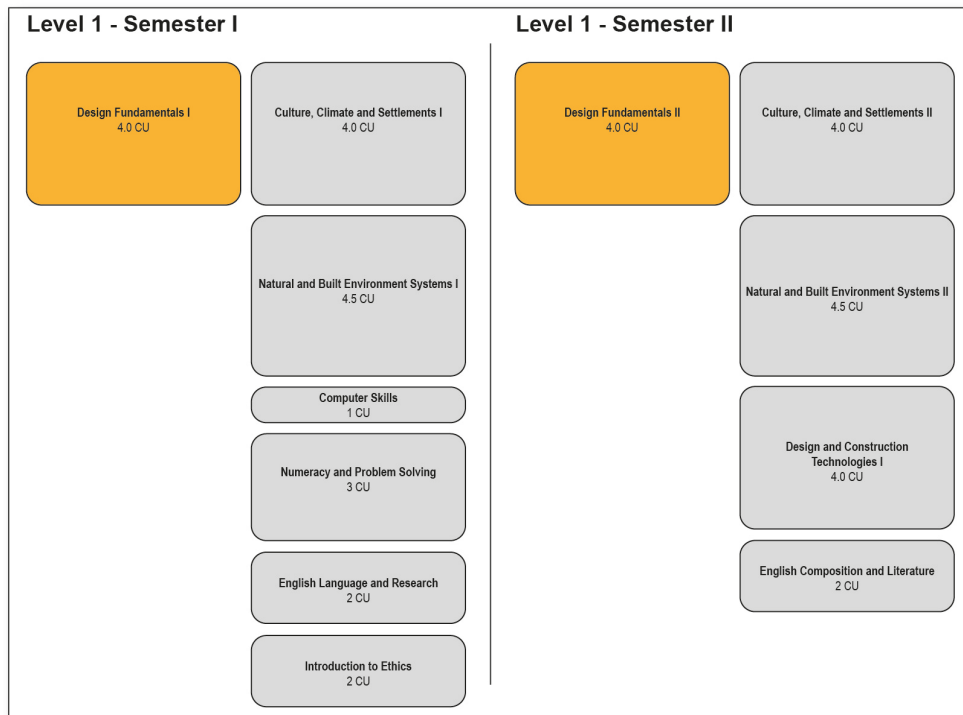
PART I						
YEAR	Semester I	CU	Hrs	Semester II	CU	Hrs
I	Culture Climate and Settlements I	4.0	60.0	Culture Climate and Settlements II	4.0	60.0
	Design Fundamentals I	4.0	60.0	Design Fundamentals I	4.0	60.0
	Natural and Built Environment Systems I	4.5	67.5	Natural and Built Environment Systems I	4.5	67.5
	Computer Skills	1.0	15.0	Design and Construction Technologies I	4.0	67.5
	English Language and Research	2.0	30.0	English Composition and Literature	2.0	30.0
	Introduction to Ethics	2.0	30.0			
	Numeracy and Problem Solving	3.0	45.0			
II	Urban and Regional Systems	7.0	105.0	Buildings and the Environment	7.0	105.0
	Design and Construction Technologies II	6.0	90.0	Design and Construction Technologies III	6.0	90.0
	Contemporary Architectural Theory	3.0	45.0	Contemporary Landscape Arch. Theory	3.0	45.0
	Special Topics in Design IIA	3.0	45.0	Special Topics in Design IIB	3.0	45.0
	Industry Placement I	0.5		Ethics in Focus	2.0	30.0
III	Sustainable Built Environments	8.0	105.0	Architecture Design Project	10.0	150.0
	Design and Construction Tech. IV	7.0	97.5	Design and Construction Technologies V	7.0	97.5
	Business Ethics	2.0	30.0	Special Topics in Design IIIB	3.0	45.0
	Special Topics in Design IIIA	3.0	45.0			
	Industry Placement I	0.5				

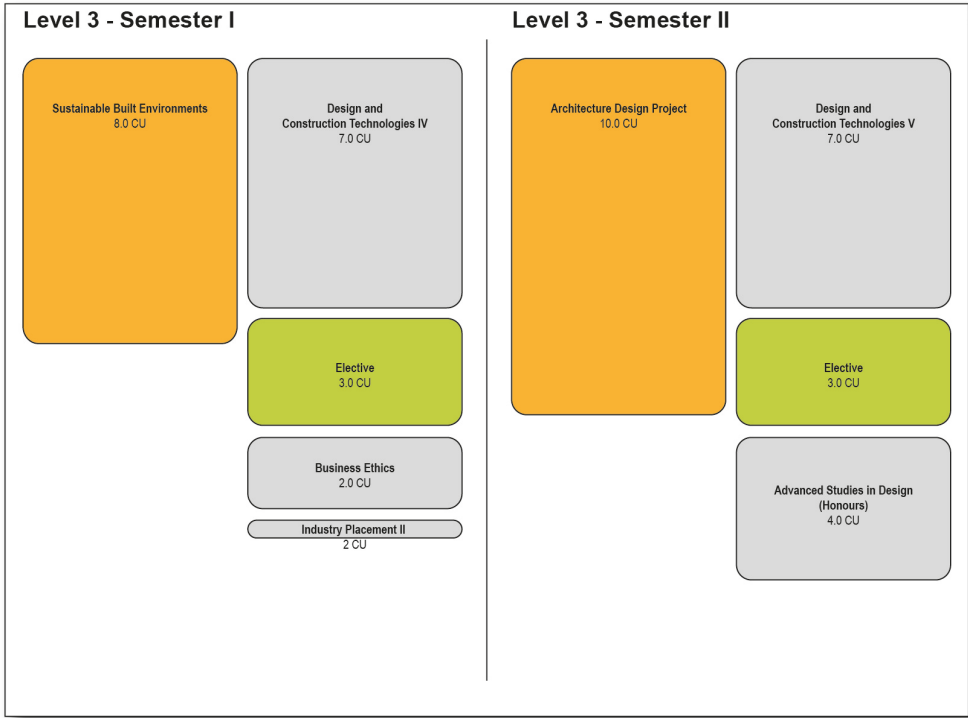
M.Arch. (Two Years) - Part II

PART II						
YEAR	Semester I	CU	Hrs	Semester II	CU	Hrs
IV	Architecture Studio A	10.0	150.0	Architecture Studio B	10.0	150.0
	Landscape Architecture Studio	10.0	150.0	Architecture Studio E	10.0	150.0
V	Architecture Studio C	10.0	150.0	Architecture Project	12.5	187.5
	Architecture Masters Seminar A	5.0	75.0	Architecture Masters Seminar B	7.5	112.5
	Prof. Practice / Practice Management	5.0	75.0			

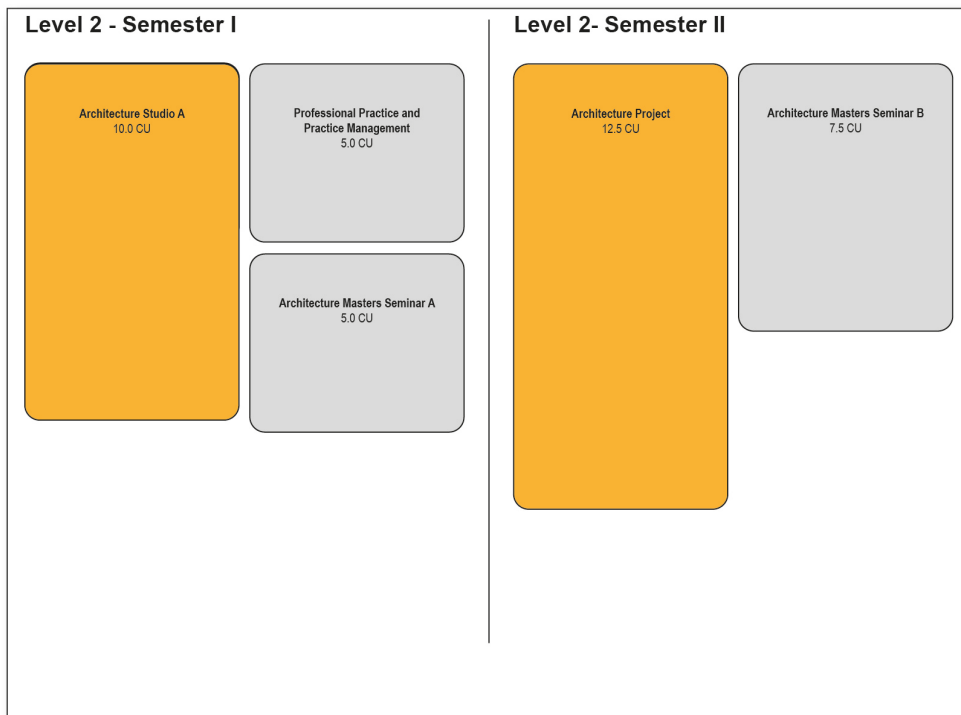
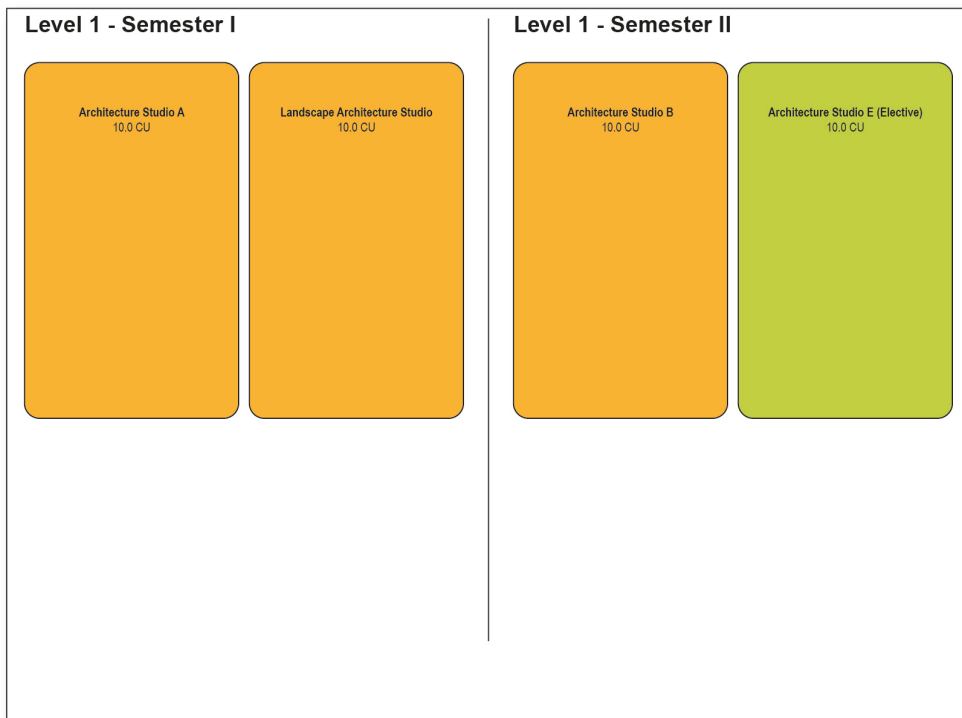
School 3 - Course Structure

B.Envi.Des. (Three Years) - Part I





M.Arch. (Two Years) - Part II



School 4 - Course Units

B.Arch.St. (Four Years) - Part I

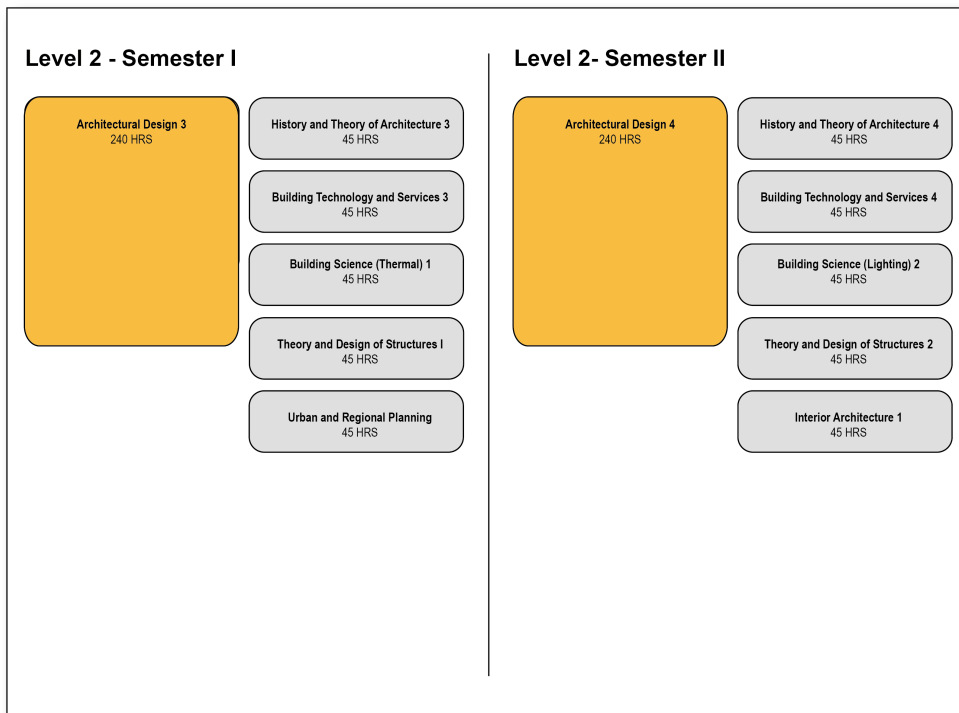
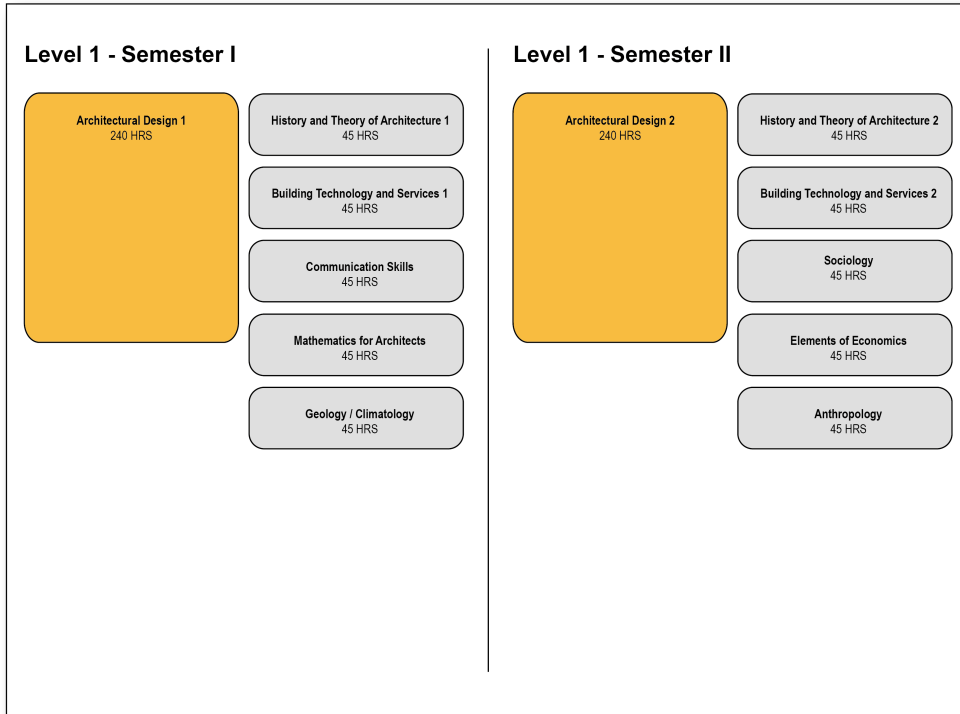
PART I						
YEAR	Semester I	CU	Hrs	Semester II	CU	Hrs
I	Communication Skills Building Technology and Services 1 History and Theory of Architecture 1 Mathematics for Architecture Geology / Climatology Architectural Design 1		45 45 45 45 45 240	Building Technology and Services 2 History and Theory of Architecture 2 Sociology Elements of Economics Anthropology Architectural Design 2		45 45 45 45 45 240
II	Building Technology and Services 3 History and Theory of Architecture 3 Building Science 1 (Thermal Design) Theory and Design of Structures 1 Urban and Regional Planning Architectural Design 3		45 45 45 45 45 240	Building Technology and Services 4 History and Theory of Architecture 4 Building Science 2 (Lighting Design) Theory and Design of Structures 2 Interior Architecture 1 Architectural Design 4		45 45 45 45 45 240
III	Building Technology and Services 5 Theory and Design of Structures 3 Landscape Architecture 1 Elements of Law Architectural Conservation Architectural Design 5		45 45 45 45 45 180	Building Technology and Services 6 History and Theory of Architecture 5 Surveying Building Science 3 (Acoustics) Housing and Human Settlements Architectural Design 6 Elective		45 45 45 45 45 180 45
IV	Architectural Research Methods Building Costs Principles of Management Architectural Design 7 Elective		45 45 45 180 45	Design Project		360

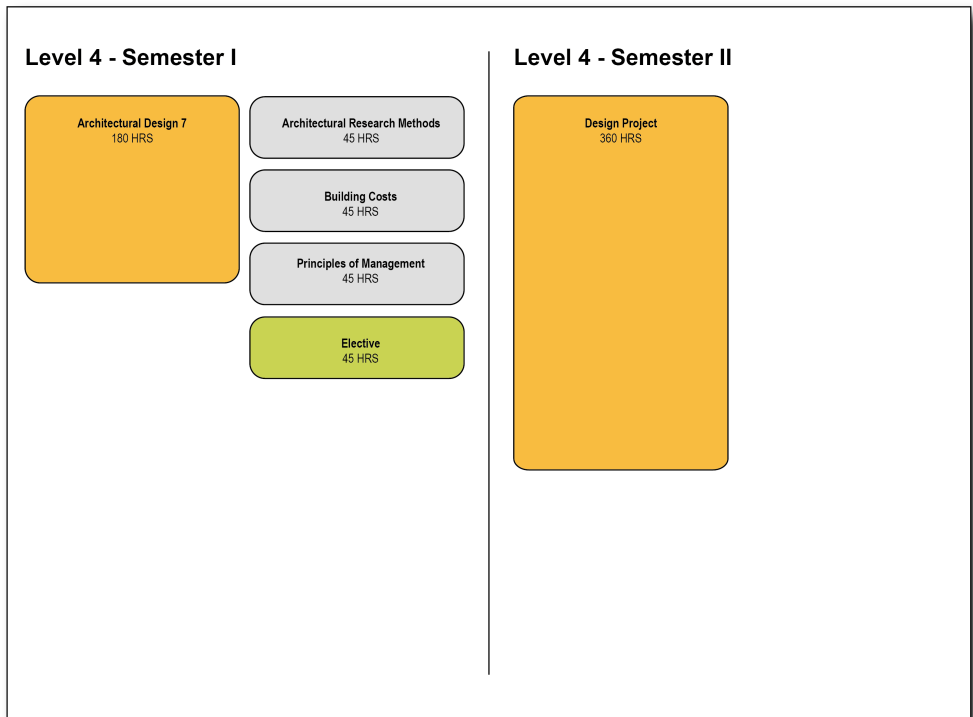
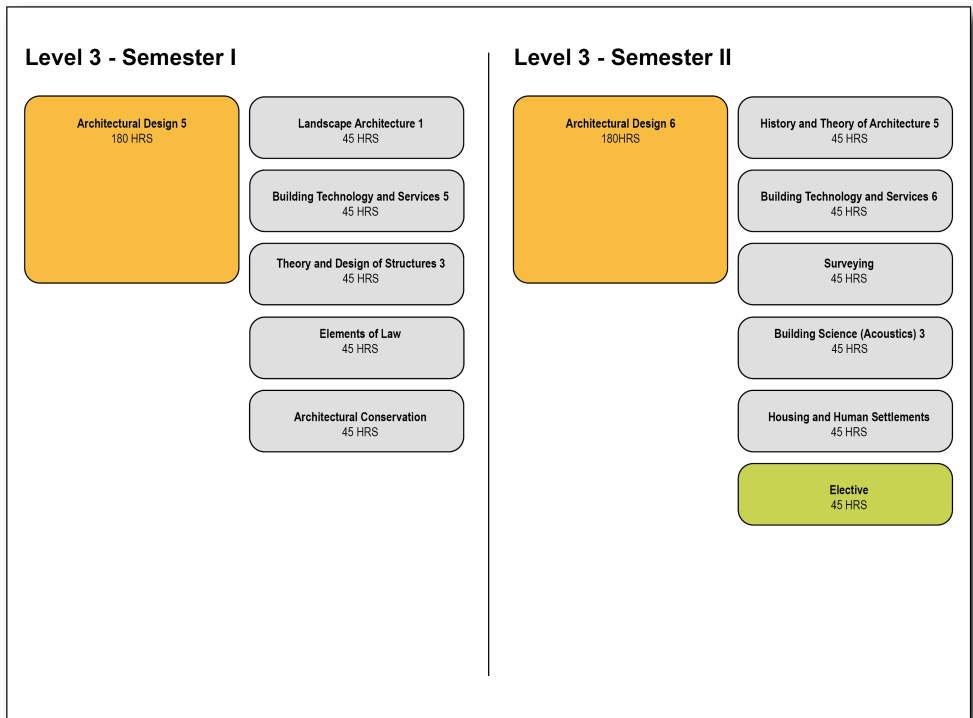
B.Arch. (Two Years) - Part II

PART II						
YEAR	Semester I	CU	Hrs	Semester II	CU	Hrs
V	Architectural Practice and Management Advanced Building Technology Sustainable Design Advanced Architectural Design I		45 45 45 240	Urban Design Advanced Architectural Computing Contemporary Architectural Theory Advanced Architectural Design 2		45 45 45 240
VI	Research Project Design Project		180 360	Research Project Design Project		180 360

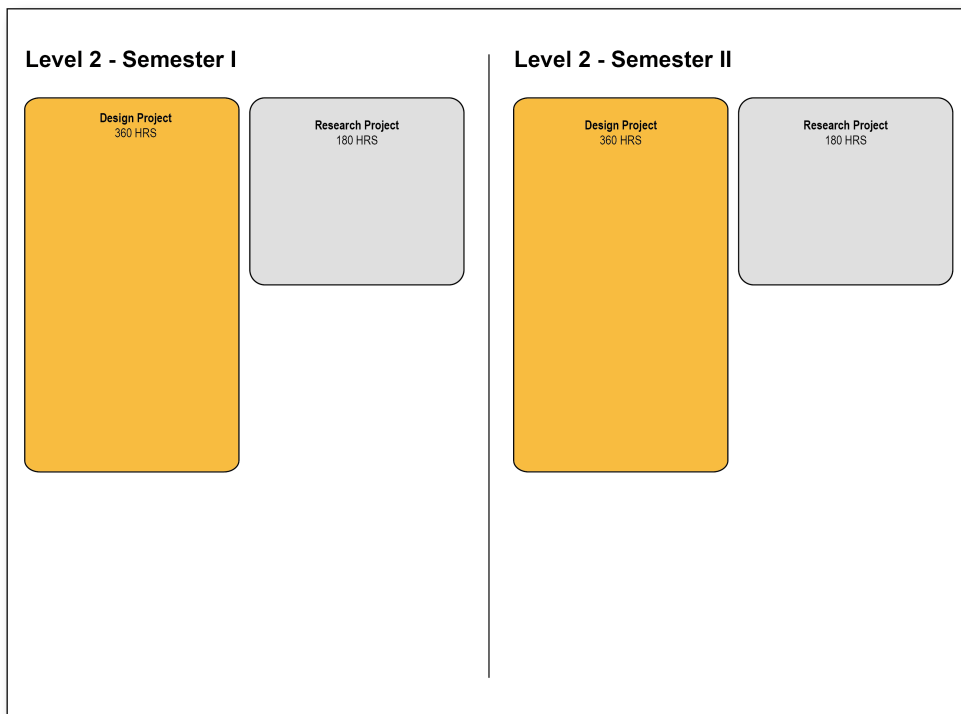
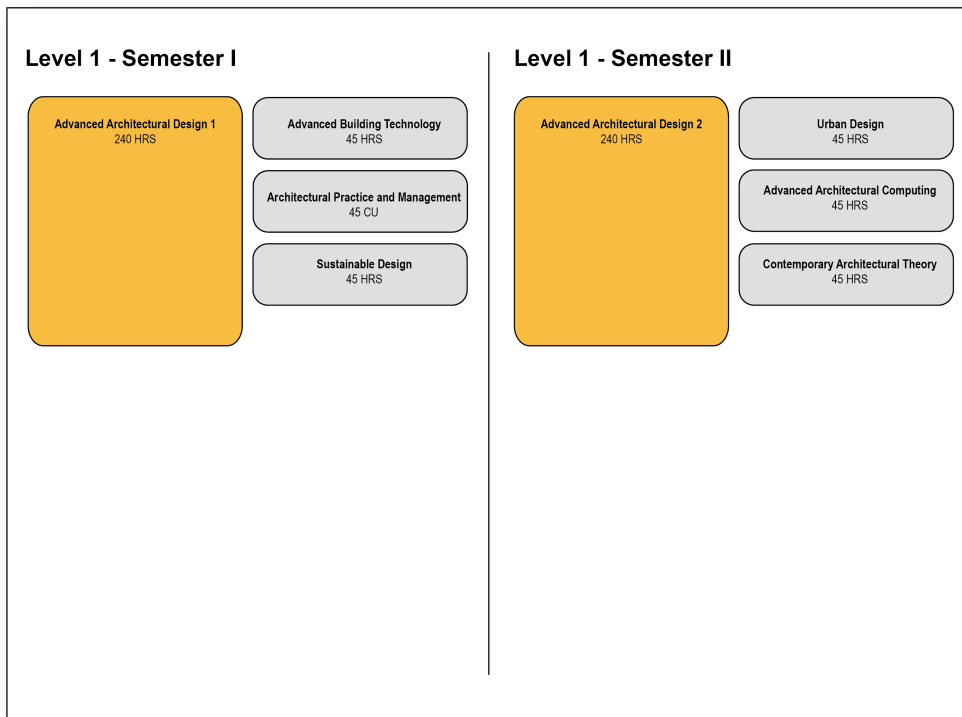
School 4 - Course Structure

B.Arch.St. (Four Years) - Part I





B.Arch. (Two Years) - Part II



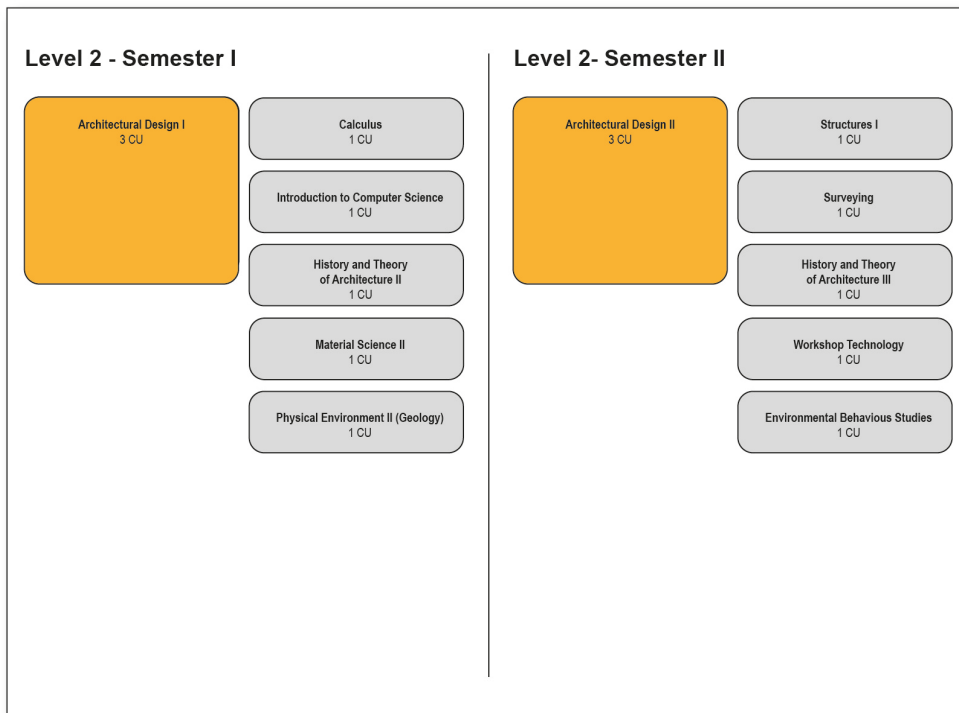
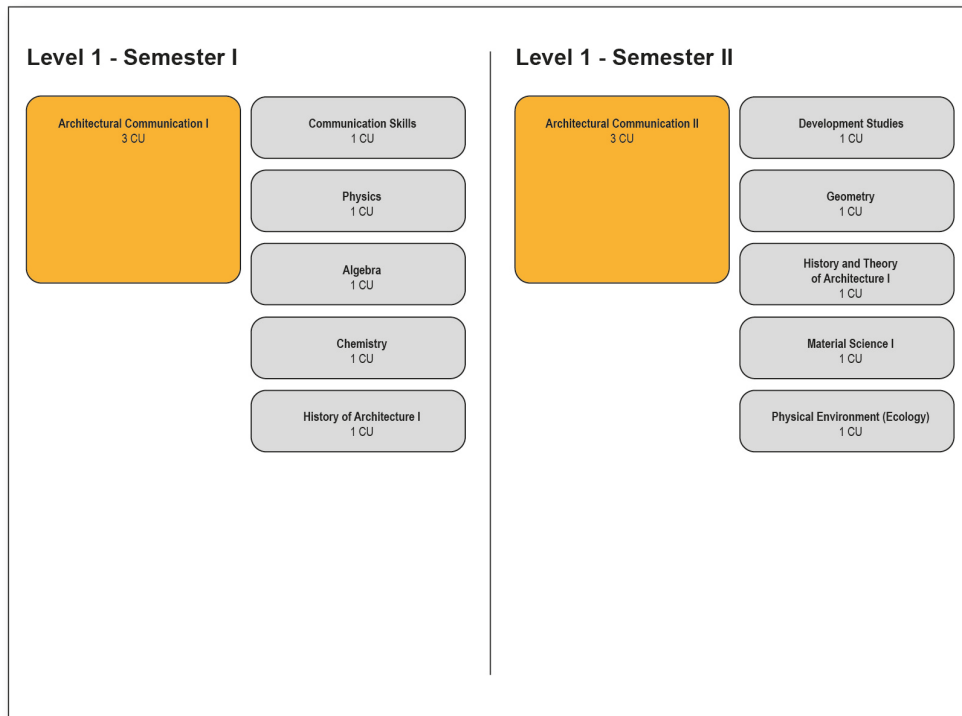
School 5 - Course Units

B.Arch. (Six Years) - Part I & Part II

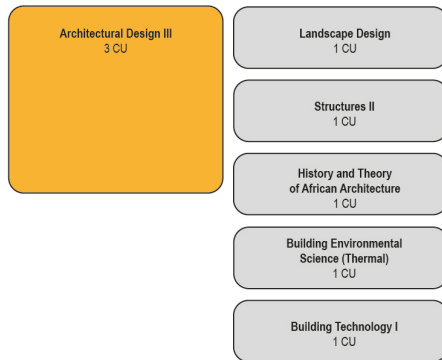
YEAR	Semester I	CU	Hrs	Semester II	CU	Hrs
I	Communication Skills Physics Algebra Chemistry History of Architecture I Architectural Communication I		35 35 35 35 35 105	Development Studies Geometry History and Theory of Architecture I Material Science I Physical Environment (Ecology) Architectural Communication II		35 35 35 35 35 105
II	Calculus Introduction to Computer Science History & Theory of Architecture II Material Science II Physical Environment II (Geology) Architectural Design I		35 35 35 35 35 105	Structures I Surveying History & Theory of Architecture III Workshop Technology I Environmental Behaviour Study Architectural Design II Practical Attachment I		35 35 35 35 35 105
III	Landscape Design Structures II History & Theory of African Arch. Building Env. Science (Thermal) Building Technology I Architectural Design III		35 35 35 35 35 105	Computer Aided Design (CAD) Structures III History of Architecture III Building Env. Science II (Lighting) Building Technology II Architectural Design IV Practical Attachment II		35 35 35 35 35 105
IV	Economics for Designers Structures IV Building Env. Science III (Sound) Urban and Regional Planning Building Services Architectural Design V & Int. Design		35 35 35 35 35 105	Building Economics Building Technology IV Statistics Urban Design Workshop Technology II Architectural Design VI Practical Attachment III		35 35 35 35 35 105
V	Research Methodology I Architectural Conservation Studies Management Human Settlement Env. Impact Assessment & Audit Architectural Design VII		35 35 35 35 35 105	Entrepreneurship Architectural Management Building Law Cost Planning and Control Research Methodology II Architectural Design VIII		35 35 35 35 35 105
VI	Research Thesis Project Project Programming		175 105	Design Thesis Project		280

School 5 - Course Structure

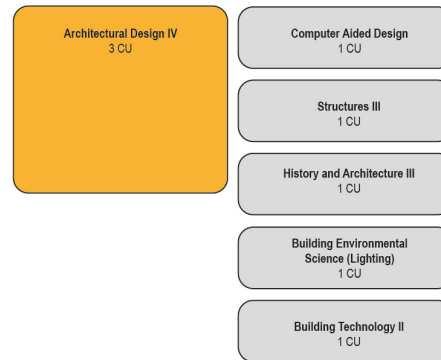
B.Arch. (Six Years) - Part I & Part II



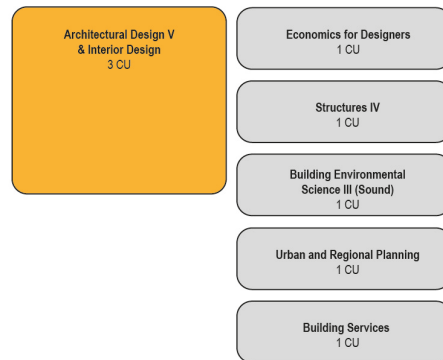
Level 3 - Semester I



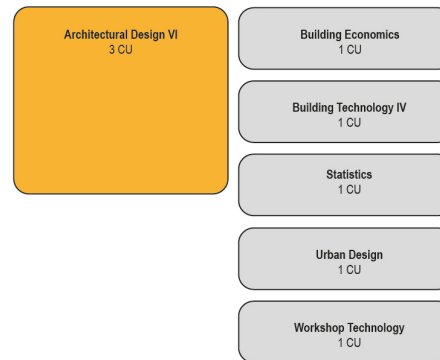
Level 3 - Semester II



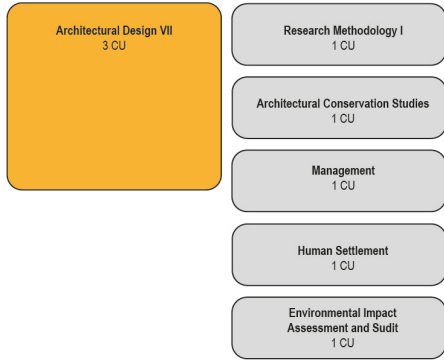
Level 4 - Semester I



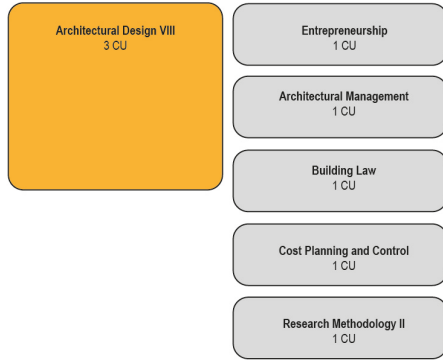
Level 4 - Semester II



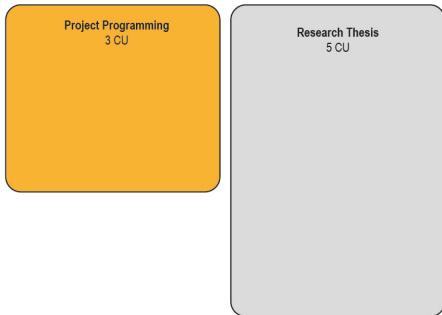
Level 5 - Semester I



Level 5 - Semester II



Level 6 - Semester I



Level 6 - Semester II



**Appendix 2: Architects Registration Board (United Kingdom)
Prescription of Qualifications: Parts 1 and 2**

GC1 - Ability to create architectural designs that satisfy both aesthetic and technical requirements.

GC2 - Adequate knowledge of the histories and theories of architecture and the related arts, technologies and human sciences.

GC3 - Knowledge of the fine arts as an influence on the quality of architectural design.

GC4 - Adequate knowledge of urban design, planning and the skills involved in the planning process.

GC5 - Understanding of the relationship between people and buildings, and between buildings and their environment, and the need to relate buildings and the spaces between them to human needs and scale.

GC6 - Understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors.

GC7 - Understanding of the methods of investigation and preparation of the brief for a design project.

GC8 - Understanding of the structural design, constructional and engineering problems associated with building design.

GC9 - Adequate knowledge of physical problems and technologies and the function of buildings so as to provide them with internal conditions of comfort and protection against the climate.

GC10 - The necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations.

GC11 - Adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.

**Appendix 3: Commonwealth Association of Architects
Validation Criteria for Validated Courses**

A.2.1 Validated courses of study must be balanced between the theoretical and practical aspects of architectural training and shall ensure the acquisition of:

A.2.1.1 - An ability to create comprehensive architectural designs that satisfy aesthetic, cultural, functional and technical requirements and are sustainable, and the ability to translate such designs into construction documents;

A.2.1.2 - Adequate personal and professional skills including communication (written, oral, aural, graphic, electronic, etc), information technology, personal effectiveness, problem-solving, and teamwork (including working with other disciplines and non-professionals);

A.2.1.3 - An adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences;

A.2.1.4 - A knowledge of the fine arts as an influence on the quality of architectural design;

A.2.1.5 - An adequate knowledge of urban design, planning and the skills involved in the planning process;

A.2.1.6 - An understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale with adequate knowledge of the means to produce safe environments accessible to people of varying physical and mental abilities;

A.2.1.7 - An adequate knowledge of the means of achieving environmentally sustainable design;

A.2.1.8. - An understanding of the profession of architecture and the role of the architect in society, in particular, in preparing briefs that take account of social factors;

A.2.1.9 - An understanding of the methods of investigation and preparation of the brief for a design project;

A.2.1.10 - An understanding of the structural design, constructional and engineering problems associated with building design;

A.2.1.11 - An adequate knowledge of physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate;

A.2.1.12 - The necessary design skills to meet the requirements of clients and building users within the constraints imposed by cost factors and building regulations;

A.2.1.13 - An adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning;

A.2.1.14 - An adequate knowledge of project financing and cost control;

A.2.1.15 - An adequate knowledge of procurement processes in the construction industry including building contracts and documentation.

Appendix 4 - Questionnaire

Questionnaire on Professional Architecture Education in East Africa

Dear Colleague,

I would like to invite you to participate in a research project on *Architecture Education in East Africa*.

I am currently undertaking my doctoral research based at the Welsh School of Architecture, at Cardiff University. I am undertaking research in the area of Architecture Education in the context of East Africa. This questionnaire seeks to garner information from Faculty, Students, Recent Graduates and Practitioners.

The objectives of the study are to:

1. Gather and share information regarding professional architecture education in East Africa;
2. Review the current and future direction of architecture education;
3. Investigate the Framework within which architecture education is carried out.

I would be grateful if you could spend a few minutes completing the attached questionnaire, and return them to me at your earliest convenience. The questionnaire contains two main sections: the first is concerned with the Educational Criteria for Architecture Education, and your perceptions of the relative importance of the different criteria taken from the Uganda Society of Architects Education Policy (2006). The section is divided into the three sub sections (Design Integration, Knowledge and Skills). For each criterion, please rank the relative importance of each statement, with One (1) as the most important. You may also provide comments about architecture education in the second section. General information to enable the classification and analyse the data should be entered in the final section.

The completed questionnaire should be forwarded to me by email at: <sarmro@cf.ac.uk>, or <molweny@umu.ac.ug>, or in hard copy c/o the Faculty of the Built Environment, Uganda Martyrs University, c/o Rubaga Office, Kampala.

Should you require any further information, or have questions about the survey, please do not hesitate to contact me.

Thanking you for your time.

Mark Olweny

PhD Candidate
Welsh School of Architecture
Cardiff University
Bute Building, King Edward VII Avenue
Cardiff, Wales, CF10 3NB

Email: sarmro@cf.ac.uk, or:
molweny@umu.ac.ug.

Should you wish to receive a copy of the results of the study, kindly include your e-mail address in the box adjacent:	
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I kindly ask you to deliver the completed form as soon as possible and not later than **Friday 14th, August 2009** using the details given above. Prompt responses will facilitate effective organisation and compilation of the data.

All responses will be treated in the strictest confidence.

1 of 7

Part I – Education Criteria

Design Integration

	Ranking (1 – 9)
1. An ability to create Architectural designs that satisfy both aesthetic and technical requirements and aim to be environmental sustainable.	
2. An ability to engage imagination and to think creatively.	
3. An ability to exercise problem definition and formulate strategies for action.	
4. An ability to gather information and apply analysis and critical judgment.	
5. An ability to utilise divergence, speculation, iteration and reflection in the elucidation of issues	
6. An ability to define personal values systems and ethical positions.	
7. An ability to reconcile divergent factors and integrate domains of knowledge in the creation of a design solution.	
8. An understanding of the processes of working within a team and how to collaborate with others in the development of a design solution.	
9. An understanding of the sources of specialist information and expertise, when to seek such advice, and how to evaluate and apply it.	

Knowledge:

History and Theory Studies

	Ranking (1 – 4)
1. An ability to inform action through knowledge of architectural design theory and methods.	
2. An understanding of design procedures and systems and the history of design methods.	
3. An understanding of issues of heritage and conservation in the built environment	
4. An awareness of world philosophical, cultural and political movements.	

Knowledge:

Design Studies

	Ranking (1 – 4)
1. An ability to inform action through knowledge of architectural design theory and methods.	
2. An understanding of design procedures and systems and the history of design methods.	
3. An understanding of design precedent, critique and analysis and movements in design theory.	
4. An understanding of tangible and intangible channels to architectural creativity.	

**Knowledge:
Environmental Studies**

	Ranking (1 – 7)
1. An adequate knowledge of means of achieving environmentally sustainable design.	
2. An understanding of issues of ecological sustainability and design for reduction of energy use and environmental impact.	
3. An understanding of the history and practice of urban design and issues of city planning.	
4. An understanding of passive systems for thermal comfort, lighting and acoustics and their relationship to active systems.	
5. An awareness of the cultural and spiritual dimension of place.	
6. An awareness of issues of national and regional planning and their relationship to global and local demography and resources.	
7. An awareness of landscape design and management of natural systems.	

**Knowledge:
User Studies**

	Ranking (1 – 6)
1. An ability to inform action through knowledge of society, clients and users.	
2. An ability to receive and/or develop a project brief through definition of the needs of clients, the public and users.	
3. An understanding of the social context in which built environments are procured and responsibilities to clients, the public and users.	
4. An understanding of the process of research and definition of functional requirements for differing types of built environments.	
5. An understanding of ergonomic and space requirements in the design of built environments and issues of equity and access.	
6. An awareness of the relevant codes, regulations and standards for planning, design, construction, health, safety and use of built environments.	

Knowledge:
Technical Studies

	Ranking (1 – 8)
1. An ability to inform action through technical knowledge of structure, materials, construction and services systems.	
2. An understanding of the process of technical design and the integration of structure, construction technologies and services systems into a functionally effective whole.	
3. An understanding of the principles of structure and their application to the design of built environments.	
4. An understanding of building materials, components systems and products and the construction techniques of their assembly.	
5. An understanding of active services systems for thermal comfort, lighting and acoustics and their relationship to natural systems.	
6. An understanding of the role of technical documentation and specifications in design realization.	
7. An awareness of technical systems and requirements for transport, communication, maintenance and safety within built environments.	
8. An awareness of processes of construction cost planning and control.	

Knowledge:
Implementation Studies

	Ranking (1 – 7)
1. An ability to inform action through knowledge of the professional, business, financial and legal contexts within which built environments are procured.	
2. An understanding of the conventional building project cycle and the roles and responsibilities of the architect and other participants.	
3. An understanding of the principles of business management and their application to the development of built environments project procurement and the operation of a professional consultancy.	
4. An understanding of the legal responsibilities of an architect with regard to registration, practice and building contracts.	
5. An understanding of professional ethics and codes of conduct as they apply to the practice of architecture.	
6. An awareness of the operations of the construction and development industries, property development, financial dynamics, real estate investment, alternative methods of procurement and facilities management.	
7. An awareness of the potential roles for architects within conventional and in new areas of activity and within an international context.	

Skills

	Ranking (1 – 6)
1. An ability to effect action or communicate ideas through the exercise of skills of collaboration speaking, writing, drawing, modelling and evaluation.	
2. An ability to utilise graphic and model making to explore, develop, define and communicate a design proposal.	
3. An ability to prepare and read design drawings and visual presentations using manual and/or electronic means.	
4. An ability to prepare and read technical construction drawings and documentation using manual and/or electronic means.	
5. An understanding of the growing theory of representation and how communication methods are integrally ties to methods and outcomes.	
6. An understanding of the use of systems of evaluation using manual and/or electronic means for the assessment of the performance of built environments (eg thermal, energy, structural, lighting etc.).	

Overall Education Categories

	Ranking (1 – 8)
1. Design Integration	
2. History and Theory Studies	
3. Design Studies	
4. Environmental Studies	
5. User Studies	
6. Technical Studies.	
7. Implementation Studies	
8. Skills	

Additional Comments

9. If you have any additional comments, please include them in the space below.

Part II – Contextual Data

Your Age Group

What is your Age?			
21 – 25		46 – 50	
26 – 30		51 – 55	
31 – 35		56 – 60	
36 – 40		61 – 65	
40 – 45		65 +	

Your Architectural Education

At which institution did you gain your professional qualification in architecture?		What was the nomenclature of your professional qualification	
University of Nairobi		Bachelor of Architecture	
Jomo Kenyatta University of Agriculture and Technology		Diploma in Architecture	
University of Dar-es-Salaam		Master of Architecture	
Makerere University		Master of Science (Architecture)	
Uganda Martyrs University		Diplom-Ingenieur (Architekt)	
Other (Please Specify)		Other (Please Specify)	
Year of Graduation?			

Your Professional Memberships:

Please indicate the professional organisation at which you hold professional recognition in architecture.		Highest degree obtained (Post professional)	
Architectural Association of Kenya (AAK)		Bachelors	
Architectural Association of Tanzania (AAT)		Post Graduate Diploma	
Uganda Society of Architects (USA)		Masters	
Royal Institute of British Architects (RIBA)		Doctorate.	
Other (Please Specify)		Other (Please Specify)	
Current membership category (in Primary Organisation)		Year obtained	

Background Information

Employment Status			
Academic		Practice	
<i>Full Time</i> <i>Part Time / Half Time</i> <i>Sessional</i>		<i>Full Time</i> <i>Part Time / Half Time</i> <i>Unemployed</i>	
Place of Employment City / Town	Country	Sex Male	Female

Thank you for your time. I kindly ask you to deliver as soon as possible by e-mail to sarmro@cf.ac.uk and not later than Friday 29th, July 2011. Prompt responses will facilitate effective completion of the research.

All responses will be treated in the strictest confidence.

Appendix 5: Questionnaire Results

Ranking - Design Integration Assessment Categories

	Score	Rank
An ability to create Architectural designs that satisfy both aesthetic and technical requirements and aim to be environmental sustainable.	2.25	1
An ability to engage imagination and to think creatively.	3.25	2
An ability to exercise problem definition and formulate strategies for action.	4.31	3
An ability to gather information and apply analysis and critical judgment.	4.47	4
An ability to utilise divergence, speculation, iteration and reflection in the elucidation of issues	6.71	8
An ability to define personal values systems and ethical positions.	5.38	6
An ability to reconcile divergent factors and integrate domains of knowledge in the creation of a design solution.	5.18	5
An understanding of the processes of working within a team and how to collaborate with others in the development of a design solution.	5.18	5
An understanding of the sources of specialist information and expertise, when to seek such advice, and how to evaluate and apply it.	5.98	7
(n=55)		

Ranking - History and Theory Assessment Categories

	Score	Rank
An ability to inform action through knowledge of architectural design theory and methods.	2.21	2
An understanding of design procedures and systems and the history of design methods.	1.89	1
An understanding of issues of heritage and conservation in the built environment	2.56	3
An awareness of world philosophical, cultural and political movements.	3.13	4
(n=75)		

Ranking - Design Studies Assessment Criteria

	Score	Rank
An ability to inform action through knowledge of architectural design theory and methods.	2.22	1
An understanding of design procedures and systems and the history of design methods.	2.47	2
An understanding of design precedent, critique and analysis and movements in design theory.	2.66	4
An understanding of tangible and intangible channels to architectural creativity.	2.49	3
(n=59)		

Ranking - Environmental Studies Assessment Categories

	Score	Rank
An adequate knowledge of means of achieving environmentally sustainable design.	2.15	1
An understanding of issues of ecological sustainability and design for reduction of energy use and environmental impact.	3.17	2
An understanding of the history and practice of urban design and issues of city planning.	4.34	5
An understanding of passive systems for thermal comfort, lighting and acoustics and their relationship to active systems.	4.00	3
An awareness of the cultural and spiritual dimension of place.	4.83	7
An awareness of issues of national and regional planning and their relationship to global and local demography and resources.	4.12	4
An awareness of landscape design and management of natural systems.	4.62	6
(n=65)		

Ranking - User Studies Assessment Categories

	Score	Rank
An ability to inform action through knowledge of society, clients and users.	3.29	2
An ability to receive and/or develop a project brief through definition of the needs of clients, the public and users.	2.33	1
An understanding of the social context in which built environments are procured and responsibilities to clients, the public and users.	3.47	4
An understanding of the process of research and definition of functional requirements for differing types of built environments.	4.00	6
An understanding of ergonomic and space requirements in the design of built environments and issues of equity and access.	3.44	3
An awareness of the relevant codes, regulations and standards for planning, design, construction, health, safety and use of built environments.	3.73	5
(n=55)		

Ranking - Technical Studies Assessment Categories

	Score	Rank
An ability to inform action through technical knowledge of structure, materials, construction and services systems.	2.99	2
An understanding of the process of technical design and the integration of structure, construction technologies and services systems into a functionally effective whole.	2.75	1
An understanding of the principles of structure and their application to the design of built environments.	3.94	4
An understanding of building materials, components systems and products and the construction techniques of their assembly.	3.54	3
An understanding of active services systems for thermal comfort, lighting and acoustics and their relationship to natural systems.	5.07	6
An understanding of the role of technical documentation and specifications in design realization.	5.34	7
An awareness of technical systems and requirements for transport, communication, maintenance and safety within built environments.	6.25	8
An awareness of processes of construction cost planning and control.	4.87	5
(n=67)		

Ranking - Implementation Studies Assessment Categories

	Score	Rank
An ability to inform action through knowledge of the professional, business, financial and legal contexts within which built environments are procured.	3.52	2
An understanding of the conventional building project cycle and the roles and responsibilities of the architect and other participants.	3.07	1
An understanding of the principles of business management and their application to the development of built environments project procurement and the operation of a professional consultancy.	4.72	7
An understanding of the legal responsibilities of an architect with regard to registration, practice and building contracts.	4.23	6
An understanding of professional ethics and codes of conduct as they apply to the practice of architecture.	3.85	4
An awareness of the operations of the construction and development industries, property development, financial dynamics, real estate investment, alternative methods of procurement and facilities management.	3.68	3
An awareness of the potential roles for architects within conventional and in new areas of activity and within an international context.	4.13	5
(n=60)		

Ranking - Skills Assessment Categories

	Score	Rank
An ability to effect action or communicate ideas through the exercise of skills of collaboration speaking, writing, drawing, modelling and evaluation.	1.84	1
An ability to utilise graphic and model making to explore, develop, define and communicate a design proposal.	3.00	3
An ability to prepare and read design drawings and visual presentations using manual and/or electronic means.	2.91	2
An ability to prepare and read technical construction drawings and documentation using manual and/or electronic means.	3.68	4
An understanding of the growing theory of representation and how communication methods are integrally ties to methods and outcomes.	4.48	6
An understanding of the use of systems of evaluation using manual and/or electronic means for the assessment of the performance of built environments (eg thermal, energy, structural, lighting etc.).	4.46	5
(n=56)		

Overall Importance Ranking - Educational Criteria

	Score	Rank
Design Integration	3.47	2
History and Theory Studies (Knowledge)	4.84	6
Design Studies (Knowledge)	2.14	1
Environmental Studies (Knowledge)	3.89	3
User Studies (Knowledge)	5.38	7
Technical Studies (Knowledge)	4.45	4
Implementation Studies (Knowledge)	5.67	8
Skills	4.79	5
(n=56)		

Nomenclature of Professional Qualification

Nomenclature	Responses
Bachelor of Architecture	60.7%
Bachelor of Science (Architecture)	1.8%
Diploma in Architecture	8.9%
Master of Architecture	10.7%
Master of Science (Architecture)	10.7%
Diplom-Ingenieur (Architekt)	5.4%
Other	1.8%
(n=56)	

Architecture School Attended (Professional Qualification)

Architecture School	Responses
Ardhi University / University of Dar-es-Salaam	3.7%
Makerere University	35.2%
Uganda Martyrs University	16.7%
Jomo Kenyatta University of Agriculture and Technology	0%
University of Nairobi	9.3%
Other (Africa)	5.6%
Other (Asia)	5.6%
Other (Europe)	18.5%
Other (North America)	5.6%
(n=54)	

Gender of Respondents

Gender	Responses
Female	19.7%
Male	80.4%
(n=51)	

Primary Area of Employment

Employment Category	Responses
Practice	69.1%
Academia	23.5%
Other	7.4%
(n=68)	

General Comments

QR_03 - "I believe this is a very useful study, considering that at times students go through architecture school without realising their area of true potential." [**why do architecture**]

QR_04 - "It is extremely difficult in most cases to assign a rank to a set of criteria, especially in cases where the absence of any of those factors would lead to a distinctly incomplete professional education." [**comprehensive | ideas about architecture**]

QR_05 - "Interesting Survey. All the outlined phases are obviously important! it is tough to rank each step. Architectural composition has always had an order of precision within which all these steps are outlined in order and it is almost impossible to disintegrate this.(Especially for those that follow the RIBA standards). However the survey gives us an opportunity to re think some phases, according to how one experiences the everyday designing challenges, which is very good."

QR_06 - "A practical approach to architectural education is the most relevant. Project based learning is a better way to do it. It is also important that students recognize the relevance all course units from the start, like Architectural History, then they are able to appreciate it and learn from it right from the start." [**fit for practice | comprehensive | ideas about architecture**]

QR_10 - "I believe in Arch education, the focus should be on furthering the abilities of each student in the different areas while working within the contextual environment." [**context | pedagogy**]

QR_11 - "Understanding of the following is a must to make a good Architect: a. Size of man and his space requirements as well as his financial and technological capabilities. b. Man's love of beauty, functionality and safety of built environment. c. Project presentation. d. Building materials and structures. e. Building construction technology and management. f. Building economics. g. Professional ethics." [**comprehensive | what architects do**]

QR_13 - "Although each class of criteria should be weighed according to the needs of a particular 'market', I generally think schools should emphasise developing abilities to analyse issues and teaching subjects that are not easily accessible during practice. However an awareness of practice and contextual issues also needs to be developed." **[knowledge | content | comprehensive]**

QR_14 - "In my opinion, architectural education should enable one to understand 'good' design that is appropriate for a given society. At the end of the course one may not necessarily end up a good designer, but there are numerous roles he/she may take on to ensure successful design projects. This is why I have placed more importance to design integration and user's needs." **[users | what architects do]**

QR_16 - "Mark, Architectural education should prime student architects for practice. It should develop creative thinking, problem solving capability, analytical thinking, commitment to foster good performance in school and in practice. A significant portion of architectural education continues during practice, graduate architects should apply basic principles and knowledge learnt in school in practice. A significant body of knowledge is attained through practice. Students need to be made aware of this and more involvement of students in field activities (practice, industrial training, study visits outside country, etc) should be encouraged if the gap between practice and formal education is to be narrowed. Parameters that determine design solutions are numerous, ever changing and are tied into functional requirements, economics/financial, geographical, political, cultural and religious matters, technological developments and limitations at both a national and global context. "If students spend 5 years in architecture school, they will spend 10 years in practice, thinking, applying and learning." **[fit for practice | link to practice | comprehensive]**

QR_19 - "Your could add Property Management or Maintenance." **[comprehensive]**

QR_21 - "In the short run in Uganda, we need an education geared towards increasing the number of architects rather than architecture." **[purpose | quantity]**

QR_24 - "Theory of design and a history about evolution and different trends of evolution of architecture need to be studied side by side. Secondly theory of design should be coverparts of applicable skills and also give studies an application of

imagination that will in turn enhance creativity codes and regulations as well as best practices of architecture should be incorporated into the curricula to give students a chance to mirror their acquired theories as a reflection of what really happens in the field.” **[fit for practice | link to practice | comprehensive]**

QR_28 - “Emphasis should be put on practical approach rather than theory. At the end of it all it is the result that matters. To define a well built environment, better living conditions, better access, land management, disposal of garbage and other waste materials, environmental management and above all paving way for future generations to live better than us needs a lot of skills. Students and of course Lecturers and Professors should devise means of not placing money at the forefront but rather profession first then money later. This will help us to think better and develop better skills. This is what I practice.” **[fit for practice | contemporary issues | comprehensive]**

QR_29 - “it is vital to fully understand the implementation of any proposals you come with in the context of the developing economies like Uganda.” **[context]**

QR_31 - “Architecture Education should emphasize the use of the drawing board (traditional method of drawing) in the formative years and the electronic means in the last 2 years. The drawing board allows more ability to think creatively. The computer tends to reduce one's ability to think especially when they have not yet grasped the basic design principles.” **[skills]**

QR_40 - “From a practitioner's view-point, current architectural education trends seemingly miss out the psychological aspects of practice to an individual student. Leadership, teambuilding and conflict resolution skills are hardly developed by the time most students hit the job-market. It is also common to find timid, but highly skilled practitioners. Architecture also involves leadership. Where is the missing link?” **[fit for practice | comprehensive | allied professions | skills]**

QR_41 - “In my opinion, the survey does cover vital aspects of architectural education and revolves around ordering in terms of which items on the menu seem more vital. However, my observation is that the more important criterion should be at what point in the course of the meal, an item is delivered to the table. The process of architectural design as many others does require different skills of perception based on exposure and personal development at its various stages and hence, if an

important lesson is taught at a time where the student may not be tuned to appreciate the information, then it is wont to be one lost. Hence,like to a chef who chooses his ingredients for starters,main course and desert based on the compatability to digestion processes, emphasis should be placed not more on importance of one study over another, but on the validity of a particular class at a certain point in time based on readiness of the student to understand the relevance of such information. It is this appropriation that in my opinion, holds key to a balanced architectural education where all values are as important if fed at the ideal time.” **[pedagogy | comprehensive]**

QR_43 - “underatanding the user requirements in all aspects: gender, safety, functionality norms and traditions.” **[users]**

QR_44 - “I think that more work is still required to be carried out to improve on the teaching and learning procedures and processes.” **[pedagogy]**

QR_45 - “architectural education is quiet an interesting issue, from the experience i have acquired i think its important to be able to have a creative mind but even more important to atleats make sure that basic design principles for particular regions(say hot or cold, e.t.c) are well understood. thats makes it easire to then teach sustainabilty and laws that govern the choice of design you have percieved for the client..” **[context | users]**

QR_47 - “Architectural studies should focus on training students on building creation right from conception to commisioning. This involves a blend of issues ranging from different user needs, technical issues, the environment, legal issues etc What is more important or least important varies with the project at hand but in my opinion, everything is important... Remember Architects are like God!!! They create things from zero... So one needs to know lots of various things.” **[stararchitects | users | pedagogy | comprehensive]**

QR_50 - “It is my personal opinion that Architectural Education in Uganda today is not as focused on the current global climatic trends and environmental issues as much as it should be. Design studies that emphasise the integration of renewable energy schemes and energy auditing systems should be encouraged more in design projects.” **[contemporary issues | pedagogy]**

QR_53 - “the evaluation could be dependent on perceptions of various people and how the approach architecture and design which might vary from person to person and architectural education involves not only lectures in school but practice and intern-ship as well.” [**pedagogy**]

QR_55 - “Building technology and design skills need to be integrated.” [**knowledge**]

QR_58 - “This is a very close survey. It is very difficult to say which is really more important than the other. They are very much interrelated and rank almost the same. I have only made the ranks according to your asking that I should say which is more important than the other.”

QR_65 - “I think one vital component omitted from your study is the criteria or qualification for enrollment into the architecture course in the first place. For many E. African universities, a strong science background is a prerequisite. But Architecture is basically an art or a creative profession. In some, universities abroad, the strong science background as Maths, Physics emphasized here do not count much. More correctly, a subtle Art and science acumen is sought after, a combination not easy to come by. Furthermore, some universities look for the creative and innovative nature than purely academic, again not an easy criteria to define and measure. I believe our universities are taking the wrong and easy route in enrollment of Architectural study. There has to be some major departure in this regard, otherwise we will continue to live with Architects who at best should have been engineers or economist etc.” [**admissions | who does architecture | background of applicants**]

QR_66 - “having joint design studios/projects with students of other disciplines would create a more realistic attitude and approach towards the design process.” [**electives | pedagogy**]

QR_68 - “Architectural education should focus on the 'why' and not 'how to'.” [**knowledge | philosophy**]

QR_74 - “Architects should be able to positively and effectively influence and cause material advancement of society. Architectural education should prepare students for this, in their respective contexts. Architectural education should produce students who, by critical analysis, understand and solve the real and felt problems,

in the contexts in which they exist. The regions should not be sacrificed to the centre in the production of good architectural graduates.” [**users | philosophy**]

QR_76 - “In the previous section, its not clear what skills you mean, and technical studies I took to mean study of materials and construction methods inter alia. Sometimes the boundary between some of the items listed is very blurred making it a tad difficult to determine which is more important.”

Appendix 6: Incoming Students by Gender

School 2 - Student Intake by Gender

YEAR	Female		Male	
	Number	Percentage	Number	Percentage
2010/2011	12	26.7%	33	73.3%
2011/2012	7	15.9%	37	84.1%
2012/2013	12	24.5%	37	75.5%
2013/2014	12	25.5%	35	74.5%
2014/2015	5	10.9%	41	89.1%

School 3 - Student Intake by Gender

YEAR	Female		Male	
	Number	Percentage	Number	Percentage
2010/2011	3	13.6%	19	86.4%
2011/2012	6	28.6%	15	71.4%
2012/2013	9	32.1%	19	67.9%
2013/2014	11	40.7%	16	59.3%
2014/2015	9	37.5%	15	62.5%

School 4 - Student Intake by Gender

YEAR	Female		Male	
	Number	Percentage	Number	Percentage
2010/2011				
2011/2012				
2012/2013	9	27.3%	24	72.7%
2013/2014	14	35.0%	26	65.0%
2014/2015				

Appendix 7: Perceptions of Architecture - Quotes from Application Essays

"I think architecture is a fancy term for extensive education in design ..." (Maria)

"I consider myself to be a creative person because of my academic experience especially in some of the practical subjects like Technical Drawing ..."
(Elisha)

"In school I hated the fact that we study many subjects that are far from our carriers (sic) like history and in long run we never use what you studied ..."
(Deborah)

"... I talked to different architects to really explain to me it really meant to do architectura (sic) I as a course I found out that it required a lot of things such as commitment, concentration and love."
(Andrew)

"... architecture is basically the process or the art of creating ,planning ,designing and construction of physical structures under the influence of ones imagination."
(Ainemani)

"I see myself contributing to the country's development as I create employment for myself and the other Ugandans in the future ..."
(Monica)

"Well, I grew in an artistic environment ,myparents were both teachers, mom and dad taught Art and Literature respectively so pursuing a creative profession was always my thinking, architecture just happened to be the one that really got me."
(Norbert)

"Yes I do have a favourite architect ,and that would be myself ..." (Ainemani)

"I come from a family of civil engineers; my late grandfather was a civil engineer, my two uncles and many of my relatives are civil engineers, so I think architecture is an in blood thing."
(Tadeo)

"... with architecture, you don't need to be employed by someone or a company. You can choose to become self-employed."
(Conrad)

"I want to be an architect because I have been a draughtsman for some time ..."
(Pariyo)

"I had always been confused and torn between choosing civil engineering and architecture careers since I did not know the difference between the two."
(Billy)

"I basically think architecture is design based on creativity in one's mind" (Allan)

"My interest in the (sic) architecture stems from the fact that I did technical drawing, particularly building drawing, throughout secondary school, gaining first insight into the field ..."
(Albert)

"I would like to become architecture (sic) because it's marketable in this developing country and the sector is in high demand."
(Perez)

"I hope to have been part of a breed of new architects who are promoting eco friendly structures as we are living in an era where our environment is the biggest victim of our constant development."
(Claire)

"I also want to be an architect because it's a prestigious job which demands a lot of concentration, skill and most of all pays handsomely. ... One can be self-employed as soon as he or she qualifies."
(Musa)

"The interest in architecture started when I was young. Travelling to Kampala from the village for holidays got exciting since I could see big structures. This fascinated me ..." (Isaac)

"As a student I practiced a lot of creativity. In fact I consider myself creative. This was verified as a student on the technical drawing classes where we were assigned to make our own constructions and later approved as correct."
(Derrick)

"My cousin whose (sic) a civil engineer introduced me to a computer program called Autocad, this gave me the feel of being an architect."
(Terry)

"I want to be an architect because it is a major source of income ... To add on more, architecture is a very high paying field due to the fact that it is challenging ... "
(Emmanuel)

"I was just beginning my A-levels for the second time after change in course to something I had always wanted to pursue despite the advice I was getting from my family in the best of their understanding for I had chosen to pursue majors in mathematics from a history majors."
(Victor)

"... I always admired different appearances of the environment and those that designed it, to my understanding they were called architects when I looked at some architects they were well off, had good money and respected in the society."
(Andrew)

Appendix 8: Some Notes from Participant Observations

Taking Notes and Asking Questions - Year 1 Lecture Session (January 2010)

Lecture Session 1 - Students in a first year course are given a session in which they are taught how to take notes during lectures, and as a means of helping them get the most of these sessions, beyond merely taking verbatim notes which they are used to doing from pre-university education. It was also evident that students did not generally ask questions in class: as such, students were introduced to the 'Muddiest Point', a means to get students to ask questions, without fear. Through this system, students wrote down any questions they needed answered, and submitted these to the lecturer. Questions were to be answered in subsequent classes.

Subsequent Lecture Sessions - With regard to the lecture notes, it was evident that students resorted to taking notes verbatim from the whiteboard. Reviewing the journals it was evident that students merely copied any textual information presented, and did not listen to the lecturer. In one case a student merely copied word for word the various slides, which in point form did not present any information useful in helping learning. It was evident that the skills learned in this course were not transferred to other courses, showcasing a silo approach to learning.

Subsequent Lecture Sessions - Students did make use of the 'muddiest point' facility to ask a host of questions, increasing the number of questions asked after each session. As questions asked anonymously, students were more willing to engage with the course material. A downside however, was a lack of dialogue within the lecture itself, which was desired. This approach also served to split questions from the context in which they were asked, at times making it difficult to link the questions with the followup answers.

The Intake Interview (February - April 2010)

The annual interview sessions for incoming students are unique among the architecture schools in East Africa, presenting an opportunity to assess applicants to architecture programmes. About 50% of applicants are interviewed, largely a result of a lack of available staff to interview all applicants. The rationale for the interview was based on an understanding that grades achieved in the high school leaving exam did not reflect the aptitude of students to undertake architecture, as it was narrowly focussed and concentrated largely on knowledge aspects of education.

Interviewees were called up based on diverse factors: their grades, statements of interest, or nature of work experience undertaken. Interviews were conducted by two members of faculty, and took between 15 and 20 minutes per student. The idea was to garner details of their interest in architecture, what they knew of architecture, whether they engaged in any activities beyond academic endeavours, and whether they had anything to showcase their aptitude for architecture, in the form of a creative portfolio.

The interviews revealed a number of things: student ideas of creativity revolved around being different, or being able to draw; ideas of which subjects were useful were determined not by informed opinions. Portfolios were generally weak, highlighting the delinking of creativities from what is actually undertaken either in or out of school. While not critical, given the nature of pre-university education, the lack of depth in portfolios, largely presenting construction drawings and reproduction drawings from drawing classes were a clear indication of the poor appreciation of what constituted creativity and architecture.

While not fully analysed, the data gathered over the past six years of interviews and student performance, over the same period suggests that there is no link between student performance in the HSR and achievement in architectural education. General findings are as follows: Applicants perceived architecture as the drawing plans; Many students were fascinated by new construction projects, with only a few paying attention to historic edifices; A number did not know the difference between engineering and architecture, with relatives who were evidently engineers or drafting technician, regarded as architects; Many applicants reported reading self help books featured prominently, but most students did not read much outside the requirements of the school curriculum, with many coming into architecture to avoid reading; In some instances students tried to gain a place through answers directed at impressing the panel, regardless of their links to the applicants personally, with pre rehearsed statements, regardless of the questions asked (evidence of cramming); For a growing number of applicants, solving the perceived challenges of the urban environment was a strong motivator to do architecture.

Creativity, Design and the One Word Concept (2009-2012)

Observation of student presentations was undertaken in all schools of architecture, with particular focus on the Part 1 programme. A pervasive element across the schools was the one word concept, attempting to summarise a building design idea into a single word. This was a strong theme across the schools, with students compelled to provide single word concepts, more often than not with fanciful words in no way linked to the particular projects or the users. In many cases, these were prepared for the sake of meeting the needs of the course, and were never explored beyond this. In many cases these were delinked from the project itself, and were largely random ideas that were for the most part pulled out of a hat. Some of these included 'Bonding', 'Consolidation', 'Weaving', 'Interconnectedness', 'Blending', 'Connectedness', 'Flexibility', 'Unity', etc.

Teamwork and Working in Groups - Year 3 Studio Session (2011)

Day 1 - In groups, student were asked to work on three tasks: first, decide on what each member of the group were to undertake as part of the bigger task; students were to be familiar with the tasks of all members of the group, a particular area of a site for detailed design, each student was to look at the interface between built and

unbuilt spaces, along with vehicular and pedestrian movements. These explorations were to inform and enrich the larger site design, by the group. While students did accept this process, murmurs in the background suggested that not all students were enthusiastic about it, preferring to work on their own designs.

Day 2 (Three days later) - Students were gathered for a progress review, and asked to retell what they were to do. Most student admitted that they had not made progress as the groups had not made decisions on which members of the group were to undertake the various tasks. This scenario was repeated in different groups, with students failing to take ownership of group tasks, failing to move beyond 'discussions' when taking on group work. It was also found to be linked to an unwillingness to engage in teamwork, a consequence of a lack of the same in pre-university education, with the inability to deal with conflict becoming a hindrance to dealing with the numerous elements of architectural education.

Feedback - Year 3 Studio (2012)

Feedback is of utmost importance for students, but this was not always given, or when it was, it was not fully appreciated. Reviewing feedback for the final year of the Part 1 programme indicated that feedback given immediately following presentations was given on two levels: Initially verbal feedback was given on issues related to the assessment criteria, followed by a formal typed document that gave a more detailed listing to comment and questions as well as a provisional grade compared with the students' own self assessment. Feedback from students indicated that this approach enabled them to listen to the comments, rather than trying to write them all down at the time, although this was a skill they did have to master eventually. Part of the feedback included an opportunity for students to present what they have learned from the studio. Students valued this approach, and even went out to demand this written feedback.

The Post Jury Feedback Session - Year 5 Studio (2012)

Post Jury feedback sessions were an opportunity for faculty and students to reflect on the work undertaken during the semester, with members of the jury giving an overview of what they witnessed during the presentation, instructors gave their views on the achievements of the semester, and students on what they had learned. These sessions served to enable reflection by students and faculty on the goals and achievements of the studio and also to bring in the external jurors. This candid exchange was related to the goals and objectives of the studio courses, linked back to the teaching pedagogy, and with the feedback from external jury members looking to transcend the fit-for-practice bias.

Appendix 9: Focus Group Discussions - Guiding Questions

Background - Welcome and introductions

- My name is Mark Olweny and I am conducting a research study on the topic of socialisation in architectural education, making use architecture schools in East Africa as my study.
- This series of focus group discussions is being undertaken in all established architecture schools across East Africa, and will take in both students and faculty.
- The reason for these discussions is to better understand what you have to say about architectural education, as well as your experiences in architectural education. You are the experts today, and there are no right or wrong answers.
- I will not be doing the talking, however, as I want to make sure a number of issues are covered, at times I will try to move things along.
- As I am recording these discussion, I am need to ask whether everyone is comfortable with this. No names will be used as part of the final documents, so no individuals will be identified. Also, I ask that you all speak up such that it is possible to hear the audio files.
- First, we need to go around the table, and introduce ourselves, I am only interested in first names, and the year you are in. This is both for the purpose of analysis, but also for me to link your voices with a reference, making it easier to transcribe the discussions at a later stage.

General Questions

- Why did you decide to do architecture?
- As you were searching for a place to study, did you have any other options available to you, apart from the school that you were finally accepted into? What were they, and why did you settle on this particular school?
- What other programmes or schools did you consider?
- What do you know about the other architecture schools/programmes?
- Have you much interaction with students in any of the other architecture schools in East Africa?
- If your perceptions of architecture have changed since you joined this architecture programme, what has changed?
- How do students /faculty make connections between theory and studio(design) courses?
- What can you tell us about the relationship between students and instructors?
- How do students engage with the wider community or with practice?

- What can you tell us about the use of computers in architectural education?
- What do you like about the programme you are enrolled in?
- What don't you like about the programme?
- What would you change if you were to come back as a member of faculty?
- How do you think the course could be improved?

Secondary Questions as Needed

- What do you consider as the role of the architect today and into the future? How is architecture education today helping achieve this?
- How would you present architecture? Is it a product or a process?
- What is architecture to you?
- What do you think is the future of architecture education?
- What do you think is the purpose of architecture education?

Graduates and Faculty

- What was your experience of architecture education?
- How do architectural school prepare you for work in architecture practice?
- How did you find the transition from architectural school to architecture practice?
- In hindsight, what do you feel was missing in architectural education with respect to the areas you are working in / areas you are interested in pursuing?

Appendix 10: Transcripts of Focus Group Discussions (Students)

Focus Group Discussion - I (Part I Students)

MO (T-00:45) - We'll start off sort of simply, why did you decide to do architecture?

FG1-1 (T-00:55) - Personally, as I grew up, I was a very practical individual, so when I joined my advanced level of education, I chose particular subjects that would direct me into studying courses like engineering, architecture. So my options were between engineering and architecture. I guess I studied architecture, because it's what I got.

MO (T-01:28) - So since you were saying, you studied it because it was offered to you?

FG1-1 (T-01:34) - Yep.

FG1-2 (T-01:37) - I, I always, buildings always fascinated me, and, I chose architecture because it's dynamic, ... I felt that I could wake up every morning and have something fresh and try to make use of that, and I always loved to draw so architecture was just what I always wanted it to be.

FG1-3 (T-02:00) - Um, cre ... creation ... I guess, just the ability that we have to create something is what um, drove me to do architecture, and since um, you can, we can go into so many types of design, um, building, buildings really ... , a place of shelter, I though would be the best, um, a better way to create environments for people, um ... pleasant environments.

FG1-4 (T-02:44) - Um, for me it was basically the intersection of my interests and my abilities, ... the requirements for architecture seemed to be stuff I was already good at and I was also fascinated about the inter discipline (sic) of architecture - landscaping, ... I also liked the fact that the course can exposes us to different career choices

FG1-5 (T-03:11) - Ok, um, I've always been interested in, in design, in creativity, and in exploring potential, in any sort of way. And I looked for something that would help me to, to discover my potential, my talents and many different things I could be good at, and for me it was architecture, in Uganda, it was probably the only option.

FG1-6 (T-03:35) - For me, whenever I move, like in the city, I look at buildings critically, ... ok, when I was young I used to make toys cars, and design, make them look nice, so all that was driving me to design, and architecture

MO (T-03:57) - And why did you chose [Named University]

FG1-6 (T-03:57) - Ah, it was a coincidence, cause, I was like, like him, I was driving to Civil Engineering, now looking at my size, I couldn't manage [Laughter]. When someone told me architecture at [Named University], I was excited, so I came ...

FG1-5 (T-04:20) - Actually, um, Why I chose [Named University], ... it's rather different, I compared it with the course at [Named University], and it is a Bachelor of Architecture, here it is a Bachelor of Environmental Design, and the name automatically changes it. that is what captivated me first. And then I had to, I looked through their website, and the syllabus, and everything that is studied there, I thought would be more interesting than just limiting my self to just strictly architecture, the whole idea of exploring environmental design was what brought me here to [Named University]

FG1-4 (T-05:00) - I wanted the best, and I think this was the best place in Uganda, cause [Named University] is a government place, and you know government resources ... , and really not the best at the moment also I liked the course outlines they seemed to be catering to what I wanted.

FG1-3 (T-05:23) - Um, for me it was the way the course was broken down. In [Named University] it's five years, now for something where you, you at first are not quite sure especially for me whether you want to stick to that, five years is a, is a big commitment,

so I like the programme here how they broke it up, they broke it down into three years, then one year and then the two years, after you have decided, surely after three years, I'll be, I'll know exactly what I want. So ya ...

FG1-2 (T-05:58) - Um ... also the structure, it, I did not want ... compared to [Named University], I didn't want to end up in a class for five years and realise that is not what I want to be, so having a three years then a break it keeps you more focused, and also the facilities here, the lecturer to student ratio, ... if ... you know, access to stuff like the library, I thought it would be much easier, I'd have better opportunities here unlike a government institution ...

FG1-1 (T-06:31) - Personally I chose [Named University] cause of the ... nature of the classes I've attended since primary ... I attended my primary school we were 39, my secondary school also we were a small ratio, and I happened to study in also a very big class in my final year of secondary school and it was nice. So when I weighted the option of studying in this pace and any other given university, I felt it had the greatest learning environment since I had experienced both kinds of classes in Uganda.

MO (T-7:14) We'll come back to that, cause both FG1_2 and FG1_1 have mentioned it, but did any of you have any other options apart from [Named University], or did you actually consider that as an option? What other options were available?

FG1-6 (T-06:31) - Um, I considered [Named University], and some other university in Malaysia.

MO (T-7:32) Anyone else?

FG1-5 (T-07:33) - I considered [Named University]

FG1-4 (T-07:36) - I considered [Named University], and [Named University].

MO (T-7:41) Anyone else?

FG1-3 (T-07:43) - No

FG1-2 (T-07:43) - [Named University]

MO (T-7:44) So it was mainly here, but we got two from outside the country. Ok. with Instructors? Ah, we are talking about this, this idea of this student, the relationship with Instructors, both FG1_1 and FG1_2 brought them, brought that up. ah, what do you think about that as an issue in relation to the way architecture education is conducted?

FG1-1 (T-08:08) - I feel it's very important. Because, when you join in first year, whereas you think that it's, you're going to study something you understand, it's, it's your perception, but when you get to attend the class, you realise that you need to now reason beyond what you thought or even come up with new ideas, and you lack the knowledge of how those ideas actually work, so if you, if you have to attend a class, and you never get somebody to actually give you some time to explain to you that, this is what I expect, and this is how it works, your idea is probably like based on a layman's understanding. I think if you are, if you'd lack that then you'd probably wander throughout your course and never pick up some important tips in what you're doing. That's why I think you really need to get that chance once in a while to interact with your lecturer directly and, because they get to know you as an individual, and understand your line of thought, your interests. So they assess you based on who you are, not just on the assignment.

FG1-2 (T-09:22) - Um, I think one of the most interesting things about being in an architecture course is everyone is different, they all have different ideas, and it's important for lectures to appreciate that an individual level, not just at a, a level of a whole class. So if they are, if, if the ratio of the lecturer to the number of students is, is, small, then you can know each student individually, know their abilities, know what they are good and, if I think that that is successful architecture education ... that is that, to be

able to add on to what an individual has, so that at the end of the day they end up with something great.

FG1-3 (T-10:10) - Um, I think it's important, because, um architecture could be described as something subjective. There is no ... um, you cannot see one thing and all three people are going to see it as the same way. So, um I think it is important for a student, especially if you are just joining the discipline, um to get clarity, to get objectivity for that matter, on um, ways of looking at the, the course in general, and architecture as a whole, and having ways to work around, um subjectivity, to find clarity in your thoughts, yes.

FG1-4 (T-11:00) - Also this whole thing of teamwork where we are given work in groups, if it is a big class, chances are you will probably finish your three year course without working with certain people, but the small number, makes sure you get a chance to work with everyone, you know their abilities, and how we get along, how they complement us etc.

FG1-5 (T-11:25) - Ok the beauty of architecture to me is the fact that everyone can create their own style. Every one can have their idea from the youngest stage, let's say from first year, you develop that style that you would like to, and if you have a very good teacher-student relationship in preferably a small class, you'll have the teacher guiding you on the basis of the architecture guidelines and you develop that kind of style, that's the whole idea behind it, and if the student is given that kind of opportunity, then they can fulfil what they want to achieve.

FG1-6 (T-12:05) - Me basically it's like, it's when I came here, I had like happy, I can do it, I can do it, but when things were showing up, it's not really the thing, that is the time when I really needed some one to show me something, that even if it is a small thing I can handle, I can be able to expand on that, so it is very important to have lecturers around, to access them.

MO (T-12:37) Ok FG1_2 and FG1_3 mentioned something, errr, that is quite interesting, uh, FG1_3 mentioned the fact that students are individuals, and FG1_2 mentioned the fact that universities adding to what people already have, How would you look at that as an issue. In your way, how can a university add to what a student already has, and how would they deal with the fact that students are individuals? In architecture school specifically.

FG1-2 (T-13:10) - I think, ok I'll flash back to my first year, when we come in first year, we are all talented in different fields, some of us are really good at drawing, some guys are good at building up stuff with their hands, so dealing with that, it's, look at what each of these individuals has, if somebody is good at drawing, or if someone is good at working with models, or if someone is really good at graphics, and build upon that, you know because I think the whole idea at the end is how can you communicate your ideas in the best way you can, so if I am good at drawing let me explore that, until I establish that's my style, because at the end of the day I have to communicate or if I can model, let me do that you know and express my self that way. So that's way I think it is important that you appreciate each one for their individual qualities what they can do.

FG1-3 (T-14:17) - I think the fact that we are individuals, means that for a single person, you're going to get exposure to so many things and that's going to be very important especially in your career as you progress, and um, you find on adding on to what you have, you are able to pick up these small elements that you have learnt from your classmates, your peers, people you interact with, and um, that in itself makes you I think a better person, a better designer, and um, at the end of the day you will find that you will be most attracted to things that speak to the style you are trying to come up with, your style, to be your own individual in design, you are able to pick out, out of all those small things looking around, the exposure, now you're able to improve on your style different aspects of it.

MO (T-15:31) Yea, now this, we have two different thoughts ... You want to add on to that, cause there is something interesting that has developed here.

FG1-1 (T-15:36) - Now, what my reflection on that idea is the particular problem like I could say as an individual I face, whereas we all have strengths and weaknesses, the thing that limits us is the fact that we have a minimum requirement to meet. Someone is good at graphics, someone is good at model making, someone is very good at literature. All these things are applicable as a whole, but that that you are very good at, normally you find that you have specific places where you apply it, and it bails you out, but if you want to concentrate on what you are good at here, the system is you will not make it in certain course units, it just, as a result we end up working to pass, and we don't excel in what we are good at.

MO (T-16:35) You know, that's actually, exactly what I was going to talk, because FG_5 just mentioned it, he says you end up developing the style of your instructor. And so we have this issue going on, what exactly is architecture education trying to do? Is it developing people to be individuals, to be creative, or is it developing clones? what is it doing?

FG1-5 (T-15:36) - I think it's two way, there is the creativity part, and then there is the individual. Because, university education as the name suggests is a universal thing, you are not going to limit someone to something small. I would feel that architecture education, is the same thing, let someone explore all sorts of things, and then at the end of the day, you guide the person, the lecturer guides the person, and you maintain that creative line, and in an individual way, so the person has they own way of thinking, their own way of design, but in the specific guidelines of architecture .

MO (T-17:38) So at that point, now I ask you, to you, what is architecture? Your own definition, at this stage in your life, what is architecture?

FG1-2 (T-17:49) - If I look at all the great architects, people who, you look at that building and you know instantly who did it, I think at the end of the day, that is what architecture to me After the five years - or after these three years, have I developed my own style. And that is the question I am asking my self now. Do I feel that, ... you know, because as an architect, at the end of the day I am a creator, I am not supposed to, or going to try to do what someone else has already done. So thats what the challenge is? Do I feel you know, I have my own style I can do it on my own. That's what architecture is.

FG1-1 (T-18:30) - The definition has changed, when I joined it was more of I was going to create buildings, but now I am happy, cause I realise that what I thought I had missed out, like cause I thought I would go into mechanical sort of things. And I realised, that you can actually study architecture and all it does it gives you guidelines of what it takes for something to work, so with those guidelines you actually open so many options. It opens our imagination and you feel so knowledgeable, like if you listen to the people who are in fifth year, when you are talking to them or when you present to them, and they answer you, you realise that their level of understanding, to talk to an individual, and they notice something you would never have noticed something so simple, but it means a lot. I think the system of studying here really opens up your understanding of so many areas, which is good.

FG1-3 (T-19:42) - Architecture to me is a solution to a solution to a specify problem, it could be, as I have gone through my first year through to the third year, it could be a problem in terms of the building itself, it could be a problem in terms of the landscape, it could be a problem in terms of the structural makeup of whatever it is you're creating, so architecture aims at finding the best possible solution to whichever problem that has been identified.

FG1-5 (T-20:34) - I see it in two ways, before I started my first year, I had read some literature on architecture, and the conclusion I came up was that architecture is basically design for humanity, to build and design to solve human problems. The spaces we live in, the spaces we walk through, the places where we are, but through first year now, the perception kind of changes, you realise architecture is not just about building for humanity and everything, it's, it's more of building your self as an individual, and

discovering your potential, discovering your best qualities and how it can help you to achieve your final, your ultimate result as an architect.

FG1-6 (T-21:28) - For me I have just realised that architecture is a very big thing, and, and it's all into thoughtful creation of stuff, of things, it can, it's even in music, it's all over the place. For me I am in first year, but I feel it's so big, I am yet to explore it get to myself what it actually is.

FG1-4 (T-21:56) - Ok, I agree with all these guys, at the beginning you have like a very narrow minded view of architecture, like it is all about buildings, building design, but as you go on, you realise that it involves so much more, it involves planning, urban ... , urbanisation, that sort of thing, it's like an extension of your individual views, what you think needs to be righted in the world, how you can right it. that's what I think.

MO (T-22:26) So if you take that, they're two questions that are related, but can be separated. How would you view, I have to phrase this correctly cause it could come out wrong, um, how would you view the role of architecture and the architect today? and the second part would be, how do you think architecture education or your current architecture education is preparing you for that? Or is it? Is it not, that's fine as well. How do you view those two questions?

FG1-1 (T-23:07) - How do you view the ...

MO (T-23:09) The role of the architect and architecture today? And you can be very specific, in Uganda or Africa, or if your are very ambitious, the world. But you can be quite specific.

FG1-1 (T-23:22) - Its a very, It's something you cannot separate, the individual from their work, and I would have to relate with the few cases, or the particular case studies of works of architecture that I've been assigned to study, and you realise that the work of the individual is always so closely linked with the architect, something to do with his inspirations, they could be related to his life. So I cannot separate the architect from his work, it's, there is a great relationship. And in terms of my education, I would say that there is a way ... something we studied in first year, about a certain phase, where there was a school in, a school in France, where there were grooming people who would replicate things ... I think it is a bit different for us, and having a chance to study that also makes us aware of the fact that as we study, we should not try to follow what we are being taught, instead we should use it as a guideline to create our new line of thought. that's what we try, I guess we try to do that, and achieving it, I cannot say I have achieved it, I hope I will.

FG1-3 (T-25:03) - The role of architecture and the architect to me is to inform people. Since whatever you are creating is going to stand there, it's going to, people are going to look at it, they are going to walk around it, they are going to live in it. What your design should aim at is to inform the users of whatever it is you are creating, about a particular aspect you think is important whether it is for example natural light, how best can you maximise it, how best can, how best can you use the effects of something that is naturally occurring to emphasis particular aspects in side the building. If it is the materials you are using, how best can you use them in a different way that is going to get people thinking about innovative ways of going about a problem.

FG1-4 (T-26:15) - And to add on to what FG1_3 had said, it's like, the major concern right now is about sustainability, and there has been a move towards sustainable architecture so, like the role of the architect today is conserving natural resources, finding ways of showcasing their creations in a good light. That would emphasis how to, ok to maximally use the available resources without endangering the environment. And, yea, what I have learned so far has sort of prepared me for that.

FG1-5 (T-26:56) - Well, I, I hope I've understood your question correctly. **(MO - Well I won't repeat it, how did you understanding it?)** The role of architect and architecture, I saw it in the way of, if the architects today are influencing architecture ... and I'll narrow it down to Uganda or to the region, this region, East Africa (East African Community),

there are architecture schools, which are really up to day they are still viewed as very exclusive, that is why you small classes in most of architecture schools, and then, small classes, it takes a long time and at the end of the day, you do not have many architects graduating. In a way they do not really affect, they do not have such a significant effect on the architecture you have at the end of the day. You have governments getting architects from Europe, from America to come and do most of the projects within, and yet there are architecture schools in the country. That to me is I should say demeaning the role of the architect here in this region, for that matter, but then again, like FG1_1 said, you can't separate the individual from their work, so somehow, I should say maybe in the long run, the architects will have to come up with to significantly affect the architecture that we have today, in Africa, in this region. You also think about the style of buildings, all these buildings that are coming up in say Kampala for example are almost exact or similar replicas of buildings in Europe in America and we think about why shouldn't we design in a way that fits within our context, that fits within Africa. That I think defines the role of the Architect and architecture in Africa. Though I am still in first year, there is a lot we are exploring, so I can't really say I am been prepared much, I do not now what is ahead, but I know that there are very many options I can explore with what I have been taught so far.

FG1-2 (T-29:14) - Um, I think architecture to me is to design, to create and always to solve a solution. And right now I think so many architects are replicating not really designing, which I hope as students it's a challenge that we shall be able to break through. My architectural education, it has been very successful because I think differently compared to my contemporaries in other universities, or already existing architects, however the challenge is also to break through the system for us to go and make a difference, and those are traditions, of what in Uganda, what we think are existing building cultures, the norms, you know, to break through that. So that's a challenge.

MO (T-30:15) What do you mean by the system?

FG1-2 (T-30:18) - The system is more of traditions, or stuff like materials how people have done things over the years and you think you can't break that. That's what it is.

MO (T-30:15) Anyone else have an opinion about the system?

FG1-4 (T-30:37) - It's basically something different is risky, so finding someone to back it up is hard, especially since the general public doesn't know about the reasons you want to change why we shouldn't just continue with what has been done before.

FG1-5 (T-30:55) - I think its starts with the education. [Laughing] If the education system is also like what was done before, during the colonial era, and what is being done in Britain then we can't probably change. You may want to decide that I like FG1-2, I am going to change the system, I'm going to go out there and build in my own style, but if no one appreciates it, if you don't get clients for that, then sorry.

MO (T-31:21) Then we go back to the same. Ok, then I'll bite, what do you think should be different about the system? We can be specific about architectural education, but also about architectural practice as well.

FG1-2 (T-31:34) - I think practice, yea that is more of it, for example if like in this sustainability thing, when you talk about green materials, green way of doing things, you know there is also the risk of will my plans be approved, or will the client welcome these ideas, [snickering] and in Uganda people have the habit of I want that because my neighbour has it that's a problem, that is what I mean by having to break through practice. I think we just have to dare and risk and see.

FG1-1 (T-32:15) - That will still cope. The basic, I think the basic fact behind all that is people are trying to make ends meet. The architect wants his plans to be bought, the constructor (sic) wants to get the contacts, the person in charge of materials wants to save money, so the competition outside while practicing changes, or it ties down on our dreams that we had as students. As a student you would go out their with your dream

to start and make a difference but when you go out there, people bring you down by the fact that we are trying to make it work out here also, our dreams may be shattered by what is actually out there in the world. ...

MO (T-33:05) But do they have to? Or is it that we let it.

FG1-1 (T-33:11) - Or we let, we let those people I think, ... The people who are out already, are the ones who are making the young energetic those with dreams, they are the ones who are pulling them down. And I am sure if you came up with a unique concept of a design to place somewhere in the middle of an African city and town planner is somebody who graduated in like 1962 [snickering], I'm sure he would be the one making you fail to achieve what you what you want because of his experience at work.

MO (T-33:49) Ok, I'll still come back to the same question, how can we make it different in architectural education? (Pregnant pause) Cause you say there is an issue, with you going out there with all these ideals, and you get shot down, although you want to make that difference out there. How about in the schools? what could be done differently, so that maybe you are able to get those ideas through? Maybe you can change the system.

FG1-1 (T-34:23) - Me, I think like the system here of introducing young graduates straight into the education, in to the lecturing (tutoring) profession is nice, because the person is lecturing you, and they have this nice experience of the fact that when I was at your stage, I couldn't get this right because my lecturer was, ... I cannot say it is their level of reasoning, but it is their kind of understanding. Whereas I was born in a generation where everyone is carrying an iPod, my lecturer was born, and all they could do is hand drawn (sic). **(MO - What?)** [Laughter] So there is, people who are, there's a way we blend in with our age mates, and I would ask someone, I would share my line of thought with a person of about my age freely, compared with an adult because I would feel that an adult would think that I am going out of my way to come up with ideas that do not make sense, but introducing young lecturers to young students, it makes their education more, ... they explore more, and they're free to express themselves, so if it's education, I think students who perform well, should be given a chance to help the young students, it saves them that pressure of having lecturers who are like gods [snickering], they interact freely.

FG1-5 (T-36:13) - The, the, I've realised that, the most of the lecturers are also practicing architects, and that I think also limits students, in a way that the lecturer would, would, directly transfer what is happening in the field to the student, without necessarily trying to break the barrier and you find that a student may have this, we like to call them crazy designs, and then the lecturer thinks they cannot work, because in the field at the moment they are not working, but if, if, if lecturers give students not ultimate, not too much liberty but a sort of freedom to explore what they can do, without necessarily having to think of what can work in the field, that can also change something, I think.

FG1-2 (T-37:05) - I think, um, because right now the fact that I think I am able to think differently compared to so many people, that I probably think that my education has been successful to an extent, however back to what FG1-1 was saying, you got this lecturer who is telling you what was done in the 1960s. I mean, get updated, [Laughter] books are written all the time, it actually helps when someone knows what is happening elsewhere, so that they do not think our ideas are off the moon, or ... it helps.

MO (T-37:41) FG1_6 you had something to add?

FG1-6 (T-37:44) - Yea, I want, Like ah, if, you said how you said how, so maybe students would go out if they want to practice, is that the question?

MO (T-37:56) Ah, no the question was, what was the question? How could things be done differently to make, I think it is to make the transition into practice easier? How could things be done differently here, in an educational setting?

FG1-6 (T-38:13) - I think ah, ... , I think we, in this, in this, in this faculty, we have tried to see the break in one year from maybe year three, after year three you go for one year. So as in that way, I think, it can bring ah, after the student goes for that year, then comes back, maybe the faculty can be able to like like see what he has done so far, and how he has practiced that one, and when he comes back, and then begins to improve on a few things

MO (T-38:52) - So you're saying that practice, professional practice , or the year-out is a good thing? (FG1-6 - Yea) Are you looking forward to it? The two who are going out? (Background - Yea)

FG1-5 (T-39:04) - It also depends on what you do there. **(MO - This is true)** If you are still stuck down in your little ways of practice, then, you may not even want to come back.

MO (T-39:17) Now, someone mentioned thinking different. Is that a good or a bad thing?

FG1-3 (T-39:23) - Both.

MO (T-39:25) Both? Why do you say both?

FG1-3 (T-39:26) - It's a good thing because, sometimes it's necessary to move away from the norm as you can say, it is necessary, cause your are going to end up for example with the, how do you say, global warming for that matter, it is very necessary to think different from what has actually been going on, and then it's a bad thing because most of the time you will get shot down, your dreams will be shattered, and you might not exactly know why cause to you everything seems to be in order, but to someone else for some reason it does not make sense, or it seems like something that is too far fetched. Yea.

MO (T-40:20) FG1_4 you said its a good thing. Why?

FG1-4 (T-40:23) - I think it is a good thing, you know like how they say variety is the spice of life, everyone brings something different to the table, and you move on from there.

FG1-1 (T-40:34) - Yea, it's, it's important to think differently, that's why I feel to change the system of education for architecture and how students will move on to practice, I feel that for those, the schools of architecture that are encouraging thinking differently and creating extra ordinary things, they should not only stop on teaching, on teaching the students, I think the lecturers should be the ones to help in following up, when you leave architecture school because out there the majority of the people are not accepting that new extraordinary creativity. So if each school created its own followup system for its line of thought, you will find like [Named University] has a certain practicing kind. Every one is unique, but you know that if a student comes up with a design even the faculty can back them even years after leaving [Named University], so that would create like those movements that we studied about in the past, in Africa that is just not acceptable, I think it just has to start in a certain way. [Snickering]

MO (T-42:07) So why do think that is the case?

FG1-3 (T-42:11) -- What is the case?

MO (T-42:13) That, when you go out as a young vibrant person, you get your hopes and dreams shattered. Why do you think that's the case?

FG1-6 (T-42:25) - You know like no one knows you first of all, you just go yes I have B.Envi.Des. or something, but what is it? For someone to look for you, they must actually see what you have done, so the best thing for me I think is before maybe you are [understood] do something, bring up something that shows that you have the best you have, it should be put out, maybe the fact that you get someone and say lets try this, person is very good at making things stand out, then you can be able to say that I

have this qualification, and this is my work, this is the first work I've done, so when they see it, that is when your ideas will not be shut down.

MO (T-43:18) The question is more related to something else. I don't want to say it specifically, but it's actually related to society. I don't know if you have any ideas about that issue. Because you got the professional side, which is correct, and they're lots of issues related to that, when you come out as a new graduate, you haven't proved your self, but there other issues as well. Anyone have any ideas about that?

FG1-5 (T-43:44) - I think there is the issue of the mindset how people think about architecture not necessary the architecture student, there are several people out there that want nice building and all that, but they first of all they cannot listen to a fresh graduate because they don't see experience in you, they don't know what you've done, they don't know what you are capable of then also they don't want to really change much they want the four walls and a roof, they are stuck with that and they think that is good enough, as long as they have the minimum, that is enough they don't want something different. But the way I see it, it's just about the age, most of those people out there there do not want to work with younger people, they think we don't not know much, we're not really experienced, so default to the more experienced architects.

FG1-1 (T-44:36) -- I think it's like that, and I will narrow it down to Uganda cause that's what I know, I know two reasons behind it: I think important decisions are taken by people who are not knowledgeable, so if for example projects to approval like a design for a certain place, and you find that the panel has politicians and business men, who chose the design, that I am sure those people would not got for creativity, they would go for basic. And secondly, I am born in Kisoro, and the way they use materials there, it's no one, everyone thinks that this worked long ago, when conditions were so bad, it means this is the best option, so people think that the way something was done, meant that it was the best way it should be done so they stick to that, the traditional line of thought, they don't deviate from it so much.

FG1-3 (T-45:55) -- I think we get shot down because, um, when we were in secondary school we had this should I call it a theme, 'embrace change, retain identity', So that is usually a big problem cause it 's hard to accept something to change something without changing you as a person, and most people are scare of changing who they are, so I think that is a big problem.

MO (T-46:26) I think we all are scared of change

FG1-2 (T-46:29) - I think, yea, it's also society's perception you know, being different, people as I always say, someone is going to say I want it this way because my neighbour has it that way. But something that needs to be done is people need to get more exposed and also I think that's a challenge which we need to face, we need to expose people to what exists out there and that's the only way we are going to have it done.

FG1-4 (T-47:00) - - Yea, and, like about that, 'I want it to look like my neighbours' I was thinking instead of coming out with radically different things, you could, .. Ok lets say you present a proposal to a client, and he totally can't relate to it, ok like fine, you want it to look like your neighbours, you modify the neighbours thing to like a middle ground between yours and the neighbours, a starting point, really, so at least once they can see what you can do and how much better yours is than what's existing, they will be more open minded, more acceptable to your radical idea.

MO (T-47:39) We're going to get back to that one because there are still some other issues that are still related to that, which are actually more social than architectural. But we seem to be hitting on this thing about what is architecture, and the two words that come up are process and product. And still this issue about acceptance. What is your take on architecture as process, and architecture as product?

FG1-2 (T-48:17) - Architecture is a process because it evolves, not only through your idea or your concept, but also it's style, and that's why I think it's a process, however we often think it's just another product, it's just another building out there, we often disregard the whole process phase, that is why I think it is a process, it has to evolve.

FG1-5 (T-48:55) - I would agree with FG1-2, but as in ... process makes product really, so technically the two are related, they are linked. But like she said most people just see the product in the end, the beautiful building out there, but architecture has always been about process starting from school and learning to explore different ideas, and then going out into the field and putting those ideas into reality, and then having to change like FG1-3 said, 'embrace change and retain identity', you have to change, it is all process, a new style, a new kind of thinking it's all in the process, the product is not a big deal, because without the process you definitely can not have the product.

FG1-1 (T-49:41) - I think, I tend to differ from that, during our holiday travels, we happened to meet these people who were constructing, piers, docks on Lake Victoria, and the process turns out to be different from the product. Just like we are studying here we are getting to develop a line of thought of how we shall create and design different things, so you as an individual, you have the ability, you can get a project you come up with your line of thought so your process you create what you would have liked to be placed for that part particular project, but the product will not be what you designed, always when you go back to your clients especially here in Africa, your initial design has to change to suite the owners because ... you studied, and you attained knowledge, you have the basics, you know what would have been best for them, and for them they will make you give them a product that fits what they want, the cost, the size, so I think the process will differ with the product.

MO (T-51:15) You see how we come back to the same thing ... yes FG1_6, you wanted to add something?

FG1-6 (T-51:20) - Process and product, like if I look at that trouser there, what was involved before it came out? There is a process that someone talked to someone, or someone, things were brought here. So that whole thing was a process. So what we are seeing here is the product. That's how it is, so architecture is.

MO (T-51:46) What I'm, what I'm interested in here, I keep hearing that Society is not accepting what we are doing, we have to modify designs to match the client needs, is there a mismatch between what we are doing and what society wants? If we are being creative, why are we being creative separate from the client?

FG1-4 (T-52:08) - It's not a mismatch, it's more a missing link, as in the society is not exposed to what we are exposed to, like, as they educate us, I think we should also, sort of like, not exactly community outreach, but broaden their way of thinking, they would be more receptive.

FG1-1 (T-52:35) - I think the society has not yet realised the effect of the built environment to the world they are living in. Their understanding is, I could say in fact they have such a ... naive ..., they feel so positive, they think that the built environment is a positive addition to the environment, they do not realise that their lack of interest into the details of what actually the built environment is, is harmful to them, so whereas you're going out of your way to create a functional building, a functional design, something that will be functional today and has nice effects on the environment, this individual all they basically think of is 'I need a house, that's all', 'I do not care about you advising me to change the nature of roofing materials, my neighbour has the same roof, why don't I add another concrete block, ... he does not know the effect of the heat that they are generating, or having like those buildings in Kampala all with curtain walling, I mean the other building is beautiful, he doesn't realise that adding another curtain wall opposite this one reflects, generates more heat. They don't know, so it's very hard, there lack of details cannot allow them to understand what we are up to. We have studied, and clearly understand certain needs, and then their education is not catering for everything I could say.

MO (T-54:33) Ok, let's come back to this whole idea of architectural education, I have a series of three questions, and I would probably want an answer from every body here Um, ... I have to find the questions ... What do you like about the [Named University] approach to architecture education? Is the first one. What do you dislike about it, is the second question? And the third one is, what would you add, or change. And we can probably do the three questions separately. Its probably easier that way. So what do you like about the current approach to architecture education, architecture approach at [Named University]?

FG1-2 (T-55:21) - The, the best part about this is exposure, I, we have so many lecturers all with different experiences, in different fields, and you soon get a wider scope of what architecture involves, and at the end of the day, the fact that these guys explain in different ways ... and also the facilities, they are unlimited, we've got a great library, so you know what is happening, and also the whole practical approach to everything that we get involved in, and to me that is the essence of architecture, you know it is a hands on thing, so [Named University] does that, and that is the best part for me.

FG1-1 (T-56:07) - Personally what I like is the fact that every lecturer is so different, and ... I have not studied in a different school of architecture, but for every lecture you turn up for, for a particular course unit, you feel that that lecture is best suited for it. So you enjoy a different line of thought for each course unit. It is so independent and yet at the end of the day they are unified cause to are studying the same thing.

FG1-3 (T-56:41) - I like, I like [Named University]'s approach to architecture because it opens your mind to the different forms of design, not necessarily the building, not necessarily the interior, it also opens your mind to for example the landscape, which in Uganda does not get a lot of attention, and um, at the end of the day you are able to integrate all of these different aspects into one whole as a was of, of, a deeper understanding of what architecture is.

FG1-4 (T-57:37) - I like the diversity of the [Named University] approach, from the get go, you know that you have options, you don't have to stick with one thing and get everything that there is to know about that. You know like, our course ends ... after the first two years of study I get to choose what to specialise in, and we have lectures that suited to that that will mould us based on that course we have chosen and ...

FG1-5 (T-58:12) - I like the, the, small classes, the fact that the classes are relatively small, so the teacher student relationship is good. Then I also like the fact that from the start you are given options, several options you do not have to limit yourself to just architecture, you know that if after three years I don't really feel that I like architecture that two tier system allows you to chose something else that you'd want to do after that. And the different phases of coursework, they expose you to several things, ... cause I, ok personally I realise that I am better at writing and literature, that kind of thing, so it helps you to explore al lot of what you can do. I like the facilities, they are really helpful, and easy to access.

FG1-6 (T-59:05)- It is not easy but, ok, most of the people have already said it, but there is some area that I realised, that [Named University] has looked at it. It's not being stagnant, as in lecturers there are not tied up to a tradition, last year they are doing the same thing, guys in last year do the same thing, this year they do the same thing, so the change from like from BDT to Envi. Des. shows a sense of direction, they are sensitive to the world, and how the world looks at things, how the world is. They are looking at pushing us towards solving what currently the the world is experiencing, because if we shall be doing the same thing that was done in nineteen something, it will look so irrelevant today, cause architecture is facing different problems today, than those previously, so [Named University]'s approach to keeping in touch with modern problems and how they are separately solved in architecture makes it the best.

MO (T-1:00:08) Ok, thats what you like, but what do you dislike? You've got to dislike something. Ok, everything is good.

FG1-2 (T-1:00:23) - I think sometimes it gets to heavy

FG1-4 (T-1:00:26) - Yea, the diversity creates more, a bigger workload cause there is more work to do.

FG1-2 (T-1:00:38) - And, and, also, the, the approach, having more lecturers they all have different opinions, however we have instances in class, where one says this then the other ..., you know it is giving some very different, totally different ideas, and then as a student you are caught up in between the two, because there's also, yes we have to face it, sometimes you have to, there is this thing thing of doing it because the lecturer said that, and in terms of being expressive, you are sort of more reserved because you are afraid of what one lecture is going to have an opinion of what you do compared with what the other person does so it is a task for us student to harmonise what each and every person says, especially with design.

FG1-5 (T-1:01:37) - I, I, don't like the fact that ... I have seen it with other students, that when the workload gets heavy and the students are trying hard to solve, to finish everything on time, and on several occasions their efforts are frustrated, many of the students just stop, they decide to do the course to now just finish which is not the essence behind the whole thing. Many just decide, I will do the three years and get the hell out of here. I do not think that is a very nice thing. Then also some of the lecturers are limited to their thinking, and limit the students to that line of thinking. So you are not allowed to explore what you think would be creative and innovative ideas.

FG1-1 (T-1:02:32) - Personally what I don't like is when I'm forced to compete doing something not because I have understood but because it's time to finish. I feel it is not fair at times. It's just the end, it's the date for submission, so I have to submit so I do not get 50% but I actually feel I could have done better, and given a chance to to better, I still earn half, it's kind of hard, and sometimes you are doing work, and the workload is heavy, and you know you could have done something better, but it's time, you just have to submit.

FG1-3 (T-1:03:20) - Um, I don't like, the, like FG1_2 and FG1_4 have stated, I don't like the diversity, not, ... in small parts because of the confusion it tends to bring to someone, after a while you sit there and you wonder is this really my work, or a portion of it is what someone told me to do here, what another one told me to do there, and that you don't have something that to you is cohesive, so for example if you are presenting your work, jumping all over the place, you don't have a logical pattern of how you are doing the work.

MO (T-1:04:24) FG1_6, anything you want to add?

FG1-6 (T-1:04:26) - It's too much, as in, ok, there tend to be like times especially now, we had one week, your handing in more than four assignments, and you're are given like one month, but there is nothing in between, then one week everyone wants his work, so I don't know which magic is that. At least one week, and handing in one assignment would be better.

MO (T-1:04:57) So the key issues ...

FG1-4 (T-1:05:00) - I don't know if it's the Faculty approach or the Senate, but the policy of retakes I really have a problem with it, I don't think it is fare for someone to spend a whole year repeating a course.

MO (T-1:05:14) So, some of the issues coming up are time, workload, conflicting issues, this are some of the things we can talk about. And we probably, over the next few months, we'll probably come back to these issues. Um, but the last part of that three part question, what would you add or change?

FG1-4 (T-1:05:45) - Ok like me, about policy of retakes, I would probably let someone continue, and do the papers of the year they failed in the next year.

FG1-2 (T-1:06:02)- What I would change refers specifically to presentations, for example, when, when we have presentations you are caught up have you need to have all the drawings, you need to have all the models, you know, what I would change say if I am

good at this concentrate on that, but at the end of the day communicate your design, it would sort of stop this whole thing of getting caught up doing so many, many things and doing them half way, because the lecture says that because the lecture says you have to do this, that I why I sort of emphasis the whole thing of appreciate what each and every student is best at and let them explore that, so that is what I would change about the system.

FG1-1 (T-1:06:49) - I think I would also go in line with that, I feel I am limited in my mode of presentation of my work, I present, I mean it is my design, I probably have a way I want to present it, but this idea of selling my idea in a restricted mode, I think in certain occasions, we need to have, yes we should have restricted guidelines for presentations at times, but I feel we should have assignments where presentation mode is open, because when it is open my idea will blend with my presentation style. It would sell my idea in a better way.

MO (T-1:07:36) May I ask why do you say the presentation mode is restricted?

FG1-1 (T-1:07:41) - Like if I'm given an assignment and I'm told that you're to use, its a design project, and I'm told that your final presentation must be on A2 restricted to two papers. [snickering]

MO (T-1:07:55) Why do you think that's the case?

FG1-1 (T-1:07:57) - That's ... Whereas ... I could have ... instead of ... that's, that's done to ease, for me I feel that's a way of easing the assessment, [laughter] so that everyone has two papers, express your ideas on two papers, and I don't know, what if my idea, I like, the whole relationship of how much I should write about my ideas, I can relate to a certain situation where I was and I felt that all I wanted to do was draw, draw, pin up my drawings and talk about them, but rather than draw and write about them.

MO (T-1:08:44) Next, anyone else?

FG1-5 (T-1:08:47) - There I would disagree with FG1_1, ... I feel that the thing about telling some to use lets say two A2 pages, and not more than 400 words, is just about teaching someone how to communicate in different situations basically, although like FG1_2 said if I am good at using computer graphics to present my idea then it is better that I stick with that and develop it properly. What I would change really here, it's rather big, is really, really big, it would take a while, it would take a period of more than say five years, but I would ideally split the different parts of the course, landscape architecture and so on, say interior design, environmental design from year one, ... but it's within the same faculty but the courses are split, the eventual degrees, Bachelor of Landscape Architecture, Bachelor of Interior Design, Bachelor of Structural Engineering, so that from the very beginning someone can develop their own, something they are very good at from the start, that is what I would change. I don't know if I would really add much, the course is already a good one.

FG1-6 (T-1:10:08) - For me I realise that the library is not always accessible to us, as in for us like, most of the assignments we have to go ... so if this faculty is like to encourage us to use the library then it needs to be open 24 hours. If assignments are like the way they are, cause in that time you can't use what you think is right because it is not always there. Most assignments need you to back up your ideas with what someone else has said.

FG1-3 (T-1:10:49) - Um, like FG1_5, what I would change is really splitting up the course into different parts, because at the end of the three years for example, when you go for your year out, you're focussed, you know exactly what you want to do. And by the time you apply for a masters programme, you're ready to make yourself into a better professional someone who is going to continue in that line of work for a at least a longer time than what you would have thought of originally, like after three years, you go to work in an architect's office, and you realise that I was probably better at maybe structures for that matter, and you now start to wonder how am I going to recollect the pieces of third year.

MO (T-1:11:57) But, haven't you just contradicted yourself in that same sentence? Are you saying that you would like it separated, but you get to the end and you find that you have, you find yourself in the wrong place, then what do you do? Do you start again at first year?

FG1-3 (T-1:12:17) - What I meant, was um, I was looking at it in this programme we have right now, you are looking at these different branches you can go into, and then you say if you are very undecided, you decide if you are very undecided, you say let me go into this one, and you realise that maybe the other one would have been a better option, if you come into first year and it is already split you will find a way of making what you have chosen work before it's too late.

MO (T-1:12:52) But that is exactly my point, if you come in at the front and your are already split and you go through three years, and you realise it is not good, what do you do? Because it comes up to the other issue, and maybe you can answer it, I don't know if you can answer it for yourselves, or for other other students, what makes a student join a particular programme? Do they have a choice, or the choice made for them by somebody else?

FG1-3 (T-1:13:21) - Many times the choice is made for them, many times ...

MO (T-1:13:25) And, and that is actually part of the issue that we are talking about. If the choice is made for you, are you going to make a good professional? If you go into a programme that you are not happy with?

FG1-5 (T-1:13:38) - No you are not [Laughter]. Generally in Uganda, the choice is limited by the education system, starting from Ordinary level education. And then when you go into advance level, you are told that if you want to be a pharmacist, you'll have to do physics, chemistry and biology and A-Level, or if you want to be an Architect you have to do Physics and Mathematics at A-level.

MO (T-1:14:00) How many of you did Mathematics by the way, at A level? ... Everybody. Physics? Everybody! Wow I have a very biased group here

FG1-5 (T-1:14:10) - So that limits people then, someone who, I know of people who have had to do medicine just because at university, they can, they can, they want to do lets say music but because they did biology and chemistry they have to do medicine, and I think that limits your choice an you do a programme but you are not very happy with what you are doing so you do it just to finish it you do want to practice it.

MO (T-1:14:35) So what do you have to say about that in relation to our split programme here? Coming back to what you just commented about, just a few moments ago ...

FG1-1 (T-1:14:44) - That's the good thing without system here

FG1-5 (T-1:14:47) - It's not really a good thing with the system here. Um, the split system I think it gives you focus from, from, from the very beginning, because your could compare it to specialisation because, this three year system, ok yes within the three years someone will realise I am good at this, I am not good at that, I am good at this, but I would imagine that if from advance level the education system is conducive then it would be easy to establish the split.

MO (T-1:15:17) So you are saying that, the issues, we cannot really change university on its own, the issues have to happen at another level. Um, have any of you had a chance to talk to students from other universities, who are at a similar stage in their architecture education, and speaking to them, how do you think your situation compares to theirs?

FG1-1 (T-1:15:48) - I think while you are studying here, and you don't talk to those people you would not appreciate how the system here is nice, ... I happen to **(MO - I didn't ask you to say its wonderful, just compare it)** ... I got a chance to see the chance for students at the same level with us, from the models, to the paper work, it's, I think our work is relatively better than theirs, ... whereas I thought we had a lot of work,

their problem is that they get to sit and listen to lecturers for so many hours of the day, and it helped me to appreciate the fact that our lectures are not so many, and don't last so long. I think it is a nice thing to brief your students, and allow them to explore their own ideas, rather than keeping them seated listening.

MO (T-1:17:03) Anyone also got the chance to talk to other students?

FG1-2 (T-1:17:07) - Um, with the split system, the three years and the two years, we are definitely at a much better level than students at [Named University], but on a different level if you look at universities in South Africa and also Australia, they have the same system, it's probably a good thing because there you relate at a better level and I think we are at a good stage to go out there and compete with these guys, it is much easier, it is more welcoming, they can relate to our system much better, so I'm pretty confident we can do it.

MO (T-1:17:51) How about the level of performance?

FG1-2 (T-1:17:55) - Ah, the level of performance, ah, yea, people are really good, they got good work, and, and, also that sort of goes back to ideas of presentation, exploring what each of our strong points are, and that's one of the things I really admired, because the truth is you can't do everything, so that's, their is sort of that extra un-limitation that they have that I feel that we don't have it so the performance, I think its great.

FG1-5 (T-1:18:39) - Yea, I've, I've talked to a few, but not in Uganda, but in Australia, Malaysia and, Singapore. The difference is they, they, they're not restricted to anything really, ...

MO (T-1:18:54) How do you mean they are not restricted to anything?

FG1-5 (T-1:18:59) - I'll, I'll be very specific here, a certain, we did this in first year, design course unit, it is about conceptualisation, how to come up with a design, where does your design come from, what is the concept behind the design, and in this particular assignment, we were limited to nature, to things in nature, say fruits, leaves, anything in nature and I felt that was extra too much limitation, in the other universities from the beginning, you are given a sort of freelance ... you can have all sorts of imaginations, no one will tell you that we don't want to see anything but nature, I think thats one

MO (T-1:19:52) Is that uh, heresy, your perception or is it what, what you perceive is going on there, or what is actually going on?

FG1-5 (T-1:20:05) - It is what I was told.

(T-1:20:06) You have't actually seen it (FG1_5 - I've not) How about workload? [Laughter] (Many - the same) Ok. We are almost through here, just some points. Part of this is sort of exploring ways to better the architectural curriculum, not only in [Named University] but in Africa as a whole, because the issues with architectural education, believe it or not are universal. All students seem to have the same issues, and its just, how do we deal with it? And thats really what my whole research is about, how do we deal with this issue. What I'd like to read to you is seven essential goals of architecture education, then you can give me your opinion about them. and they come from a publication by two gentlemen, Ernest Boyer and I've forgotten his other name, Mitgang, and they did a study of every single architecture school in the United States. and they came up with seven goals, which they thought were important. The first one was: An Enriched Mission; the second one, Diversity with Dignity; third one, Standards with out Standardisation; forth one, a Connected Curriculum; fifth one, a Climate for Learning; sixth one, a Unified Profession; and the last one, Service to the Nation. What would you say about all of them, one of them, some of them? What in your own experience about architecture education ...

FG1-3 (T-1:22:01) - What is the one about unifying ...

MO (T-1:22:05) A unified profession ...

FG1-3 (T-1:22:07) - Yes, am, I think one is very important, I take an example of some of um, some of the architectural firms we have in Uganda, they call them multidisciplinary firms, whether they are interior designers, they are structural engineers, they are architects, they are project managers in one firm. And I think, if we are able to learn that from the beginning when you're still in school, you have to consider all of those aspects in your design, all of those different branches in your design, I think it's very important, and I think it betters you as a professional.

FG1-5 (T-1:23:02) - I particularly, talking about the seventh point (**MO - Service to the nation**) ah, I would say that in the African perspective as a way of building for people, building for the African people, and we don't see that happening in Africa today. We have architects that are replicating buildings from Europe, buildings from the United States. And if we are following that line - service to the nation, then those buildings are built for the American people not for the African people, or Ugandan people for that matter. So I would think that architecture education in Africa should emphasize buildings that fit within the African context, or design that fits into the African context. And then, Standards without Standardisation, yea, ... I'm I'm not sure I understand that well, but I think it's about not limiting creativity and innovation, but having particular particular standards to follow, but not putting it into a tiny box and saying this is what we want only. So open up everything, that it should be free, but yes of course everything has its standards but to an extent it should be really open, although I think, all the others make sense.

FG1-2 (T-1:24:32) - Ay, yea, I think pretty much makes so much sense but I would like to emphasize on the last one, *Service to the Nation*. Ah, one of the challenges I think as an architect ... it's just not enough to just enough for us to probably to an merely to what happens if we cannot make a difference to what is happening in our own communities, and that's our service to the nation, however back also I think the nation owes us something, it does not encourage me as a local architect if I know I may not be successful in getting a big project locally, and all that so, and so I think the nation also has a role to encourage us as architects. The younger architects.

FG1-1 (T-1:25:27) - I think the most important one I would relate to is the *Unified Curriculum*, I feel that as an architect, I should be able to practice in any region of the world and not be limited by the fact that I studied in Africa, and only understand building in the tropics. If while we are studying we are given that exposure, and while studying, for example when we are studying here, we are now in our second year, but if we tried to produce like work using CAD programmes, and you compared with our classmates who we were with in secondary school who are studying architecture abroad, their ability with CAD programmes is superior, so if we would kind of try to keep up with the requirements that could be used globally it would be nice.

FG1-4 (T-1:26:49) - Then for a *Climate for Learning*, I think each new design should inspire something further, it shouldn't just stand alone in its context, you know like how they say you can tell the story just from the building, I think that's how architecture should be like.

MO (T- 1:27:12) Now FG1_1 mentioned CAD, I am not sure how much you are aware of CAD in different universities. How it is used, and why it is used, are you are aware of it? As he mentioned, he saw the, comparing people in other universities, but he did not mention how he got that information.

FG1-1 (T-1:27:37) - I was a classmate to a student in senior 6, so he is exactly at the same level as me, but studying in Malaysia, so I was relating to, I as an individual and the majority of my class mates, our abilities using computer aided and using hand drawn I believe it's important cause your work can I guess with experience you get better, but I'm just saying, we need to ... it is partly of course a personal initiative I know, personally you can work on it, but I mean also the support of the teaching staff to make sure that an individual class at a particular point should be able to do this. I think it's important.

FG1-5 (T-1:28:36) - Ah, to talk about CAD programmes, ah, a friend of mine studying in France, he is in his second year now, but he told me that that the emphasis there is on process, and in the process of coming up with the design, most of the work is hand drawn, but the emphasis is CAD for presentations, yes. They are told that we are encouraging you people to do this from first year because when you are presenting to a client, you are most likely have to use CAD, you will not show your client your sketches and your initial work, the client will want to see what you have done at the end of the day, which is not done much here.

FG1-2 (T-1:29:29) - Ah, there're definitely a thousand CAD programmes which so many people use, but in my opinion, I think at the end of the day, if we do not learn how to use your hands, if you, I think your hand is your greatest asset, so emphasis on hand drawing at this level is still a very good thing about it, because it is going to make us different. Still my opinion on CAD, not everyone is good at hand drawing, and architectural education like in first year, if you let somebody do CAD because they can't do their hand drawing very well I think it should be done, not trying to make everyone try to draw yet, they are just not good at it. Its a win, win situation for everyone.

MO (T- 1:30:27) So we come back to the same question, what is architecture, is architecture CAD? (Murmuring in the background)

FG1-1 (T-1:30:40) - It's not CAD but should my inability to express myself clearly with hand drawings make me a poor architect, no, I can be a good architect, whereas I am not that good using my hand drawing, expressing myself using paper and pencil, that's why I think its ...

MO (T-1:31:08) But isn't using CAD just as limiting, or even more limiting than using your hand, ... particularly if you do not understand how, what you are doing?

FG1_4 (T-1:31:18) - I think CAD supplements hand ... [Talking Over]

FG1-1 (T-1:31:19) - I'm, I'm not using it ... I'm not interpreting it in that sense, I am trying to use it as a way of allowing people to express themselves, because ... mine is more about ... basing on the fact that they need to express their ideas, I cannot use the word limiting, because peoples thoughts are not limited, but expressing their thoughts can be limited by their media, so if the person is allowed to use any form or any media ...

MO (T- 1:31:52) There's nothing wrong with what you've said, in fact it is a very pertinent point. Me as an instructor, I would be very happy if anybody actually did that. It's something that I'm very keen to explore, this idea of different approaches to presentation, and you do that, when you get to the Masters degree you do tend to do that, because the only limit is the size of paper, and there is also a reason for that. the reason why we restrict the size of paper is because that is what happens in the rest of the world. You don't have endless acres of paper, real-estate to present, it's just not feasible. And its also part of the mission, when you talk about the environment, one, producing endless amount of paper which is going to end up in the bin anyway. So double thing. So the issue is, how do you do it? It's probably something we all know about. What is, why use CAD, why use hand drawing when I can use CAD? The question you should ask is, what can't I do, that I need to do? Maybe that is the question. As I said, maybe we cant solve it. Um, no one mentioned anything about the *Enriched Mission*. Any comments about that?

FG1-5 (T-1:33:23) - Are't they all similar?

FG1-4 (T-1:33:25) - There all connected somehow, the Enriched Mission has to do with diversity. It all has to do with bringing something new.

MO (T- 1:33:34) Would you believe it or not that all those are things that we have already discussed in the last 90 minutes?

FG1-5 (T-1:33:43) - Every one is there, their all similar, the missions of an architecture school, I think, ... it just depends on ... what the words of the mission say here.

FG1-2 (T-1:33:56) - Enriched mission, I, I'm thinking about the impact we have to make on society ...

MO (T-1:34:03) - Ah, this is specific for architecture education. Actually all of them are specific for architecture education. If you try and take it past that, you tend to get into a bit of trouble. You start talking about professional issues. Cause it's to do with what architectural education is trying to do [Pregnant Pause] so maybe I'll finish off with one last question, then I'll have my few comments. What do you think is the future of architecture education?

FG1-1 (T-1:34:52) - I think it's going to keep getting ... initially it was so restrictive, and they were following like standards, but I think the needs of the society, and the interests of people, they keep on getting broader, they need more creative things in their environment, so the only way that the architects the creators of this comfortable and appealing environment, the only way they can keep up with that is also the education will have to get split into smaller and more and more detailed sections to cater with the various needs of society.

FG1-5 (T-1:35:44) - The, the pending problem now, yes the pending global challenge is climate change and global warming, and I am one-hundred percent convinced that architecture has a lot to do with it, has a huge effect on it. I see that, in, in the future architecture will always relate to the global challenge. If something is wrong, and architects can't fix it, then architecture education will have to evolve to, to, to create graduates that can fix that particular global challenge. Not necessarily limiting yourself to people's needs, because sometimes people's needs will not necessarily solve the problem.

FG1-4 (T-1:36:28) - Yea, I think the future is diversity, courses should be more diverse so that the end product is easily adoptable to the current climate needs, society needs ...

FG1-6 (T-1:36:49) - I agree with FG1_5, the future of architecture, is ... how the world will review architecture in the face of the alarming problems the world is facing, if the world looks at us as problem solvers, then they will pay big money in the future more, and we will continue to ...

FG1-2 (T-1:37:17) - I'll probably agree with what everyone has said, the future, it lies in teaching us the students to be problem solvers, at the same time we have to keep up with the trends, or probably be the trend setters, ... and appreciating diversity at the same time as one of the goals, stated diversity with dignity, maintaining what already exists, so that's a challenge.

FG1-3 (T-1:37:49) - Um, I think the future for architecture education as FG1_1 said is going to be a break down into smaller detail, um into smaller sections of what architecture as a whole entails.

MO (T- 1:38:13) What level do you think that's going to happen, cause FG1_1 and FG1_3 both mentioned it. At what level do you think the specialisation is going to happen?

FG1-1 (T-1:38:24) - What specific sectors will people specialise in?

MO (T- 1:38:28) Not specifically. I do not think you can ask that. Because you both mentioned about splitting about the education process, but at what level will it happen? Is it going to be first year, second year, third year?

FG1-1 (T-1:38:40) - Well, I think, architecture will still maintain ... I'm sure, it's ... one of the things about architecture education is the fact that we appreciate what was - the beginning, so I believe that the fundamentals will stick, we shall ... the beginning of architecture school will always be there, what I think will split will be the end, towards the end of our course, we shall get a wider variety of options than what it is right now, but the beginning is so important, it is the basis for everything, you cannot do without it.

FG1-5 (T-1:39:25) - I guess the fundamentals will remain the same always for, for, for architecture and for design, but the split, I still insist, should or will eventually occur at

the beginning, with, it will be a hang on with the fundamentals, but there will most obviously be a split.

MO (T- 1:39:48) Ok, I don't know if there is anything else to add, cause I'm through, the rest is just tying things together.

Focus Group Discussion - II (Part I Students)

MO - (T-02:24) Why did you decide to do architecture?

FG2_1 (T-02:45) - Why I decided to do architecture? ...(Laughing) I answered that in first year, and I think ... at the moment ... the answer changes, but at the moment I think it's about mainly getting remembered by having a landmark on the earth's surface and then they point at that building, and be that was Architect Kintu who did it. The other one was for the money, generally architects are not very poor people ... those are my main two reasons.

FG2_6 (T-03:14) - I think as for my case, I thought of being an architect when I was right at like P4. I liked drawing so much, I could draw structures in magazines, in newspapers, so it's daddy who like gave me an inspiration that you can end up becoming an architect, so it become a dream in my life. I was like, if architects draw buildings, draw these things. Well I didn't know much about architecture, so I just know it's about drawing building and such things, and I love it so much. So I cultivated in me, and I had a dream of doing architecture.

FG2_2 (T-03:54) - I did architecture because I like to fantasise about a world that is different from what we have right now. And what better place to start than a course where you can, you know, come up with buildings that look different from what was already existing. Since architecture is more than just buildings, I felt it was the right, you know, course to do.

FG2_3 (T-04:24) - Ok, all I knew about architecture, when I was in high school, ok of course drawing buildings, what, coming up with like buildings and changing peoples way of life in that way. So I met an architect when I was I think in S5, and what really made me like set upon this decision was, I wanted to do something that was practical and also connected with the way people live. And that guy helped me understand that in architecture it's all about changing peoples way of life, not only in building, creating comfort, something like that, and I decided to do architecture.

FG2_4 (T-05:35) - Me, aah, influences mostly came from the technical drawing aspects in high school, and the fact that we were also doing building drawing. So when coming to campus, architecture was my first choice. So that I think was a great influence. And also, my parents are into a little real estate, so I kind of ... , I got involved in you know understanding how it went about, and what exactly was happening. So it sort of pushed me towards architecture rather than any other course.

FG2_5 (T-06:17) - Mine was, in high school, I hated reading notes, as in reading basic stuff, politics and history and all that. I wanted to do something more practical, and I felt doing something like Engineering would be more interesting because I loved Maths. Then when I did TD, and it was kind of interesting building and everything, I felt it was the right decision to do architecture. And also the influences from my two uncles (architects).

MO - (T-07:17) Why did you pick [Named University] or you didn't have a choice?

FG2_2 (T-07:25) - I did, I had a choice, and in fact I came for an interview at [Named University]. But, I talked to an Architect, he is called James, I am not so sure of his other name ... , he was one of the last people to get a first class degree in architecture. So I talked to him, and ... but that's not why (laughing) ... But, he really had a lot to say about [Named University], not that he had tried [Named University], but he spoke so much about it, and I felt it was quite more interesting compared to what I had just experienced at [Named University].

MO - (T-08:12) So what was different about it?

FG2_2 (T-08:25) - I looked at their studios, I went and visited the studios, and they looked more dramatic, compared to ...

FG2_1 (T-08:34) - As for my version, honestly it not even very real, but mainly the government sponsorship. Cause I just couldn't take anything Ok Architecture was my first choice to be sponsored for, and then ... anyway I had to take the sponsorship, it was no way, ok, ... the liking, sponsorship was offered in [Named University].

MO - (T-08:58) Is that the primary reason for most people, sponsorship?

(T-09:02) Most - Agreeing ...

FG2_6 (T-09:03) - For my case it's quite different, cause for me I am an international student, so the only university that is heard in my country in [Named University]. I am from Kenya, so I did my A-Levels from here. The only option was [Named University], cause some of these universities are unheard of, though they may be better, I am not sure, but it's only [Named University] that is heard of, so I had to choose [Named University].

FG2_2 (T-09:38) - Also the six years at [Named University], compared the five years, I think it truly helped me make my decision. (All laughing) ...

FG2_5 (T-09:50) - I had a choice, I wanted to go to [Named University], I never liked [Named University], but it wasn't there, so when I found out it wasn't there I was kind of disappointed. Then when they told it's in [Named University], then I looked at the distance, travelling, cause I had been travelling my entire high school. I was in Mbarara, then went to Masaka. So I wanted to be closer to home, and so [Named University] was a first choice, but it wasn't there, so I decided to just go to [Named University].

MO - (T-10:21) A couple of you said you were aware of the different programmes, while FG2_6 says he wasn't, just [Named University], but... . Were you aware of other programmes offered? Just that you mentioned [Named University], but [Named University] has never offered and Architecture programme.

FG2_3 (T-10:39) - They have a Diploma

MO - (T-10:43) It's a Diploma in Architectural Drafting

FG2_3 (T-10:56) - But, I think in our year, the intake of 2009, they actually have architecture now, I don't know if it is a five year course or ...

MO - (T-11:59) Lets talk about your experience so far, you have got third years and second year, and some of you have just finished your first year. Probably the three most difficult years in an architecture programme. Maybe you can tell us a little bit about your experience so far, very briefly about what you've gone through.

FG2_2 (T-12:17) - I think architecture is fun, it gets boring sometimes, because if you like stay with an assignment for a very long time, it can get boring. But it still promises a lot. It still promises that you will be able to create, in my case with the whole fantasy issue, it still offers me hope, an ability to actually come up with this world, that I want to get across and market. I think that is what keeps me there satisfied.

FG2_1 (T-12:57) - As for my experience, it's really been something to do with hard work, and then at the end of it all the hard work pays by getting reasonable results, like are the drawings being decent, and the design being logical, and like it works. And mainly hard work, and the results bringing some happiness around.

FG2_3 (T-13:22) - It's been challenging, as in there are many ups and downs, but Sometimes, sometimes when you do something and you really like it, and it's interesting for you, I think you don't see all the other negative aspects of it. So I think that has been very interesting for me. But I'm yet to connect more with people, like I wanted, and I don't think I have achieved, ok I still have four years to go, so maybe I'll realise that.

MO - (T-13:58) You mentioned the negative aspects, can you mention some of those.

FG2_3 (T-14:01) - Negative aspects, sometimes some projects may seem challenging, FG2_1 mentioned some projects being boring. Ok, maybe you don't see something

head on, and you really have to go deeper into it. That can become interesting at some point. And then of course other times when you don't agree on many aspects with your tutor, and all that. Those are probably some of the negative things.

MO - (T-14:44) This has come up, disagreements with Tutors, maybe we can talk about relationships with Instructors (Background - Snickering).

FG2_2 (T-14:45) - It has been trying for us, students trying to defend their ideas (*reinforced* (FG2_1). But at the end of it all, you want the marks, (*Laughter*) and it's the tutor who has the marks.

FG2_3 (T-15:01) - The Tutors like to be open minded

MO - (T-14:05) Some Tutors like to be or all?

FG2_3 (T-15:08) - I don't if it's all, but some to me cause I have not met all.

FG2_4 (T-15:13) - I think about the teachers being open minded, it's more or less along the lines of when somebody critics your work, it could be objective or subjective. But many times when you design something, and you present it, and then you disagree, they need to see that change in the next presentation because when you're doing a project it is a series of presentations. So at one point when something happens, they need to see change, or ... You know, and ... So that poses a question whether what they give you is subjecting, being that you can take it and leave it, you don't, you know ... or objective whether you know you have to do it, or In some way it creates conflict because if they see the same thing, or what they call the problem the next in a presentation, then it gets you in trouble. They are like, 'you don't listen to us', or 'we are your tutors here, we have the final say' you know. So, as a designer, it puts you at conflict, whether you're are there to listen to them, and design for them, because may times if you do that, you are designing for them, you are designing to please them, and say, I did this here, you know last week you said this, so they are like, 'yea, yea, good work', or you're like, 'I have a reason as to why this should be like this, and they are like, 'hey ...?' you know. So that is the conflict, and so as students it's either up to you to either take it in, or go against and stand your ground. So that is the major conflict people find. But many a times, it's ... changes, you also change, and you know like FG2_2 said, it's the marks you want at the end, because ... we are at a point somewhere down the road, after having these fiery presentations, it's just about getting the marks and being done with the project, rather than fulfilling the design energies out of it.

FG2_1 (T-17:25) - The only thing I would want to add on to that, is that the rigidity of the tutors in the end may come, at times shuts our innovative, how can I call it, qualities in a way, at times you get to fear them so much, that you fear that they can mess up your marks, so you end up having to take their suggestions.

FG2_4(T-18:00) - As architectural tutors, I don't know if I can call you tutors or lecturers. When does it stop being, 'hey your supposed to do this', or 'this is how it's supposed to be done', or 'do this or don't pass'. Cause that is the major conflict.

MO - (T-18:19) This is the one thing that I am trying to discover here. Please ask me this question when we are finished, because I can't answer that now, but I will give you my own answer afterwards, because it's actually a very important issue about what is going on in there.

MO - (T-18:36) So I will ask you another question related to that, is the criteria you are being marked on, are you given those as part of your programme of study.

(T-18:48) *Multiple* - Sometimes

FG2_1 (T-15:08) - But the way it works, the Tutors argue that when thy give you guide so early, you get to become rigid more so, like in your design projects. They bring it in most cases the day we present, after like we've worked, then they say, 'we are marking functionality, we are giving it forty percent, we are marking the way you've interpreted the concept of the design, we are giving it ten percent ...', and then along the project you work blindly and I quote 'blindly' and they argue, it's like, you are supposed to enjoy

the project by working blindly, without a very clear goals to achieve.

FG2_4 (T-19:30) - It varies from year to year. All I know is in third year, at some point, its design functionality, they question the functionality, services, they give them marks. But now like FG2_1 said, if when they give it to you earlier, you work for that, as in, they say fire escape five marks, you're going to have to find somewhere or somehow to put, to have a fire escape in a project, even when it is two storey, your looking for a fire escape. And so it kind of bogs down the design, and also, ... and so ... it also creates, cause there are times when you have, ... you don't have some things, you don't have, like, ... they normally break them down, five marks for this, five marks ... and you find that out of, on the making list, or the marking guide, you have, you come close to eighty percent, and then the other twenty percent is missing. In a way you claim it is unfair, but at the same time, ... so, ... I don't know. Sometimes, ... sometimes they claim it's for your learning, you have to have these things. I don't know about first years, or how they, ... all I know is that then it was for design process, and how it was thought, how you solve, how you come up with your solution to whatever design challenge you have been given.

FG2_6 (T-21:02) - And I think the way they allocate marks for some of these things may kind of have an effect. For example, you may find that they emphasise modelling skills in the models we use for presentations, yet you find maybe a model will cost only five marks (*background - bonus*) out of one-hundred marks, so it becomes kind of like, so much, ... you find, it's, you have to work on a large model, do all that stuff, and you are only fighting for five marks, so at times people end up getting reluctant about some of those things. So we focus where they are big chunks of marks. If you know that graphics is going to earn me twenty marks, then you have to present the shit. No one is going to give me these mark, so we focus where the marks are, and maybe like ignore modelling, which may be could be much more important than some of the things that they may, ... Not really that much more important, but equally important. So I think maybe that could be part of maybe the problem with the allocation of marks.

MO - (T-22:07) So in general, you're saying it's sort of give and take, sometimes it is a good idea, sometimes it is not.

FG2_4 (T-22:12) - Yea at times, they can give a, they can come up with a marking scheme, and then everyone doesn't have it, then somebody brings out something, it could be a model, it could be something in his design that he has thought about. And then they start to allocate marks for that (*multiple respondents*). So they are like, 'oh, he talked about air conditioning, whoever does not have air-conditioning, no five marks'. And, so it poses a question, if I was doing a project, do I have to think outside the box, bring things that, you know, I may not need. You are fighting for marks. It's all about the marks (*multiple respondents*). You are fighting for the design.

MO - (T-22:51) So essentially you are saying it is a good idea to have marks then (laughing) because if you don't know the marking criteria, haw can you actually do anything?

FG2_2 (T-22:12) - Well in first year, in first year, we've been handling it quite well, because, ... Ok, they tell us that their going to be more marks for models, and I don't know, some drawings, some sketches and everything. But, I don't think, ok some of us do not take it so seriously. What we want, as they have told us to do is, in first year it's supposed to have fun, yea. So if you have fun with model making, then make as many new models as you can, and then come up with very little paper work or something, just to be able to explain your, your stuff, make it seem like a whole.

MO - (T-23:35) This is an interesting scenario, which came up again with talking with the [Named University] students. Talking about the whole idea of first year being fun, and the whole idea of exploring what you are strong in, and pushing that. Which I thought was quite a novel way of dealing with this idea of allocating marks. What do you think of that, the idea of in first year, you as a student, you come in, he is strong in art, you are string in technical drawing, he is strong in CAD, and that is what you do in first year. What do you say about that?

FG2_2 (T-24:11) - You just do what you are good at?

MO - (T-24:12) You primarily do that, you know, I mean you have to, ... lets say in terms of presentation, you concentration on what you are good at, where do you think that's going to take you?

(T-24:22) Many together - Laughing, ...

FG2_1 (T-24:25) - It's a very, very interesting thing. We tried it in second year, they tried to split us into groups, like models, watercolour, charcoal and pencil, then others are doing pen and ink and all that. And it seemed like it were going to work, but I hear, like halfway some students lost interest. Some students want to do everything: they want to come with a model, they want to come with a 3D, with colour, they want to come with this, they want to come with pen, they want to bring some pencil. So it becomes very hard for students. My point is ... *(cut off)*

FG2_4 (T-24:58) - It becomes hard to determine where to stop. Where does this person stop with their CAD and, ... or if they did the modelling were do they stop with the modelling.

FG2_1 (T-25:11) - My point is that can only apply in the field, ok. At the level we are, I may call it the incubatory level, the training level we need to get a taste of everything (reinforced LN) yea, because we need to get somehow like some wholesome training or else if we only train in what we are good at, it is almost useless us coming to the university in a way, we would have remained there and applied what we are good at, and maybe developed it, but then get together we need to get a mix, more like a balanced diet in quotes.

FG2_4 (T-25:43) - These design styles using pen, using ... the initiative is on us, not that, ... the school will tell you that there is this you can model, but the initiative is on you to buy it because even with those modelling, there are those who do poorly, then there are those who are going to take it to another level, because one way or another ... *(Interrupted by someone walking in late)* ... as I was saying, the school doesn't have a platform, if they are like, ok we have realise he is good at modelling, somebody is there to tutor you on how good you can make your models, or if he is good at pen, or if he is good at, ... there is, it is just one design studio, and people doing, you know He has the pens, at one point you find some one saying help me with your 0.5 or help me with your 0.3, I have to do this work. So in a way, the skills, saying someone is good at something is only limited to what they are, what they can do, rather than what he has been taught, knowing what to do and how to do it, how to pull this out, or how to So I wouldn't say that there is a criteria to say that he has achieved, say if he is good at modelling he has actually achieved something, I believe.

MO - (T-27:14) So essentially your saying it gets back to a technical school, where you go in and you are good at one thing, production line, that is all you do. (Laughter)

FG2_1 (T-27:27) - I appreciate that the tutors are trying to prepare us for the market which is not so one to one style, one to one kind of design, but I would also like to give my all strengths to something that I know I will do very well.

MO - (T-27:47) This is one of these things, unfortunately because of the way the discussion has been split up between the first three years, and the last two years, is because, these are some of the things that students in fourth and fifth year probably would be strong on. You would be guaranteed they would say this is what we do well and that's what we are going to concentrate on, but at your level you can see it is quite split. Lets get back to experiences. The approach to architecture education, unfortunately none of you have had different experiences, maybe Ivan has, he can enlighten us from different ones. Maybe telling us about your own experience about the approach to education at [Named University]. The way you are taught in terms of Architecture Education Criteria. They are three areas, they are Skills, the Knowledge, and then what they call Design Integration,

which is essentially, the Design Studio. That is the general split, these days it is not as clear-cut. But those are the three areas, and the way it is tackled again varies, lectures, studios, seminars, some schools have electives some don't, teaching pedagogy, all those vary. So maybe you can talk about your own experiences, something which I brought before, what you like and don't like about what you have experienced.

FG2_4 (T-29:24) - He talked about first year, I am in third year, so they ... the first year is quite dramatic, because you came and you're like, hey we are doing buildings, and the very first lecture, they're tell you, don't think about buildings, think about space, or think about this. The first project they gave was to design a special box in my first year, and people were thinking, what so special about a box, or how can you design a special box. And then you go to second year, and then that's when they are telling you now after you have done the first year, cause first year is probably conceptual, second year is now functionality and the reality of actually designing space, cause first year, I mean second year is when you actually design space, come up with you are know like, do this, and you start to, you know, come up with space, and then third year is, after you have designed the space, the functionality, the way it's working, that's when the marking guide becomes more descriptive. It's do you have this or do you have this, or how did you go about this, that's when you look at a much bigger concept of design sustainability, and all that, and so Yea it is quite dramatic. I wouldn't say there is a particular process, it depends, cause first years will experience something else, and second years, and if you have been through second year, you will have a different experience in the design process and how it is taught.

MO - (T-31:20) Well let's talk about the lectures and studios then. How do you think our knowledge acquired?

FG2_6 (T-31:25) - I think most of the effort is on the student side. Apart from a few course units maybe where a lecture comes in and maybe gives you a lecture, I think it's, ... a bigger portion of it is personal effort, because you have to research, you have to find out everything by your self, so it's more of personal effort than maybe saying that you are relying on the lecturers. That is how I think about it. And I think it would be much more better if maybe, ... well I like it, I like it personally, because it helps us to like develop a habit of working hard individually. I think lecturers also should have enough time for the students, because I really feel like some of the lecturers they really don't have enough time for students. And you know something like with portfolio, you may be trying a bit to make inquiry, but a lecturer will be like, 'what is your own opinion about it?' Somebody is advising you by actually making you like tech yourself. He doesn't give you the way forward, so he does more of, you inquire, but he asks, so that, like at the end of it, you are teaching yourself, you are just trying to come up with your own, it is actually your own, cause at the end of it you are coming up with, but if they were to open up to guide up through, some of these things we are not certain of, I think it would be much more better than letting us like do everything on our own.

FG2_4 (T-33:12) - Apart from the theories, of which fifty percent is your effort, everything is ... You do a critique, and then ... unless something comes up, that's when they probably have a little say, but all the work is personal, your research, your assignments, it's all personal, it is all on the internet, or I read it in this book, they don't feed us.

MO - (T-33:44) So in terms of your different years, you've all finished either first, second or third. May be give me a ballpark, about in a week, the percentage of time for studio, or portfolio in your case, and lectures, and by that I mean formal time where it is actually on a timetable, not the time that you go spend on your own, but it is on a timetable. ... What is programmed, and what actually happens, with a formal body .. With an instructor there.

FG2_2 (T-34:34) - Studio is, portfolio is self-directed, isn't it, so sometimes the tutor is not there. But what is on the timetable, is we have three days that's from eight to five, (Other Person - and the lunch break) Some people do not take the lunch break. And then rest is, the rest is theory and graphics and that.

FG2_4 (T-35:03) - Officially the school does portfolio on Monday and Friday for the whole school, portfolio Monday and Friday, and then theories come two hours every other day.

MO - (T-35:16) So how many, ... on average, you saying it is about four to six hours of lectures.

FG2_4 (T-35:25) - A maximum of eight hours a day of theory, the rest is design portfolio and graphics.

MO - (T-35:33) May be you need to explain this portfolio thing, because I am not quite sure what portfolio is. (FG2_3 - Design Portfolio, Studio) Because to me what portfolio is, is actually your whole semester, your whole years work in one place. So when you say portfolio, I get confused.

FG2_1 (T-35:49) - The design course unit that we get to design buildings, we actually handle a project, we get to be given, he talked of a special box in first year, for us we did a designed object, they give you a project to work on, just like a client can reach a normal architect, like do me a residential, then you go through stages of conceptualising it, so that is the course unit called portfolio to the final drawing for presentation.

MO - (T-36:19) So in first year you say it is free days

FG2_4 (T-35:25) - A maximum of 8 hours a day of theory, the rest is design portfolio and graphics.

(Inaudible)

MO - (T-39:36) So do you think that is doing you justice, helping you grow, since the majority of the time is dedicated to portfolio time, or studio time, but you are only seeing someone for only 10 minutes.

FG2_2 (T-39:48) - It works well for me. I wouldn't want someone changing a lot about my idea. So if he is going to come and see my work, and tell me what he thinks, in ten minutes, that's fine. Cause I have classmates who can contribute a lot, and we are in the same situation, so we kind of relate easier.

MO - (T-36:19) Ok, FG2_2 has brought up this idea of your peers. Do your find that working, do your peers help you with your learning?

(T-40:26) Multiple - Yea I think It does / To some extent it does / It does / Many times working in isolation is not good ... just doesn't work

FG2_3 (T-40:39) - Your peers will ask you questions that you wouldn't have asked yourself, and it helps you realise your mistakes, and by the time the tutor actually comes to look at your work, you've already answered most of the things that a client would have asked.

FG2_4 (T-41:04) - You asked the question about if those 30 minutes benefit. I rather find it sad that the reason why those 30 minutes are there because you have to see the tutor by force. Your forced to see the tutor because if you don't they will not mark you. Ideally when you come to present, or your going to have to present the project, and if the tutor said I didn't see your project, then ideally they don't mark your work, or they refuse to mark that work, so that 30 minutes is showing them nothing, this is my plan. It is not necessarily part of the design solution, but more or less, showing up, or having attendance.

FG2_3 (T-41:53) - Not really, I think, it saves ...

FG2_4 (T-41:57) - That is not before third year

FG2_5 (T-42:00) - He's right, he's right ...

FG2_4 (T-42:03) - It's not necessary that what I'm presenting is ..., because these, these two and a half days per week, I am allowed to go to office, to review my layouts and say this is my problem, this is my work, help me, it doesn't necessitate that I have to come to class.

MO - (T-42:23) So that other one doesn't count for the 30 minutes

FG2_4 (T-42:28) - It's based on individuals, some do it, some don't do it, so, those 30 minutes are for just class, it might benefit, or it might not.

FG2_3 (T-42:44) - I wasn't sure about what he was talking about, but Ok I think that, yea, those 30 minutes, it's not by force, ok, maybe it's by force in third year, I'm not so sure about that, but I think it saves a lot of time, cause during presentations, if a tutor has never seen your work really, you're going to start from, your going to explain your work from scratch, and it also saves you a lot of time, cause he may end up disagreeing with a lot, which you could have done if you had actually seen him during those 30 minutes. And it also saves every one else's time, because you are going to move forward in your project faster if you see a tutor, though you don't have to see a tutor, cause sometimes, he can make you lag behind.

FG2_6 (T-43:35) - I think the problem is because of irregularities of the attendance of the tutors. You may find that you, a tutor will just come at any time in studio, so ... you may find a student who wants to maybe work from elsewhere, and a tutor will pose it as a threat to the class that, if I don't see your work, I am not going to mark your work. So it's like, you have to stay in studio the whole day, just waiting for maybe a tutor to turn up, maybe in some few hours, then he gives you his 10 minutes, he looks at your work. There is no that freedom of working wherever you want, like you have to go to the studio just because you want to wait for a tutor to come maybe, and look at your work so that at the end of it all he may not be biased on marking your work, or something like that. That is what actually happens.

FG2_7 (T-44:34) - I think measures are put in place to ensure people progressed. I think it started with ... , unfortunately I wasn't in school then, but when they put it at school, it seemed that people were never there during studio times. So they came up with a system that every time we have a studio session you have to make sure that you see a least a tutor. But I wouldn't think that it counts much for progress.

FG2_4 (T-45:12) - It doesn't

FG2_1 (T-45:13) - It Does

FG2_4 (T-45:14) - Well not progress as in doing the projects, but just enlightening, it's important. The idea is that FG2_3 says is that you show the tutor exactly what you are doing, so that when you present, they are not in doubt. But it doesn't necessarily mean that what you present to them is what you are going to have to present at the end. You could go beyond, say I did this after, and I took this project to this point. It's just to enlighten them, hey, this is so far, this is my plan, and progress, and I found a problem here.

MO - (T-45:47) Just following, both FG2_4 and FG2_7 have brought this up, maybe we will explore this a little more before we move on to another one. There is this issue of what is architecture, it's actually very pertinent in this whole idea of this feedback that you're get from your tutors. What do you think architecture is?

FG2_5 (T-46:13) - Well, in my opinion, architecture, at least the thing I found out, is about designing spaces for humans, this is of buildings.

FG2_1 (T-46:30) - I think architecture to me, the way I understand it, is more of a culture, lifestyle of people, the way people live, the way people behave in a certain society, is what architecture is. And it is he product, it is what comes out, it is what you produce, it is what portrays what those people think, how they behave, and what they show to other cultures. So believe me, it is like more of cultural thing, in touch with the people's lifestyle.

FG2_7 (T-47:09) - *Inaudible* ... says it is just simply designing or organising a space for a deed. That is because space is not limited to anything, it can be out there in the open, enclosed or within mortar.

MO - (T-47:34) Ok, so the follow-up question would be, if that is the case, is it the

process that is important, or the product?

FG2_3 (T-47:46) - Process leads to product (Laughter)

FG2_2 (T-47:51) - Process, Product ... ?

MO - (T-47:53) Comes back to the heart of the debate about seeing tutors

FG2_7 (T-47:56) - The process is the product (Laughter)

FG2_3 (T-48:00) - Is it the process or the product? I think the process determines the product. But in the end, the product is what is more important Background - It's what is seen)

FG2_2 (T-48:21) - What do they pay for?

FG2_7 (T-48:23) - Product ... (Laughing)

FG2_3 (T-48:25) - The ends justify the means

FG2_4 (T-48:28) - I think architecture is a lifestyle. One way or another is, you're going to find a design solution to any particular given project or problem in society. And, as pertaining to process I think finding a solution is important, because if you find a solution, definitely, you get the product, so process, ... If the process is well thought out, definitely the product, inevitably becomes something.

MO - (T-49:04) If it were a product, it's very easy to get a draughts-person, only been in school for two years, to draw up some plans, and build something, isn't it?

(T-49:20) Multiple - Yea, It is

MO - (T-49:22) So if architecture is a product, why would you spend five years, at university? All they do is go in for two years to any drafting school, or in fact you can go down the road here, there is one school does it in three months. Why are we at school for five years?

FG2_2 (T-50:04) - I think, I think, ok, the product is important, but, I think the process adds the value to the products.

MO - (T-50:11) So what is that value?

FG2_2 (T-49:20) - Like you've said it, compare three months and five months, their is going to be a difference in the product.

MO - (T-50:21) What is that?

FG2_2 (T-50:25) - I can't say I am so clear about it. But if I were asked to do an architecture programme, and my options were for one or three months, and another for five years. I probably would take the one for three months, but I wouldn't feel right about it. I would still want to take the one for five years, just because there's that value attached to the idea of having such a weighty programme. That's what I think.

MO - (T-50:56) So why did you go to [Named University] and not to [Named University] then?

FG2_2 (T-51:03) - Like I said, I would probably take the three months programme, but ... (Background - something ain't right ...)

MO - (T-51:10) By the way, programmes in the United States are seven years.

FG2_2 (T-51:16) - And besides, at [Named University], they do something in the Built Environment. Is it Design ...

FG2_1 (T-51:26) - According to some news I am getting from, they are getting a masters, ... some person I am training with, at the site I am training, industrial training. It's like, they first do three years, and they get a Bachelors in the Built Environment, and then (laughter)

MO - (T-51:41) Before he even starts, maybe I will ask you how much do you know

about the programme at [Named University]?

FG2_2 (T-51:48) - I know it's six years, yea. And then there's three years with the Built, ... Design of the Built Environment (FG2_3 - Design of the) ... yea Built Environment, and then there's, that's three years yea, and then you do the fourth year internship, yea, and then you come back and it is two years of architecture.

MO - (T-52:17) Anyone else what to clarify that?

FG2_1 (T-52:18) - Oh yea, I hear they turned the Design of Built Environment name into Environmental Design, and then after that you come back for a Masters in Architecture. So you do five ...

FG2_2 (T-52:28) - That's what I thought, and I actually wanted to take that, cause I thought I was going to have a Bachelors and then have a Masters with the other two years, I don't know if that what it is.

MO - (T-52:49) It's interesting we are in the same country, and no one knows what's happening!

FG2_3 (T-52:52) - I have a friend in [Named University], and he believes, that after three years, he will have a degree in Architecture, or something to do with Built Environment, and a Masters in Architecture. But the tutors ok say it is a degree in architecture after six years, there is no Masters. I am not so sure about that. *(Laughter)*

MO - (T-53:27) How much do you know about the [Named University] programme?

FG2_7 (T-53:30) - Well it's five years *(Laughter)* (LN - It's Direct) Bachelor of Architecture, I think I even know the course units *(Laughter)*, all of them. When, ... before I applied, there were three institutions, one in Malaysia, then Uganda. So I looked through, first I never wanted to do architecture, I wanted to do medicine. But along the way I think I was told medicine, you have to think twice, or five times *(Laughter)*. So I was told about architecture, so we get a list of the different courses in different countries. So I looked at the course at [Named University], it was very similar to the one at Malaysia. Then later on I think we looked at Canada and South Africa, and later Kenya. Then were wondering, ok in [Named University] it's called Architecture, so people said, how would you explain to a person what course you are doing. Initially it was called Building Design and Technology, and at [Named University], ... that's the first three years, at [Named University] it's Bachelor of Architecture all the way through. So, ... what's the difference, how come this institution seems to be calling it Bachelor of Architecture, and yet the trend that you notice around is, you see three years, and then somehow it was disappearing, then someone comes back in two years, and then ... it was a bit confusing. But then, when I got there, you appreciate the fact that, seriously, like, ... when I got to ... I have friends at [Named University], there were some who I think were in their fourth year. But they knew about the programme at [Named University], and actually, in fact three of them wanted to switch. Cause they thought, .. First thing, one thing ok in Uganda, we do not get any training about lets say, professional practice, as in what's out there, you never get, ... even the schools that tend to have career guidance, it is not that realistic. You always get people who just come, say they are Doctors they are Engineers. I am a doctor, I do this and this, then kids are like, wow! I want to be a doctor, because I want to get bragging rights, I am a doctor, I am an engineer, but what's really involved in that. So you get this vacuum of you know so much about, the other, ... one profession, but, ... even when you think you know so much, you don't know anything. So when it came to architecture at [Named University], the first three years, ok now it is called ... , just to clarify before I get you guys lost, or I don't intend to, cause I also feel I am getting lost *(Laughter)*. But, the programme you have a three year, plus two year programme. This will answer why I feel it was done that way, because when you get into school, you do not have a clear picture of what you want to be, or where you see your self in future. And so when you get a five-year block course, that's like you've been nailed to the cross *(Laughter)*, you will only leave the cross when they tell you, ok it is time for you to resurrect *(Laughter)*. So now, it kind of gives you an opportunity, as in, cause when you are into a programme, it's like your mind opens up at

the wrong time, and yet it is a decision you should have made a while back of where you want to see yourself. Firstly I had never heard of about Landscape Architecture, Interior Design, or even Structural Engineering, or anything related to the Built Environment. Now when I get here, I see the three years plus two year programme, giving you that opportunity like, well, the first advantage is you get the chance to decide, and which I wasn't seeing at the famous hill. And then the other approach what I liked most is, ok, you're all hearing the Built Environment but, the Faculty is called Faculty of the Built Environment, and I guarantee, if you look up any, look up any architecture, as in type in Google, architecture programmes, you will find very few institutions around the world that have their programmes as, or even the Faculty itself being called the Faculty of Architecture. Cause of that thing that I think, ok there is the whole thing about the world environmental change, there was a time when we used to blame, as in the industrialisation going on, it was what has led to what we getting into the global warming stuff. But people will realise it's actually our lifestyles and really like we have been defining architecture, FG2_1 says architecture involves culture, lifestyle, what, and basically that is what the programmes are trying to address. The fact that, not only are the industries ok, they can only be blamed for a very minute percentage for climate change, but our lifestyles, where we live, the buildings we live in, are also to blame. So the programme at [Named University], not [Named University], was done in a way to kind of address the real issues, as in the problems we are facing now, and also the future, that is why we have a lot of the Built Environment. The Faculty is called, the Faculty of the Built Environment, you have three programmes, ok there is a Diploma, ... the three-year programme is now called Bachelor of Environmental Design. It's called Bachelor of Environmental Design cause of the different aspects, as in you have landscape architecture, there will be Interior Design, and rest ... ok it was in response to the International Federation of Landscape Architects, cause they never want to be in an institution that only talks of Architecture and only buildings, cause they feel left out. That is why it was designed that way. And then, before it used to, the last two years, were Bachelor of Architecture, but it was upgrade to Master of Architecture. But that means more work for students and lecturers, because I look at it as, the original was two years, but now this is two years, and six months longer, because the other was mainly projects, but now there is the inculcation of the element of research, which component wasn't, it was there but not that strong. Cause now you have, like since I have been at the university, during my internship year, you have people going out to get the actual information, lets say there was one doing about I think about energy consumption in shopping malls, or something like that, or thermal, he was studying the temperature, but he actually went out to the shopping malls, planted temperature devices, and got the information. While in the past, you would just look up stuff in books, over the Internet, and write, come up with calculations, and say this is what I think. But now the research bit was intensified more, and that is what basically makes a Masters programme different from Bachelors programme, the research element.

FG2_2 (T-1:02:59) - My question is, after you've got, ... so the three years gives you a degree in Built Environment, ...

FG2_7 (T-1:03:07) - No, Environmental Design, the Built environment is the name of the Faculty.

FG2_4 (T-1:03:13) - So after the three years, the other courses, are they elective or can you have to do the whole?

FG2_7 (T-1:03:19) - The three years?

FG2_4 (T-1:03:20) - Yea, because after three you go back, you specialise.

FG2_7 (T-1:03:25) - The three years as I said gives you an opportunity to select. You do not have to go back to Nkozi. Ah, like, so far I think there are three students who have gone elsewhere, I think the three have done Masters in Structural Engineering. Though like, I have a classmate who is intending to do interior design, another landscape architecture, so that it's not that when you go back, you start

FG2_4 (T-1:03:55) - My question is that that is what is there, but can, if, I wanted to do interior and landscape, is there that platform?

FG2_7 (T-1:04:09) - Yea, there is, cause I think the landscape architecture is starting in, ... is expected to start this academic year.

MO - (T-1:04:17) The issue with those ones, is the criteria. To do both, you have to, you can't do it in two, you have to do it in three. Yea, you can't do it in two, it is very intense.

FG2_1 (T-1:04:26) - Something I like about [Named University], it looks very flexible out there. You realise for us in [Named University], we are following the 1990 something, 1992 curriculum, and it's like set in stone, (Background - Our Own) ... It's very old (Background - It's the old school).

MO - (T-1:04:44) How much do you know about architecture programmes in East Africa by the way?

FG2_1 (T-1:04:52) - All I know is we have a similar, is what we have at [Named University] is what is happening in [Named University] ...

MO - (T-1:05:00) Yes [Named University], yes, [Named University], ...

FG2_1 (T-1:05:02) - They have a five-year programme ...

MO - (T-1:05:03) And [Named University], as well ...

FG2_1 (T-1:05:05) - That is as far as I know

MO - (T-1:05:08) [Named University] follows a similar system to [Named University], and so does [Named University], and [Named University] is also offering a Masters. The issues as FG2_7 pointed out, as of I think 1999, the entire, the whole of Europe, has to offer their degrees at Masters level. As of 2006, Australia, South Africa also, Singapore, Hong Kong, New Zealand, aah, the US has been doing it for 25 years already, Britain also had to change. So it's been a massive change in the last ten years, the move to Masters level. So it's now next to impossible to find straight through five programmes. In fact they now only exist in ex British colonies countries, they've pretty much just disappeared

FG2_7 (T-1:06:24) - One advantage that I've noticed through last week as well, the fourth year, which currently I am on, the one that is done outside, you get to, other than deciding, but you get to learn a lot. I know, yes, that you guys get to do internships in firms, but I do not think that time is enough (Background - two months are very short). Cause there is like, a lot that I had never known. First there is yes getting the knowledge, but transforming the knowledge into something that will eventually come up. That has been a totally different experience for me. And then also things like office politics (laughter), those tiny things that are not taught in school, but jut come up. I think also like, management of your own affairs, like I think it is the first time I have been getting a salary (laughter). Yea, but those are things you are not taught, as in what kind of lifestyle do you live, as in social stuff that you won't find in architecture school, like in how you manage finances, movements, work, yea.

MO - (T-1:08:02) So there you go, so now you are enlightened about what the different architecture schools are doing. It's always good to know what your opposition is doing by the way, because it's competition, and that's what goes on in the world. If you do not know what the competition is doing, there is no way you can compete, there is absolutely no way. So you are always on the back foot, it is worth knowing that. So lets carry that conversation further, ... although you mainly know about your own programmes, ... what do you dislike about it?

FG2_1 (T-1:08:45) - The rigidity of the curriculum, the idea of we are following the 1990 something curriculum, with this changing technology levels, and global trends to save the environment, am even the way they distribute the course units around. The thing that fails me most is the idea that Computer Aided Design is given ok, is it one or two

credit units, and it's like what is happening in the field? Everybody in the field is using Computer Aided Design to do buildings. They just, ok are so rigid!

FG2_4 (T-1:09:19) - They are really really conservative ...

FG2_1 (T-1:09:23) - Yea, very conservative ...

MO - (T-1:09:25) So what makes it conservative?

FG2_4 (T-1:09:29) - In one way or another we are not affected by the moving trends. You do paper work, ... and you are in your own little world, so it's when you come out, that you are like wow, this paper work (FG2_5 - It's different), they are five years ahead. And that is a great problem, FG2_1 has talked about that. Now that I am doing office practice, it is frustrating to learn CAD afresh, as in from basics, this is a line, this is this (laughter). And you know, now that you are actually in office, it is time, it's deadlines, client wants this, or this has to do done within this, and then your basic is your knowledge, you have to catch up, you have to match up, you have to ... It is kind of frustrating, and you want to blame it on the school, but at the same time ... CAD, many a times CAD, people who have been given a chance to use CAD misuse it, in that they either don't fully utilise it, they are limited to what they know, that is plans, and everything, ... or

FG2_1 (T-1:10:40) - It is subjective ...

FG2_4 (T-1:10:43) - ... Yea, I know it is subjective. I know a lot of, many people who have taken their CAD strengths to other levels, but at the same time, it's sad to see that first years are not, you know, there was a person who did use CAD and they were disqualified as well. If one way or another the school caught up, it opened its eyes to what is happening out there, maybe, maybe it could be considered a change, and maybe we could catch up, but other than that ...

MO - (T-1:11:18) You mentioned that CAD is ... , FG2_4 was talking about CAD, and you said it was subjective, what do you mean?

FG2_1 (T-1:11:24) - I mean, is attitude of CAD making someone have fake designs? I think it's like, compared to the way, ok the pencil can also ruin somebody's designs. CAD is today's, I may call it, twenty-first century designing tool, and the pencil was top of the other century. And when you master CAD, ... you can go miles ahead, and it won't, it's about master it so, ... so if you choose to be lazy it will mess up your designs.

FG2_2 (T-1:12:11) - OK, it might be an old tool, the pencil, but it still preserves your originality. It's the first, ... compared to the mouse, I still feel the pencil does it well. And if it's about it being an old fashioned way, if it still does the job, it's still the way to go.

MO - (T-1:12:39) I am going to prod this one further. I am not going to let this one go. You said that the pencil preserves your originality, but the computer doesn't, or the mouse doesn't. What is this originality talking about?

FG2_2 (T-1:12:56) - I didn't ...

FG2_1 (T-1:12:57) - I think it's the, the feeling that you did it yourself it's your work, as in, ... it's your work ...

FG2_3 (T-1:13:08) - It's like that painting, it's like that painting there ...

MO - (T-1:13:13) It could have been done by a computer you know ...

FG2_3 (T-1:13:15) - But it would be different. It wouldn't be the same.

FG2_1 (T-1:13:20) - It feels like ... there is that personal touch to it ...

FG2_3 (T-1:13:20) - You can, if someone got a computer to do that, and put the same painting next to each other, I think it would be different.

FG2_2 (T-1:13:36) - The thing is with the computer, you cannot say you did something unconsciously, or without thinking ...

FG2_3 (T-1:13:40) - There would be no mistake ... (prolonged silence)

FG2_2 (T-1:13:43) - Ok mistakes! ... and mistakes add to something. You cannot just whisk a mouse and come up with something ...

FG2_1 (T-1:13:52) - OK, you may think Computer Aided Design is all about mice, have you heard of the Apple iPad that has come up. ... in a way, you can just sketch on the iPad itself and then like transform it ...

FG2_3 (T-1:14:05) - You are still using your hand ...

FG2_4 (T-1:14:06) - You are still sketching ...

FG2_1 (T-1:14:07) - Ok, it is your hand, and the CAD suite ...

MO - (T-1:14:10) Again, I am still lost about this originality. What exact are we talking about. Maybe we should get to the point here, what actually are we talking about when we say CAD. What actually are we talking about.

FG2_3 (T-1:14:22) - Using computers, ...

FG2_1 (T-1:14:24) - Using computers, that is the computer programmes, in producing design, (FG2_3 - drawing) (FG2_4 - Computer Aided Design) ...

MO - (T-1:14:31) Are we sure, we are talking about Computer Aided Design, or Computer Aided Drafting?

FG2_3 (T-1:14:36) - (Snickering) Maybe ...

FG2_1 (T-1:14:38) - Ahhhhhhh, ... I think I may need to revise that, ...

FG2_5 (T-1:14:43) - It's design and drafting, it's the same.

FG2_3 (T-1:14:47) - Question ...

FG2_1 (T-1:14:48) - The hand, there is always that, that personal touch. There is that emotion that you put in when you are doing some work, you look at it, and you are like, yea, ... this is my work.

FG2_5 (T-1:15:02) - Aside from the computer, someone, ... cause it comes like from the CAD, then you have to print, and when the prints come out poorly, then, that's when you realise, oh, there is something wrong ...

FG2_1 (T-1:15:13) - Then you have not mastered the tool ...

FG2_5 (T-1:15:14) - No, it's not mastering the tool, remember you are not going to print from the laptop or the computer, you have to move to another machine, to print out. So if the prints don't come out very well, you can't blame the computer, you always look at it, and say it is perfect, but it's something different (laughing), you get, but when you draw something with your hand, and you look at it

MO - (T-1:15:37) But it can also go wrong, if you are drawing by hand, and you use an HB instead of a 6B, it is not going to look the same.

FG2_1 (T-1:15:45) - It's the level of emotion ...

FG2_5 (T-1:15:50) - You know how much emotion I find in ArchiCAD by the way, I love ... (laughing), I zoom into the space ... (Lots of background comments)

FG2_7 (T-1:16:00) - Have you seen sketches by Calatrava, or then lets say computer-aided models of either of the two. I thought the originality is like a signature that you are trying to define. As in, if, ... It's something that should be ably expressed using your hand or anything. ... It's just that, I take it that the computer is just there to help you do something faster ... (Lots of background comments)

FG2_5 (T-1:16:34) - Faster and more efficiently by the way ...

FG2_1 (T-1:16:40) - Accuracy, but ...

MO - (T-1:16:43) Theoretically, it should be more efficient, so it comes back to the

same thing. It is the user who is causing the problem, not the beast ...

FG2_1 (T-1:16:51) - Not the tool ...

FG2_3 (T-1:16:55) - I think it's best to do something that you are very comfortable with, to use something that you are very comfortable with, (FG2_1 - Then there is what we call global trends) ... so if you like computer aided design, and it works for you ...

FG2_7 (T-1:17:05) - ... like ah, the person who did the artistic impression for the Birds Nest, he used his hands ... as in the hand to illustrate it.

MO - (T-1:17:18) In the office I worked in, in Canada, most, or, well until I left, most of our impressions were done by hand. It's only, when, I think in the last five years that they moved to computer, but most of it was done by hand ... and that is one of the top forms in the country. But it also depends on who you are presenting to, some people will want a computer rendering, and then you make it like the real building. Now there is obviously a danger in that, if once you go and build it and does not look at that, the client will come back and say, eh, what happened, you lied to me. So you have to be very careful with it. I don't know if you have had a chance to look at them, but maybe have a look at the work of this architectural firm called Denton Corker Marshall, or abbreviated DCM, they're Australian. A lot of their work could never have been conceived by hand. This is what I want to get to the essence to, when I said, what I the difference of CAD as Computer Aided Design, and CAD as computer Aided Drafting. What is the difference? A lot of times we seem to be talking about Drafting, not Design. They are not the same thing, they are very different.

FG2_5 (T-1:18:34) - Sometimes I think the discussion probably focus on ArchiCAD, AutoCAD, or things like Photoshop, or animation ...

MO - (T-1:18:45) So that's the presentation side, by that time the design had pretty much already been done.

FG2_1 (T-1:18:51) - No I'm saying using, as in to like, to make your design look better. At times, these drafting tools may not bring it out the way you want it, so you have to transfer to another programme, ...

MO - (T-1:19:06) So has anybody, ... so for the most part when we talk about computer aided stuff, we are talking about presentation?

FG2_4 (T-1:18:15) - (Hesitant) ... I think so ...

MO - (T-1:19:17) For the most part, cause when you are doing 3Ds in ArchiCAD, 3DStudio, you are really talking about presentation. How many of you have experienced the computer as a Design tool?

FG2_1 (T-1:19:34) - I'm getting a feel of it ... for fun actually. I believe in ... actually, doing the bubble diagrams in AutoCAD thing itself ...

MO - (T-1:19:45) For the most part, cause when you are doing 3Ds in ArchiCAD, 3DStudio, you are really talking about presentation. How many of you have experienced the computer as a Design Tool?

FG2_1 (T-1:19:34) - I'm getting a feel of it ... for fun actually. I believe in ... actually, doing the bubble diagrams in AutoCAD thing itself ...

MO - (T-1:19:06) So you've started using that ... This is now, by the way this is going in completely different direction. Again it is not really dealing with the design issues, it is to do with something else, which is very, very fundamental to what he was talking about, about moving with the times. It is very very important. ... Ok, dealing with process. Anything else?

FG2_1 (T-1:20:15) - There is one I saw, like 3Ds somehow we can make simulations of whether, the way it will be reacting to winds, and environmental emissions, so in a way, it could help do analysis that we wouldn't have done with sketches ... It's generally a

design tool, when you master it.

MO - (T-1:20:42) Have you actually played with any of these simulation tools?

FG2_1 (T-1:20:44) - Well I am beginning to, ok I am not very far, ...

MO - (T-1:20:50) Can you name some of them?

FG2_1 (T-1:20:52) - Simulations with, 3D Studio Max, and the Motion, like the motion, can make some motion, I just saw it like from a tutorial from the internet, like it can make motion of a ... , the way a building is going to be like, affected by wind and stuff, with this whole general trend of light buildings and stuff, is like the one I saw. And they just just, the one I saw, it can do much more, so I'm supposed to get back to it.

FG2_4 (T-1:21:24) - FormZ ...

MO - (T-1:21:26) FormZ?

FG2_5 (T-1:21:27) - Yea, you could, it takes away a lot of stress during the design process ...

MO - (T-1:21:36) I, it's interesting that this is the first time the conversation for computing has gone in that direction. Cause most times, I guarantee you, it has always stopped at the presentation, at drafting and presentation. And computing, and that's probably why it gets a bad rap, cause people think that it is about presentation, it is actually a lot more than that. A lot more of it has to do with these issues, in fact 90% of it has to deal with that. The drafting, the presentation is a small part of it. ... we were talking about dislikes, ok, yes, sorry, ... we got sidetracked, distracted.

FG2_5 (T-1:22:40) - I think mine is that lack, we are lacking that, a cultural bit, we do not know much about our own architecture. Most of the time, we go through five years, and we are doing case studies of Europe, case studies of Australia. Everything you are doing is outside, and at the end of the day you are designing a building that can't actually fit in our society at times, either it is too expensive, the materials, aah, do not work well in the environment, so we lack that aspect. Although we study a bit of it in History, but it is not like detailed, like students are asking about those old buildings of the time of independence. Cause when you look around the city, these buildings are really really nice, but we don't know anything. It's the reason why people are saying, 'ah no architecture in Uganda, building are ugly, or buildings look like those, the ones that are coming up, look like those in Europe, and, I mean, ... as in those glass things, ... aluminium, curtain walling and all that, so we lack that element, and people keep claiming, oh, no it's a global trend, what, we are moving with the times, but we are forgetting our own ...

MO - (T-1:24:05) So what do you think has caused that, and how would you solve it?

FG2_5 (T-1:24:10) - Go back to the drawing board, basics, how it is studied, go back to basics as in start from foundation as in building the huts, everything ...

MO - (T-1:24:23) How would you describe that?

FG2_5 (T-1:24:25) - Probably if you were doing like History, or if you were doing Theory of Architecture, you could bring in such aspect.

MO - (T-1:24:35) I was looking for the word, "research". But who does the research?

FG2_3 (T-1:24:39) - Us ...

FG2_1 (T-1:24:40) - We could do the research, but also on the tutor's side, they need to, they need to know.

MO - (T-1:24:45) The, the tutors also need to get the students to do it, that's what you are saying?

FG2_1 (T-1:24:51) - You have to give students references, like try this building here, try

this building here, ... where they see something. Cause if you allow the students to, they may never finish, so tutors need to help them in that direction, look at these buildings, look at these styles and relate to the people outside.

MO - (T-1:25:17) So, a follow up question on that, is why you think the tutors are not doing it at the moment?

FG2_4 (T-1:25:23) - Ah, one, every tutor, fifty percent, ninety percent, of the tutors, are foreign based, ok, they are Ugandan, but all their architecture education is from out there. So ideally (sic) when they come here, they are telling you what is out there, they are critiquing you, they are tutoring you like it's out there, and then you tend to lose the feel for what is actually on ground, what is actually here. We could do the research, but I mean in History, you are learning about the Pyramids and the Mascabars (sic), in Theory you are doing ... ok, it is good to know what is out there, the competition, but what we have here is basically not recorded, one way or another. The research here is zero, if it was to be done, it would be done from afresh, and so, the tutors could do it, but there is zero interest.

MO - (T-1:26:26) Do you know of any published work on East African Architecture?

FG2_4 (T-1:26:34) - Ugandan? ... I know of only one who is doing it, but it is still in ... he is doing the history of architecture, buildings in Uganda. He did have a presentation, Dr. Birabe, he did have a presentation, so, that is the only work I know. When I attended, I was also surprised we had something.

FG2_5 (T-1:26:34) - Dr. Assumpta, ... that was far ... second year, she did some research on Ugandan something ... it was, we didn't get the book or anything, but she told us ...

MO - (T-1:27:19) It was a conference article ...

FG2_2 (T-1:287:38) - I think there is a problem with the programme. Cause, I mean, all we are doing is following the way the West is doing it, and so far, as far as getting our own style is concerned, it's not working really, because ... All of us in first year, when we want to do some research, we go onto the internet. They tell us about an architectural installation we are supposed to put somewhere, and we go and look up architectural installations on the Internet. We have these big examples, and well, we might say that they don't catch our attention, but they do and so we get biased. And so I feel that this programme only allows us to get our reference from specific things that have worked before, and not, you know dig back into our slums and towns out there, that might have something for us, because when we need to go by specific rules, or specific, I don't know something specific that has been lined up for us.

FG2_7 (T-1:29:01) - I think, when people criticise that we do not see anything like Ugandan architecture around, I would think it is a problem of, what inspires the designers, as in ... You can have, ... we've seen buildings which have been inspired, ok where the designers have given it lets say, the modernist feel, or even if deconstructivist, but you still see the element of context. Because when you say like Ugandan architecture, I've been sitting here thinking, is there any building that is really, you can tell like this is Ugandan, you won't find it anywhere? Like when you look at most, ... ah in Saudi Arabia or around, and you say that is really Islamic architecture. I would just think it is just a matter of context, and whether the designer really appreciates ... Cause if you came up with a glass or curtain walled building, but is it functional in the context it is in? If it's glass walled or something, why are you bringing in ACs, if you say one of the things that markets the place is the wonderful climate. I think that's one element that probably is not addressed very well. You may do all the research, but you may find at the end of it all to describe what is really African, or what is really Ugandan, cause ... there is one person who presented some time back about eco-friendly buildings, and he was using bottles (acknowledgement) He was, he did that thing in a place where people was living in huts, so someone asked him, but you are encouraging people to do away with their traditional architecture. His response was, yes but if you ask those people whether they would like to live in those houses, they would say, yes we would love to, but we can't afford it. Well I started thinking, would you live in a hut, because you think, yes this is

African, or if the hut was translated into something you want, but I don't know ...

MO - (T-1:33:29) I'd like to come back to one last thing, before we finish off, ... Teamwork/Group Work. We've mentioned that the studios, I think FG2_2 mentioned it, the studio is a wonderful place to learn from your peers? Do you have any formal sessions when you actually work in teams or groups?

FG2_1 (T-1:34:04) - Well in first year recess, recess period, which FG2_2 and FG2_3 are doing, we get to be in groups, and we get to handle tasks in groups, and we are marked as a group. And then in portfolio, the portfolio we did, that is the project, that is the fire station, that is the beginning stage, we had to cover some studies of the building site in groups. So in a way it teaches us to work as a team, and it's happening.

MO - (T-1:34:33) How do you find that?

FG2_4 (T-1:34:35) - Limiting at times, ... normally in a team, you find that there is one person doing all the work, or in a group there is one person who is doing everything, and people are on the bandwagon. So in a way it helps putting minds together, but at some point it becomes limiting because True, some stages of a project, like the site analysis could be individual, but many times what is on site is what everyone is going to find, ... except for the feel. And so, at times when people do the site analysis in groups, then they take away the individual feel to it, what somebody experienced, or what somebody saw, or questioned about the site, maybe another person didn't like. So in a way it is good in bonding and sharing ideas, but sometimes the outcome is limiting.

MO - (T-1:35:39) So why do you think, ... maybe I should ask this another way, do you think it is important?

(T-1:35:46) Multiple - Yes, it is.

MO - (T-1:35:49) In what way?

FG2_4 (T-1:35:52) - In one way or another, in this group of people, some have their strengths, Lawrence could be good at sketching, I may be poor, but at the same time, I may be good at conceptualising, so bringing heads together definitely has its impact. You could do something out of it, it creates a bond, and also it creates an air, a positive air in the design studios. Cause I don't think if, if people weren't at par in the design studio, I don't think work would be done, ... normally you find he has something, he has water colours that I need then, if we were not in the same team, or in the same group, I may not even get them, or he may have information that ...

MO - (T-1:36:46) What about on a professional level. What is the importance of group work to you?

FG2_4 (T-1:36:56) - It's efficient, it's reliable, it is much more reliable than individuals

FG2_6 (T-1:37:05) - I like group work, but at times I always feel there comes challenges when maybe it comes to decision-making. He has a different idea, he as a different one, and it's like at the end of it we have to get one idea to move forward with, so it becomes more of like debating, and you're like, which is the best idea we should work with? I think that is the biggest challenge I have experienced with working with group work.

MO - (T-1:37:33) Isn't that the point? (Laughter)

FG2_1 (T-1:37:36) - I think group work is, ... I'm enjoying it, cause, FG2_3 and I happen to be in the same group of three for this recess, and I find it very, I find it very comforting, because you might not be able to think in this direction, but you know someone in the group can think in that direction, and purely explore it, and all he needs is your backup to you know, go along. And sometimes it's, you can have the debate, fine, but then you can deal with it, it's something you can deal with, we are only three, and, ... I don't know maybe it's just because it's who we are. But not debate comes out of just three individuals coming together to come up with the same thing. You know you can agree and just keep pushing forward whatever all of you like, to come up with one thing.

MO - (T-1:38:28) The reason I brought this up, is because it's something that came

to mention earlier, and I am going to finish on this one, is this idea when he said, I came into architecture to produce a landmark building. And by that, whenever that happens, you always will pick an iconic building and an iconic architect, a star architect. Often what happens is we perceive the pinnacle of good architecture is this virtuoso, solo architect, working alone. The question of teamwork and group work is, does that actual, is that the actual reality of construction projects, or it's a myth that has been created that we subscribe to?

FG2_4 (T-1:39:24) - At times, at one point, when you start to enjoy architect, yea these common names you are going to hear, like Frank Lloyd, Lois Kahn, Van der Rohe In some way, in one way or another, you want to be like them, cause, in one way it could be a team, but the name is what people, right now people want to make a name, it doesn't necessarily ... Kintu Philly's building, you don't want to say Kintu Philly and his team, you want to say just Kintu did this building, and that is the perception that is always created in school. You want to, when we do these individual projects, you want to be the one, you want to, when we do these individual projects you want to be the one, you know, you want to have that project, that they say, ok ...

MO - (T-1:40:13) Who creates the impression?

FG2_5 (T-1:40:15) - It's more like, it's more like art, you can't paint two people (Laughter)

MO - (T-1:40:21) Would you say architecture is art, or art is part of architecture?

FG2_5 (T-1:40:27) - But I think art is really subjective ...

FG2_7 (T-1:40:32) - If you get keen on these, let's say awards in the architecture practice. If you notice the people who are scoping the awards these days are not individuals but (FG2_5 -teams), yea. And if you look at even the big firms, like Norman Fosters, I used to think that it's just one person but really, having a big office where at the end of the day, you have to come up, you come up with a, a design that can be, someone can look at and say that's a Norman Fosters building, and it's a team. Even, looking through so many firms, Herzog & de Meuron, a... s it all those, it's a team. That is something I've learned to appreciate, I think you should think of it.

MO - (T-1:41:31) One of the issues with teamwork is that, most buildings are very expensive; they are very rarely done by individuals. The idea of the solo virtuoso is this myth that has been created. It actually never existed, it doesn't exist. The studio projects come out, and then people working on their own not talking to anybody, it's creating that, that is what it is. If you actually want to see how far removed that is from reality all you have to do is pick up Detail Magazine, and look how they list who has contributed to a project. Everybody is there, absolutely everybody down to the interns, are listed. That is the Mainland European approach, that is how they do it. This solo thing is actually very British.

Focus Group Discussion - III (Part II Students)

MO - (T-00:02) So we'll get straight into it, we just need to go round the table and everybody introduces themselves, so that I can get an idea of what you sound like, so that when I am transcribing it, it makes more sense. I had problems with the last one, cause I did not know who was who. So we'll start on my left, just introduce yourself briefly, what year you are in, and your name and, and maybe we'll start, ... just tell us why you did architecture, just briefly, because last time when I only asked for names, I didn't get enough information to code it.

FG3_1 (T-00:48) - Why I did architecture was, well there were ... I think it was more like an instinct thing, I have always loved drawing, I did art, so when it came to choosing courses, it was either BiFA or Architecture, BiFA being Fine Art. So I chose Architecture. At that point I didn't have a real concrete reason, I have gotten into it since first year so I stayed with it.

FG3_2 (T-01:56) - Why I did architecture, I think it's something that I've adored from an early age. I used to asked on our dining table what I wanted to do when I grew up: I wanted to be a fire-man, I wanted to be a pilot. But then as I started developing, I realised I needed a vocation that doesn't require me being an employee at all the time, something that at some point I could be my own employee. So that is why I went into architecture. But also, the other things that come with architecture is that it helps you create things, which is something I think I have a passion about, being able to create things out of ideas, and that sort of thing, so it makes me a semi-god or something like that.

FG3_3 (T-03:02) - I decided to do architecture, because I felt it gave me ... more options, and I would get to use and improve on my creativity, and also everyone had always been saying how it's challenging, you know how you can't do it. So I actually just wanted something challenging.

FG3_4 (T-03:36) - The reason I did architecture, well it came from the fact that my whole life I've lived on a construction site of one sort or the another. So it just felt natural for me to go into something where I design what was going on around me. So, I ended up in the profession, and the rest is history as they say.

FG3_5 (T-04:11) - I always wanted to be a tourist to see the world, and I was just fortunate to stumble upon architecture, because it has enabled me to see the world as I have always wanted to.

MO - (T-04:50) We have two different universities here, so maybe tell us about your experiences doing architecture in [Named University] and [Named University]. It is sort of an open question, so maybe I'll start with why did you choose [Named University], and then why did you chose [Named University]?

FG3_2 (T-05:16) - The choice of [Named University] for me was more of an afterthought, cause I did a Diploma first from [Named University]. But that was more of I think, a misguided choice in my opinion, cause I didn't get a chance of getting good career guidance along the way. But the choice of [Named University] came in as an automatic choice, cause five years ago there were only two choices, and usually when you are choosing an institution, you try to look for a track record of sorts. So [Named University] seemed the older university, and the one that had a little more opportunities in terms of scholarships, in terms of the track record and things of that sort. So for a Ugandan who was not thinking of going abroad, it became the obvious choice. But along the way, I would say the experience of [Named University] has been eyeopening, though in a way it has its challenges that may be will come up later in the discussion, but it has had a good experience.

MO - (T-06:27) You mentioned misguided choices at [Named University]. Why do you say that?

FG3_2 (T-06:30) - Usually schools, secondary schools have things for career guidance, which in my experience Uganda is a little lacking in that area. As in people are assigned to do career guidance, but in most cases they hardly have an idea of what they even guiding students about. So in this case someone told me 'no, you know [Named University] offers architecture, but there's also [Named University], and [Named University] it's two years, a shorter period, it's very technical, so you get hands on experience, and people of that sort are preferred in this world'. So that was the general idea. Now that did not expose me to things like the professional bodies, registration, requirements for professional registration and practice, and things of that sort. Now that is why I call it a little misguiding as a choice. So if I had known of some of these things earlier, I definitely would have gone straight for a Bachelors degree without wasting time with a Diploma first.

FG3_1 (T-07:40) - Well for me, why I chose [Named University], to be honest to you, I thought architecture was only offered at [Named University]. I didn't know architecture was also offered at [Named University]. I got to know it as soon as I entered. It was ... well, the thing is when you, ... the system is when you are applying for a course, you apply for public universities first, and when you get it there is no need to apply to a private universities. So it was straight forward, it was an obvious choice.

FG3_3 (T-08:32) - Ok, I had a brother in [Named University] already, so I was influenced to go there. And I had visited before, I liked the environment, it's a very quiet place, it's clean and peaceful. I also got to know that when I was doing this course, I would get two degrees in one, so I thought that was something nice. And yea, my parents, were like, 'you need to keep out of town, cause you know how they say [Named University] people are in town, they have too much freedom, they go move about, they are too free, go partying, go what, waste time around', so my parents felt I was safer far away, where they though those things did not exist.

FG3_4 (T-09:30) - Personally, I think it's a marketing thing. I went to traditional secondary schools, catholic oriented, and I, I did not know about [Named University], I should have been in [Named University]. But when I applied, cause first you apply for the government scholarships, and then private. When I applied on government I was given Quantitative Economics, that was for [Named University]. So I thought let me reapply for architecture on private sponsorship, and it was during that time that I just heard an announcement in one catholic church that said that [Named University] offers degrees in architecture, I did not know that. So I put in two applications. [Named University] called me first, and I ended up there. I did not even know there were two degrees in one. And the rest were just pleasant surprises.

FG3_5 (T-10:31) - I had gone to [Named University] for one engineering course, Electrical Engineering, but on a visit to [Named University], it was something different. And while I was there, a friend of mine told me that the most progressive course on that campus was with the Faculty of the Built Environment. And when I spoke to the Dean and Associate Dean, I felt more confident. And after the first year, I was sure that that was the right thing, that was the best decision that I could have made, to join architecture at [Named University].

MO - (T-11:27) Ok, you are all now, I guess senior students, masters students, maybe you can give use very quickly some of your experiences about your different architecture programmes, maybe [Named University] you can start, and if there is anything that someone wants clarified, feel free to ask questions as we go along. So anyone can start. It is about your experiences over the last four or five years. ... Specifically, maybe I will make it easier, what you liked, and what you didn't like about it.

FG3_3 (T-12:09) - I remember in first year, see when we came in first year, the studio, studio just seemed to be a monster, it was just treacherous, like you would always have to stay up and I think maybe the lecturer we had at that time was a little tough, or a little demanding, anyway maybe because that was first year, your first time doing this, or your first time being treated as an adult, or being expected to act as one. So always being up

doing studio you do so much work and it's not appreciated cause, many times we had no sense of direction, you don't know ... so you just do everything and try. So it was a bit like gambling, but it was interesting. When we look back now, I think when we are in a group, like the whole class, when we look back on those days, it's just funny, it's just nice, and we feel that the years that have actually not done that or have not gone through exactly the same things, have kind of missed out. The other thing I actually like about [Named University], our Faculty, I think there is great unity, it's really one Faculty. There's a lot of teamwork, then the student and lecturer relationships are really good, so it also eases like studying or making progress in a project, cause if you can speak to your lecturer much easier, then it's easy to make progress for someone to guide you, even for fellow students to be able to guide you while they can. I felt that's something good we had. And about maybe presentation skills, the way we are told, or we've been taught to sell our ideas. You may have an idea that many people don't think is nice, but once you've developed it alongside your tutors and you are confident about it, then the way you sell it also becomes important, so I felt that was something nice too.

FG3_4 (T-14:35) - Basically for me, the past four years in architecture school, I must say have been a series of highs and lows. One thing I have found out is that in this design and technical field, starting a task, a design task, or whatever task, is not difficult, but then for me the most challenging task is pushing that task through, and that is where I find the biggest lows. Periods where you try and push a task through and things are not really working out, but then again I find that I always look forward to, to, to the final presentation, where I feel I've reach that point where I feel I have done my work, and I am proud of that piece of work. So that sort of motion, from high starting the task, to the lows of pushing the task through, and the high and jubilation of finishing. That's what has basically been architecture school for me. And I find that it's a pattern that I have gotten used to. At first it was really scary, especially in first year, when you are trying to get things sorted out, but they are not moving. [Named University], being at [Named University], I always ask myself the question, would I have been better off at [Named University]? Would it have, ... have I missed out on anything? And I find that because I have a few friends at the Faculty of Technology, I find that really it's ... no, I find that the answer always comes back that, it's a balance, I am not really missing out on anything. As long as I try to keep my self updated. You see [Named University] is in a very rural setting, so some people say the exposure there is limited, but I think that is not true. I think as long as you keep yourself well informed, newspapers, internet, books, it's, it's a wholesome training experience.

MO - (T-16:43) Two things have come up, FG3_3 mentioned student-staff relations, and now FG3_4 has mentioned other architecture schools. How much do you know about the architecture school in the other architecture school?

FG3_3 (T-16:57) - I have friends from high school, from secondary school, who were at [Named University] doing architecture, so when we would meet up once in a while, Oh, we actually shared some lecturers, but see the way we related to those lecturers at school, was not the same way they would relate to them. Maybe partly it had to do with the numbers in class, cause I think we are less and you get to meet with these people one-on-one. And ...

FG3_2 (T-17:27) - Maybe something it has to do with the structure of the programme ...

FG3_3 (T-17:33) - Ok, that too, maybe ...

MO - (T-17:36) How would you describe this structure of [Named University] compared to [Named University]?

FG3_2 (T-17:41) - My experience in [Named University] gave the impression that you guys have a more cordial relationship, where you guys interact really, whereas in [Named University] it's still the same old traditional kind of institution like arrangement, where there are gods and servants, subjects and slaves, you know, masters and slaves. You guys interact on a more, you are kind of in one plane. Here it is someone down here looking at someone up there, lecturers are taken as gods, and someone in that way, in

that case kind of, ... doesn't explore their full abilities in terms of creativity and free thinking, because they know so and so, you know, wants things this way, and you know, that's the way it's supposed to be, as long as I am dealing with them. So in other words, students adapt to a particular way of dealing, to an actually an evasive way of dealing with individuals, rather than maximising from the whole experience of being a student of architecture and design.

FG3_1 (T-18:50) - What FG3_2 is saying, is actually true, to an extent, cause like, during presentations, you, ... you find that, ... there's an air of, ... the atmosphere is very thick, it's, ... people are very tense, especially the person presenting. It takes of course a lot of time to get used to, after some time you get used to that kind of environment, and maybe find ways to counter it. But the mood is, is, is a very tense one, it is not relaxed, as such it limits the creativity. Another think I don't like about the programme, I don't know if it happens at [Named University], is the business of giving marking guides. It has come up at [Named University], where they say you can give a model ten percent, sections, what, elevations, site plans, services. Of course these things are necessary, but when you, ... the trend that has come up now is that people now start, ... the marks become the important thing. Cause now a guy says, ha models have been given five percent if I do a site plan it's thirty marks, function and concept forty-five percent, so you focus on that. As such, because model actually suffers, they give it less than ten percent in most cases. As such you find that the model making skills in the Faculty it's a general problem, have gone down because of that. If they said that, yet, ... Because all of us have a way of working, we don't work in the same way, some people prefer to use, to make little models, find out things of form, how will it be viewed from this angle, and things like that. Such people are now discouraged in the Faculty. What happens, what they should have done, is, you bring your work, all of it, all the models you have done, plans and sections, and they mark you from a neutral point. It's kind of discouraging in a way, that's what I don't like.

FG3_3 (T-21:12) - Can I maybe ask if you have like, ... if your programme is such that the load is broken down into portions, like the beginning of the project, you have maybe site analysis, and it's allocated certain marks, and then another stage, different stages ...

FG3_2 (T-21:31) - That is more of what is done, but this whole business of saying, ok you are still at the site analysis stage, but still there is something called a marking guide that has a structure that is broken down to information gathering, model, ...

FG3_3 (T-21:51) - Which you know before you present?

FG3_2 (T-21:53) - Yea! In a way it kind of you know, orients the student to look in for only those things because, first of all there are the only things that have been pointed out, but also it seems, in a way, it comes back to the whole structure of you know, us being taught to pass. We come from a background of secondary schools where there is a structured syllabus, people get knowledge, but can't really actually apply that knowledge. You find someone who has come with AAA, but can't really apply that knowledge. Now I think there is a big gap, we need to find a way of imparting knowledge and having, training students to use, actually use that knowledge. So here, these marking schemes, that's what they do. Someone wants to pass, I come with the intention of passing, you have given me a marking guide, I will go by that. I will not explore any other alternative. Now there other things that I found disturbed me within this whole architecture education thing. To start with, [Named University] is structured in such a way that you know, things are traditionally done in a particular way. I tried applying after my Diploma for other programmes elsewhere, including [Named University], and [Named University] gave me an opportunity of doing the programme for a less period, which wasn't in [Named University]. Why I didn't join [Named University] cause I could't afford it. I got a chance of getting a scholarship to [Named University], which I exploited, and I am grateful for, but it has also exposed me to the glitches of the system which I have completely come to dislike. Apart from the relationship of Master and Slave, there is this whole thing of, ... architecture, I think it might be a general problem, it's a programme in which your personality can have a disadvantage on your

performance. It's a programme where, how do I better put that, you can be judged, your work and you and everything else can be judged by the way you carry your self and the way people think about you. Other factors mean that you may be good at everything else, but because your personality and attitude, someone doesn't like, you are judged according to that.

FG3_3 (T-24:38) - Is that a bad thing?

FG3_2 (T-24:40) - I think it's a bad thing, because it removes the objectivity of the whole education system. As in, you know, someone should come, a tutor or a lecturer should be able to guide you through you know, help you acquire the knowledge that would make you a better person to the field you are pursuing, but here ...

FG3_3 (T-25:02) - How about trying to be professional, like trying to build us professionally. Such that your character is also tamed or, ... like you are trying to be professional ...

FG3_5 (T-25:14) - I think, I think more than just physical appearance, the demeanour, cause some people are jovial, some people are outgoing, some people are, ... some people look like they are into the life, the partying you are talking about. And because of that they come out, the persona comes out as a fun loving person, hence not academic oriented. So that might hinder the relationship between a lecturer and a student. And yet, if that individual was judged according to what they have presented, you may find that they have what it takes, but if they are being judged by maybe dreadlocks or, I don't know, or something like that, which may not necessarily be the dress code, but you know, that kind of thing. ...

FG3_2 (T-26:06) - So, so in a way it becomes a challenge. I think, I personally think that is the main reason why architecture programmes the world over have the highest number of drop outs. And I think their is always a first step to rectifying such situations.

MO - (T-26:27) Do you know what the drop out rate for [Named University] is between the number who start and the number who graduate?

FG3_2 (T-26:34) - Of late it's reducing, but it was more than sixty percent. It's now coming to about forty-five percent, our year is about forty-five percent, their year it should be coming better (FG3_1 - They've actually done a good job) But is more of a policy kind of thing. Cause I think the University Senate looked at the number of architecture students coming out, and they are like, ok we need to do something about it, but, so the Department is also saying ok, lets ... you know, I don't think it is being done in a proper way. When policies are there to, you know, it's more of political, and ... I think there's something wrong somewhere there. But, just to point out the few things I've come to admire from [Named University]. I like the two in one degree programme, that structure, first of all it gives the student a break to, you know, really take steps back and focus on his objectives. By third year in [Named University], people lose focus, lose gas, lose the zeal they came in with. That has happened to many of us, but then the last two years, you are like, ok I am almost there, let me just go for the sake of going. You know, you come in first year, and you are like, ok I think I am shooting, I am aiming for a first class, but along the way, you are like, ok just a 50% can do. So the break I think is a very good thing. And then, there is something to do with the presentations that I liked from [Named University]. You not only look at the academic demands of what, you know, projects should have, but you also have a way of kind of looking at how these things could be marketed, or focussed into pursuing or convincing the client and things of that sort, which is lacking at the [Named University] side. The student staff relationships, that is a very good thing, but I'm ... there is something that has slipped my mind. Yea, for the moment I will stop there, cause I am babbling a lot.

MO - (T-29:02) Ok, a lot has come up about what you like about the [Named University] programme, and what you like changed in [Named University]. Is there anything at [Named University] that you would like to see different then.

FG3_4 (T-29:14) - Just something about what he said, the two tier programme, what you said is right, it's, ... because I remember by the time I finished my third year, I was totally exhausted, but that one year out gave me a chance to to really refocus my energy and decide yes, this is what I want. The one shortfall I find in it is, for example at the moment there are three people in our class, and the reason for this is when people go out there and start making a little money, (FG3_2 - You lose focus) and then they think about going back to school, and it's really a problem. Now being three in the class is not bad, but what I think is, if classes are very small, you also find that the competition is not that intense. Ok fortunately for me, my other two classmates are vey good designers, and we tend to compete everywhere we go, so But I don't know, maybe this is for the institution itself, how do we bring more people into that programme, because I believe competition is a good thing.

FG3_5 (T-30:15) - I would like to disagree a bit. I disagree with saying that the competition is not as high when you are fewer, I think it's even worse (FG3_2 - It's more challenging). But what I can say is that I have noticed, that the production rate, or the level of work after the three years is much better. The people who go out, whether it is what they learn from where they work, or just the way they fee about coming back to do architecture, but what I've noticed is, all the students who have come back, their level of workmanship, or design, or creativity, or even hat they are tying to bring into their projects is much higher. That is what I have observed. I would like to say communication in architecture as a student is very different. Cause when I joined [Named University], I had no sketching skills, and I, I liked to sleep a lot. You can be mistaken from someone who doesn't care, about what is happening, but maybe that is a personal weakness. And, if judged from something which is not exactly what you're producing. If judged, if, ... because the, as he said, fundamentally in Uganda, the education system there is a Master and a slave, that is primary and that is secondary (school). Then you come to university where the freedom is supposed to be, but in many cases it is still that. So there is no communication, and yet in architecture, the most important thing is communication. Now, communicating an idea to a client, to a lecturer, to a fellow student is very difficult if you don't know how to sketch, if you do not know how to use a CAD package. So I think, that is something that, I can't say I know how it can be done, but if there was a way of finding out what a student would like to say, if students would be, maybe bolder to say that this is what I want to do, and maybe are given advice, I want to show in a model. Cause, actually I heard a story about a student in [Named University] who presented the final presentation, he had a model, a very detailed model of everything, he showed his section from the model, he showed the elevations, and he passed. So I think the model thing has not been thrown out. However, I agree it has been downplayed, cause even in [Named University], many students look at the ten percent and they are like, I will focus on this more, and let this ten percent go, I will manage to pass either way, because it is a passing thing. I think as students we must agree that time management is something. Architecture is very time demanding. In first year, I think in the first week I used to sleep at 9pm, but three weeks into the semester I stated to sleep at 3am and wake up at 6am. And, I was surprised, cause actually it surprised me that someone can do that for more than two weeks and still be alive.

FG3_2 (T-33:34) - I'll just like to add on what you brought out about people going for that one year break, and coming back better. That kind of also depicts a kind of divide between the academia and the fields. Whereby the whole educating programme or scenario is supposed to prepare students for the field. But you find practicing firms and architects saying, ah you students, students from this place, they know nothing, the others yea maybe they are better, so there is kind of divide. Now, such a divide in the academic programme is supposed to be bridged by what we have as Industrial trainings (sic). And in a way these are things in my opinion that are given kind of very little thought or very little attention in terms of supervisors, and in the different academic schools, architecture schools. My experience in [Named University], is that, once you've been attending, you have, ok, not necessarily been attending, ... once you have a logbook that has been filled, it's assumes that you've been training and everything is, ... your

supervisor may not even come to your office or site to see whether you are there. I think that's an area that needs to be taken a little more seriously. And, it would actually be better if a supervisor is just someone who checks on you once in a while, but the actual person to give you the marks or the grades, would be the person who you've actually been training with. So if I came to train in [Named University], it would be you to assess my performance in terms of what I have been doing in your office, and to actually give a more comprehensive indication, ... that's why I'm a little bit against this system of awarding marks, where someone is given a seventy-five percent or something, I would prefer if I've been in your office, you should be able to give a more comprehensive remark on my performance in your office. You know, I am lacking in these areas, I can improve in these areas, and so and so. So the marks kind of don't portray that kind of information. Then, maybe to divert a little bit from that, I missed, I had forgotten, [Named University], you guys, seem to embrace writing skills from an earlier stage, which in [Named University] comes just towards the fifth year. Cause it's only in fifth year, first semester, when I was writing my dissertation that I was introduced to all these techniques of, you know how proper reports should be written, and things like that. And I was like ok, someone mentioned something like this in first year, that was Martin [Surname Deleted], I wish I had been more serious. Of course for Martins reports, and everything, I was more serious. But I wish that was something that was cultivated from then, so by the time someone does an dissertation, you know exactly what is expected of a dissertations, and you can just carry it through ...

FG3_1 (T-37:01) - I beg to differ ...

FG3_3 (T-37:09) - I was just going to maybe let you know that I, ok I feel proud that our course as very diverse. I can tell you in first year, we did English Language and Literature, we did Animal Farm. But I don't know if people still do that, like we would actually take the piece of text and read it, and that is really really helpful. Cause you find, maybe they are some leaders, and they are giving speeches, but you just listen to them, and you won't believe that person (FG3_2 - Is actually a leader in your country) has gotten through to this stage learning in English. So that practice that you actually go write a composition, and submit, write a letter to a friend, you write a letter applying for a job, we have, we've gotten, ben lucky enough to get that training from first year, and all the years through.

FG3_2 (T-38:06) - And which I think is a good thing cause you know, ... it introduces you to a professional way of writing and you know, communicating, which is kind of lacking ...

FG3_1 (T-38:23) - I totally beg to differ. Yea because, for report writing, well, I think, ... ok in first year, we wrote of course it was also with Martin, we wrote one report, which was in a standard format, but then you find that, now I think it has come on a bit late. Nowadays, the students find themselves writing very ... because in third year you write a report about Sanitary and Building Services, in second year you read all these architectural books about styles, and incorporate them in your design, ...

FG3_2 (T-39:11) - But the thing of the, referencing systems and the like, those are the things that are overlooked, and demanded at a later stage.

FG3_1 (T-39:20) - It depends anyway, cause for Industrial Training Reports, it's the same format as a Thesis ... (Background - Is it?) the things is, it depends on your supervisor, thats the thing, there is a little bit in quality control, it is a bit laxed (sic).

FG3_2 (T-39:42) - In a way because it's not a university policy, you know, it takes the supervisor or your, ... individuals to bring that out, so if you haven't got the opportunity of being in touch with that individual, you will not get it.

MO - (T-39:56) Ok, now this comes back to what we are talking about before, which has to do with this marking guides, cause you are saying in some cases it comes down to the individual instructor. Do you think this is actually a good thing?

FG3_2 (T-40:08) - In a way, I think there should be a better way of actually handling it. Not that I have an answer to it right now, but I think it's still, it's an area that needs deeper thought and discussion. Besides that I was just ...

MO - (T-40:40) Now there is another one, half of you are graduates, you've completed your professional training. How do you think you compare to students at that stage in the rest of East Africa, or the world.

FG3_2 (T-40:56) - Ok, now that reminds me, what he was talking about, about numbers in their class, and competition and all that. I don't think I would be in a good position to respond, to answer that, give you a good answer to that question, cause there has hardly been any interaction before between students and the schools and the like. So it becomes a little hard to wight yourself vis-à-vis the others that we meet. Of course there are a few rumours you would hear that, 'I think so and so is better than so and so, and you know you are from different schools, but some times it is to do with your different past experiences. So what happens in this case, you guys being few and not there being competition, I think that would, that could be a little bit opened up if these different schools of architecture within the region, or the world over had a way of interacting and collaborating. Say things like social, ... the facebooks of this world, networking sites, and things of that sort. Maybe if, it's an idea that's out there, of we had one for architecture students, and professionals all over the world, and you could interact, it would give you a kind of broader thinking, you know, not thinking within your self or just locally. I know architecture is one of those very expensive programmes. Within my five years, I haven't gotten the chance of touring with the rest of my schoolmates because I couldn't afford it. But if someone can afford it, travelling is a very big experience that would or ideally would be integrated within the architecture education system. I think it would be a very good thing if it could be integrated, that is if everyone could afford it. But if, there was more interaction, I think even if you are three in a class, and you interacted with people elsewhere, it would be a very good thing.

FG3_5 (T-43:21) - I would like to add something to that, or to agree a bit. I've found that architecture, like he said, has a lot to do with the individual, your past experiences, maybe you were in Uganda Martyrs Secondary School, maybe you were in Namagunga. So in the different schools, cause fortunately we managed to visit [Named University], and we got into an architecture school at a time of presentation. So the work is similar, the presentations are a bit different because of what is being asked for at the time, but the workmanship, or the presentation, the artistic representations are quite similar. But again, in every school there are good students, average students, and what I would call fair students. So a good student from maybe [Named University], would compete favourably with a good student from Kenya or a good student from Tanzania. But the grey area comes in with the lower levels, a fair student of course would suffer, along, over the board. But I think, if I remember correctly, in my first year we did physics, chemistry, literature, mathematics, calculus, structural engineering, theory and history of architecture, studio, materials, ethics, aesthetics and philosophy, that was first year first semester. And it completely opens your mind. Whether you did music at O-Level, whether you did, ... so you find a Science biased student, and and Art biased student, have, they reach a symmetry (sic) a middle point, and they can move together from that point, which I thought was a very good background, for this architecture profession. But still before, the training you receive before, cause some people are already artists, and it helps a lot. You are in a client meeting, you are talking with a client, if you can show them you what you are saying with a sketch, (FG3_2 - Drives the point home) he is in love with you. But still what I learnt is that you can learn to work smart, if you cannot sketch you can meet the client a second time, and show him a CAD something, you can meet an artist and explain, and have him do the sketching for you. So it's about communication, about relation, one thing I hope for is that students learn to relate, I mean, to communicate more with each other, because, I would say most of my survival in architecture school has been because I've reached out to students, and we have managed to share. Where I was weak, I helped where they were weak, cause I was pretty good at writing, as he says, and speaking, the presentation, and other people

were good at drawing and, you know, choosing colours. So when you share these ideas, you find that both of you are able to move faster. And I think that is something that we all need as, ... and that relationship doesn't have to stop in a school or in a class, it can go out into [Named University] and [Named University], it can go out into [Named University], [Named University] and [Named University], so that the students get that, you know ... Cause in architecture you need to know as much as possible about everything. And that is just what I think.

FG3_2 (T-46:54) - Maybe just to add, this interaction thing. [Named University] for example has a School of Architecture that's located within a Faculty of Technology. That exposes it to different departments: civil engineers, electrical engineers, land surveyors, mention all of them in the building industry. Now, the field, in the field these are people we interact with, but it is very absurd that the programme in [Named University] doesn't introduce you to these people. You only meet them later in the field. If you have a chance of meeting them in the studios, you are complaining with them because they are using your studios and they are using up all your space. So what kind of relationship is that for people you are going to work with in the field, it is a little absurd. I think a place like [Named University] would exploit that further in that by third year, where people are doing substantial projects, you could handle a project with a civil engineer, a structural engineer, a mechanical engineer, and have a holistic project. It seems like these people are more interested in how many projects, portfolio projects students do rather than what's the quality of these projects, and how far the students take these projects. Cause if they got a civil engineer, a structural engineer, a QS by the end of the semester that is 15 weeks, you would have a project that is almost ready to go to site. And I think that would be something they would really need to exploit. That said, there are other challenges that the education system needs to look into. We are living in a global world, and we are supposed to, ... it would be ideal to stop thinking of these different architecture schools as niches for architects within the localities, but rather aim, or strive to giving students a more global objective of architecture, and things of that sort. So that a student is prepared that if I left [Named University] today, I could very well fit in, in British Columbia or Toronto somewhere in an architecture firm. And then the challenges of the field, which are supposed to be bridged by the Industrial Training as I mentioned earlier, also need to be addressed. That would bring in introducing architects, architecture students to these other professions in the built environment, and that needs to be looked at. And then we also need to embrace the technologies of our day. When the industrial revolution started, it was ..., you guys architects, and in the architecture profession, you can imagine what happened, the use of steel glass and everything else. These days, there are technologies that have, ... it the information age, and it's a digital information age. When you read about firms like Thom Maynes, Morphosis and the rest, you know these guys have taken architecture to a different level, which I think is something we should also embrace in our schools.

MO - (T-50:32) Can we talk a little bit about that because, I think it's come up with Achilles, he has mentioned it twice about CAD twice, now you've brought it up about Information Technology. How is that handled in the Schools of Architecture?

FG3_2 (T-50:45) - In the schools of architecture, for example [Named University] which I very well know, up to third year, CAD is taboo, despite CAD being taught as a course unit for the first three years, using it for an assignment or anything is taboo. Which I think wouldn't (sic) be the case. Much as we strive to make sure students are conversant with using their hands, drawing, sketching and everything. I think that can be explored, or made, ensured in a different way, other than you know, saying you cannot use CAD and that's a rule, without objectifying, or giving good reasons for that. That said, I believe CAD is the future of architecture, and it needs to be embraced, how that is done, would be an issue of discussion within the different schools, but I strongly feel it needs to be embraced in a better way than it's being done right now.

MO - (T-51:55) Can you explain to me very quickly, what is, you said CAD is taught, but it is not used, and it's taught from first to third year. What exactly is taught?

FG3_1 (T-52:10) - What's done at MUK is, they introduce you to the programmes, ... Well, you have AutoCAD, ArchiCAD, some form of FormZ. So, those are the basics, much as they don't limit you, the thing is, what they think is, ... they introduce you, but you keep on exploring ... the best CAD monkeys, ...

FG3_2 (T-52:37) - ... In other words it's not really taught like it would be taught in other places, where you have guide manuals, and everything, you know, today we are learning this, tomorrow you are learning this. It's more of, you are introduced to the programme, how the screen looks like, and then the rest you investigate ...

FG3_1 (T-52:53) - They call it diving in ... (Laughter)

MO - (T-52:56) So you have a formal instruction in it for a few hours, and that's it. At what level, at first, second and third year, or only first year, and that's it?

FG3_2 (T-53:05) - First second, third year, and I think fourth year. ...

FG3_1 (T-53:08) - ... even fourth year, ... the thing is it's more like studio work, so, ... it's actually studio work. So what they do with studio course units, is they limit ... too much guidance by the lecturer, they want you to do it on your own. So they keep on telling you, now develop a concept, do this, do this, then come back and present, things like that, then it's like presentation style, mode ...

FG3_2 (T-53:35) - Though in a way, just before I forget this, cause I forget things very fast, CAD should be used as a tool in architecture school, or in the whole profession, it should be used as a tool.

MO - (T-53:49) A tool for what exactly?

FG3_2 (T-52:51) - A tool for expression.

MO - (T-53:52) What, when you say CAD, what exactly are you talking about?

FG3_2 (T-53:56) - I'm talking about all Computer Design Aided Softwares and Techniques. In this case, things like from photo editing, to drawing production softwares, the AutoCADs, the ArchiCADs, FormZs and the likes, those in that category.

MO - (T-54:16) Is there anything different from [Named University], or anything you would like to add?

FG3_5 (T-54:19) - What I would like to say about CAD in general is, as he said at [Named University], in the first three years, it's taboo. But I don't think that is necessarily a good thing, because the students who cannot sketch well, will fall short. Because in many cases it's not that because someone sketches, they are going to be sketching detail. Cause you can sketch a footprint, you can sketch the entire building, but it does not mean that because you are using your hand, you are going to think in, you know the miniature part of the design, which is also important. Unfortunately, when most students go to CAD, they have that same thing, it's just the whole thing. Why most people prefer ArchiCAD in my experience is because you put a wall, you put a window, and immediately you can see it in 3D. And that also limits a students onus to investigate deeper, to dive in as you say, into a programme, cause some programmes have very amazing capabilities. At the end of, ok, what I found out with ArchiCAD, or with some other programmes, at the end of a project, you can actually put the costings, cause if you go putting the information in, eventually the programme will calculate the whole building and show that to you. But because many people are interested in just seeing, you want a room and you just want to see that, that overtakes someones onus to dive in. And these programmes have a lot to offer. And in [Named University] we do FormZ, VectorWorks, we did Photoshop, and I think that's it. I think those programmes were quite nice, cause what I learnt from those programmes is to work in that 3D environment. And when you go to another programme, cause I learnt ArchiCAD later on, but it's quite easy for me, cause I already had that background of being able to see things in that 3D, the computer environment. But, I think the forcing or limiting someone to one style of working, it doesn't help if it is not pushed further. If they say you cannot use CAD, they have to be explaining how deep you have to go with whatever you are

doing with your hand, cause, some people don't use CAD yet eventually do not have a fine detail that one would expect from someone looking at things directly from their mind. And then again, some students are weak, and in my opinion, it is easier to learn how to use a CAD programme, than to learn how to sketch well. That's just my opinion. There are some people who have managed, but what I have seen is that in three years, someone can be able to express themselves with a CAD project better than with a hand drawn ...

(T-57:34) Multiple - That is true ...

FG3_3 (T-57:35) - Maybe what people should be encouraged to do, is not totally abandon what they already know and take on the CAD. See if you can already sketch, then maintain that, but use CAD to enhance what other skills you already have. See people get to CAD and totally forget by other things, you won't use your hand, you won't think, you'll just get amazed by the colours, you know, the moving 3Ds and that's it. So maybe if, the way of teaching CAD also includes that, or incorporates, or brings together all these other skills, then maybe it will be helpful.

FG3_2 (T-58:14) - My bottom line is CAD is here to stay, we need to embrace it, and find a good way of embracing it within the architecture programme.

FG3_5 (T-58:22) - One thing I needed to add is, true CAD is here to stay, but what I have observed also in the first year, in my first year and progressive first years, students have been sketching cows and, you know, dynamic objects. But when they get into CAD, they get stuck (FG3_2 - That is where tutors have a problem), and then they go into boxes, regular forms. And, I think, if anyone noticed, the current people who are in second year, in first year all of them had circular forms and oval shapes and everything, but this last presentation, everybody came with a square, a rectangle, you know, their own interpretation of a box. And I think that can only be accredited to failure to, you know ...

FG3_1 (T-59:15) - I think that's the reason why, the Department has resisted to introduce CAD at an early stage.

FG3_2 (T-59:22) - But still that said, that's why we really need to think how to integrate CAD, cause you can't run away from it for ever.

MO - (T-59:33) So essentially the problem is it with the program, or is it with the instruction of the program.

FG3_2 (T-59:39) - I think it comes to the instruction of the program, because how well you express yourself with a certain software depends on how well you know it.

FG3_6 (T-59:58) - About CAD, personally, I didn't use CAD until my year out. So for three years, I did not touch. ... (FG3_2 - You used HandCAD) But what I learnt from that is, there are things you are comfortable with as designers. You will find one person comfortable with sketching, another person comfortable with CAD, but there is a balance between those things, one helps the other. If you can't draw it, you can't sketch it, you can't, ... it will be hard. That's why you find that, like you said, the current third years now, did not produce, ... because they didn't sketch it. I learnt that you can sketch something and because you know how you can manoeuvre around with a sketch, you can do the same thing on the computer program. So we can't say that one is better than the other, one helps the other, back and forth.

MO - (T-1:01:14) So it is the thinking process that is actually at fault, not the program. It is interesting that no one mentioned Spreadsheets or Indesign or Word Processing programs as part of CAD. ... So maybe we go around the table, and just in your own opinion, what do you think, if you were coming back to teach, what would you want to do differently in an architecture programme.

FG3_6 (T-1:01:54) - I personally want to find a way of encouraging people, even like FG3_5 said, there are people who come to first year when they can't draw. And those people, because they meet lecturers with various attitudes about drawing, they are, I

think they feel that they can't make it. I was personally told by a certain lecturer that I cannot become an architect, because of a certain skill I had, and I had to think about it deeply, because I had to go beyond the statement and see beyond what I was told. So in a way, I would want to find a way, a method of showing someone who can't draw, or who can draw well, to show him the hinderance of drawing ... because I was an artistic drawer, ... Whenever I would sketch, I would want to make something look artistic, so I was told that, you can't be an architect, just that, there was no explanation why. So I would just want to find a way of encouraging ... because there are very many people with the mind of an architect, because the mind is the architect. It's not your ability to draw, it's not your ability to do nice computer things, probably you would be a graphics artist if you can do that, but ... yea ... People have been hindered just because of certain statements which have been ...

FG3_5 (T-1:03:47) - I would, ... if I was coming back to teach, having done this professional course, I would also go and do a course in education. Because sometimes, in architecture many times you learn how to be critical, you learn how to see things very fast, you learn how to focus on the important things. A student at any level, may have missed something, may have, you know, may have misquoted something, or misrepresented something, but the way you explain that they have done that, may hinder the students ability to learn. Because as human beings, many times when you are attacked, you tend to either defend yourself, or, you know, to sit back, you know, you just get ... So I think many times, when something ... a critique is made, it is not received as that, because They taught us to carry a small writing pad into a presentation, so that when the lecturers speak to you, you write down what you need to change, or what you need to improve. But in some cases someone will say something to you, and you have nothing to write down, cause it will be something very very short of an insult (Laughter) (FG3_2 - You should see what some students write for some of the lecturers). It would be difficult to write down anything that's going to help, so I think, as much as it may be difficult or even expensive, that investment in an education course might help. Then another thing I would do is encourage students to communicate together. Because I found that, in our class in particular, they are some times when someone would speak to the student, maybe a tutor, and that would pass, but if a fellow student went and said the same words, the same words, to that student, were time, but if a fellow student would say the same words, to that student, they would receive them more readily. So I think that is something that helps, we are more comfortable with each other. And so students, ... there is something they taught us to do, and we thought it was not helpful, but it helped us quite a bit, was you present to other students, even at a lower level, before doing a presentation to ... and you'll find it helps a lot, you get more comfortable with your project, you learn to, you know ... So that kind of student interaction, whether it is a student in a different course Fortunately [Named University] has that opportunity to have a building related course nearby. So you go with your structural things, take them to a structural engineering student, and he advises, take them to an electrical engineer, and he advises, that kind of interaction is priceless, as in we cannot live without it. So if students on their own are encouraged to do that, I think it would help them quite a great deal.

FG3_2 (T-1:06:52) - I think I would, if I went back to [Named University] as Head of Department (Laughter), I would advocate for splitting the programme in to a 3+2 programme, two degrees in one, so that, with the option of the student continuing for the five years without a break if they wanted to. Then, I would like to see a more holistic kind of environment in the architecture programme, which introduces students to workshop practice, and things of that sort, where may be you have a workshop, a workshop for model making, and things of that sort, cause these skills are hard to just get from looking at someone doing them. You know you need something like an instructor, you know, a worksop with dedicated tools for such things. A system that encourages students to express themselves, without limiting them to thinking, to giving you responses to what they know you are interested in, you know, free expression. Removing that Student - Master divide, which is traditional in our educational institutions. I would also look at a way of dedicating an element of research to current

techniques, technologies, developments within the building industry, the built environment, cause in a way us architects, this is, this is our niche, and without a good understanding of it, we are bound to just make things a little worse. I would also endeavour to take tutors, or new recruits for tutors, through a kind of an eye opener into the criting (sic) process, cause if that is not done well, it has a lasting impact on students, and how they view the whole system.

FG3_3 (T-1:09:18) - I would, if I went back to teach, I'd maybe have the students take part in like international competitions, like actually take part and submit, pay attention to deadlines, and be able to know what's out there on the world market. I would also encourage students, or have students do art, I noticed they were teaching students at the lower years in (Named School) to draw, so I thought that was a good thing, cause when they were doing that, I felt that we had missed out on that, cause now at the higher years, we are suffering trying to draw some things, yet if you actually did it in first year, you would enjoy it, and improve on your skills. And then much as we should be tough, and the lecturers are maybe trying to do that, it is unfortunate that sometimes they actually break people down. I don't know in what way students confidence can be built, because professionally, I feel we should be very confident. You are going to be a team leader, you are going to be among these other professionals, but you should put your foot down, say what you need to say, ... the communication skills, so maybe try and improve that. Then also try and get students out of their comfort zones, cause in your comfort zone there is no way you are going to learn. When you step out of your comfort zone then you will definitely learn. So if you're so comfortable with CAD, and you are not willing to try something else, then maybe you will not learn much. And then about English, the communication skills, if we are trying to be competitive, we are trying to see ourselves against the rest of the world, then we need to not take things lightly, if you think your spelling mistakes are ok, but if we are going to compete with the rest of the world, and your English is not right, you cannot communicate right, then we are going to be in trouble. Then, also something that had come up was about a year having a built up project, like you actually do a project, you build somewhere, so that could also contribute to the Industrial Training, like physical work done. So we could also help the communities in which we live.

FG3_4 (T-1:12:07) - If I were to come back to teach, I think the biggest thing I would push for is to encourage exploration beyond traditional means. The biggest problem I find with architecture students in this country, is when you look outside really, there is not much that is going give you that spark. So, there, ... for example I remember, at the beginning of my fourth year, we were, we were encouraged to just do small exploration models. I found that such a simple exercise, it allows you to think over and beyond what you usually do. So that is one of the things I'd change. But then the other would maybe have to be the Minister of Education (Laughter), because I find that, like, she has said, Industrial Training for me is a period when a student can, sort of breath in what he has been studying. And in this country it is not taken seriously, because first of all there are few firms that have any places for interns. And the majority of places you go to, they just see you as a work horse that is not going to get paid. So maybe like she said, instead of sending students out into this exploitative world, what we can do is internal Industrial Training, we have so many communities in need of small projects, so for example you can pick a project and let the students actually get into construction of this project. It would be, it would be something that would be, I think, more helpful than going out into the world and doing free work for people when you are not really learning much.

FG3_1 (T-1:14:02) - First, I think even if you are doing free work you can learn something. Apart from that I think I would increase the period of Industrial Training possibly to half a year, or a year. I think to do that I would have to be Head of Department or in the Senate, somewhere. Secondly, is what she talked about, design competitions, we mentioned it in this meeting, interaction with students from other countries. If we make maybe East African countries, or International competitions, I think it helps to know, it also helps to gauge your school, I think thats it.

Focus Group Discussion - IV (Part III Students)

MO - (T-35:39) Lets go back to what FG4_5 mentioned, and then we will get back to talking about experiences. FG4_5 mentioned something about the fact that the entry requirements were Maths, Physics, standard ... What is your opinion about the entry requirements to architecture education, and what actually happens in architecture school. ... What is your opinion about ... , again take it from your own experience ...

FG4_3 (T-36:11) - I don't think you need maths and physics. I think you just need that passion to create. The rest can fall in line afterwards, cause I think most of these early architects did not study maths.

FG4_6 (T-36:31) - I would like to differ on that, if you don't know maths and physics, or basically the sciences, then you are going to have problems when it come to areas like materials, and when it comes to designing of structures, you are going to have problems with that. So I think that doing mathematics will really go a long way to help counter some of attitudes of some of the engineers that we do have, that theirs is more like a prototype, and they do not want to go more into experimenting into structures that the architect will create. It typically has to do with, ... it takes a lot, and mathematics, and the others ... you will come to realise that [**Unintelligible**]

FG4_5 (T-38:00) - My experience with the mathematics we were taught at A-level, was not the mathematics that we needed for architecture, especially in the first two years of architecture education. The mathematics that we needed was more of an analytical, geometric understanding of proportions, and understanding of harmonies, understanding of rhythm, the kind of mathematics, the mathematics that gives you the ability to think logically, systematically, and put something together, not the mathematics that allows you to solve a mechanical problem. You can study that in architecture school as a preparation for your structures course unit.

FG4_6 (T-38:46) - [**Unintelligible**] ... Some of those ... Logic and Philosophy or even Psychology, and all those areas you have to develop your areas of thinking and reasoning, more like But mathematics or basically the sciences, you require them in, like I said ,in areas like materials, and structures, cause you must a fore knowledge of structures to be a leader in a particular sense. To be able to lead you must have a fore knowledge about other professions. That's what I ... it is important that you'll be able to work with the engineer, you'll be able to work with the Quantity Surveyor, and you will be able to work with even the builder.

MO - (T-39:40) So maybe I should throw in a question and ask, 'What is Architecture?'

FG4_2 (T-39:48) - Before you get to that, personally, me I think the whole concept of getting to A-Level, and you are told that these are the subjects you need to have to do architecture. I think architecture should be open, anything should be able to get you into architecture school. And personally if I was the minister of education, I would, ... I don't know whether the minister is the one that regulates, but I would regulate that when you finish S4, then you should go to architecture school, because. ... I found the whole aspect of A-Level inappropriate because when you finish O-Level, you have pretty much studied most of the things that you need to get into an architecture school. You have done maths, you have done physics, some chemistry, which I think is sufficient. But to get to A-Level, and you start doing ... I don't know what are those things called, differentiations and I don't know what ... I thought they were really not very appropriate, and especially when you get to the selection process, in that [Named University] big book, where they say, these are the courses and the weights that will get you into the programme ...

MO - (T-41:06) Who decides, you talked about an interesting point, between your O-Level and A-Level, who determines the courses you do?'

FG4_4 (T-41:21) - I actually did mine forcefully. They asked me to do arts because I had performed arts better, and I refused to do that, I did it forcefully, so I was two months late into the programme, because they were insisting that I should go into arts class.

MO - (T-41:42) So the high school system forces you to do either arts subjects, or sciences. You cannot do a combination of both.

FG4_5 (T-41:52) - For example, you cannot do mathematics and literature at the same time. This is what I wanted to do.

MO - (T-42:00) How many of you did literature by the way, at A-Level.

FG4_6 (T-42:10) - [Inaudible]

MO - (T-44:23) How did you come to do architecture.

FG4_1 (T-44:40) - In my own experience, right from the time I was joining senior one, I wanted to be an architect. So when I finished my O-Levels, I had to look for a combination that would enable me to do architecture in university, so basically I had to look at the [Named University], you know admission requirements for architecture, look for the course units they recommended to do architecture, physics, chemistry, maths; physics, economics maths, so basically I had to streamline myself from the beginning to do architecture. So what happened is, ... my experience with the subjects, physics maths, ... in first year we had a lot of problems, cause in first year, ... we were to do building design and technology as a degree, so we had a lot of physics and maths related courses, more than architecture. So basically our first year and second year was more of a continuation of A-Level, our A-Levels. So that left very little space for us to appreciate architecture, yet from the beginning I was more interested in architecture. So we had very very few course units to do with architecture, and you know, the courses were hectic, you know, physics and maths related course were very hectic, so that left very little time for us to appreciate architecture courses, and that's why by the time we were completing our third year, we were very short on architecture experience, and appreciation. We got to appreciate architecture in our one year out, I got to appreciate architecture on my one year out, after working in an architecture firm, you know, getting to work with architects, you know, getting to work with projects. That is when I appreciated architecture. By the time I came back for my fourth year, I was now, you know, into architecture full heartedly. So, I think, but I think that has changed with time, the undergraduate course in [Named University], at least they have reduced the physics and related, ... cause I believe, first year should more, you know, ... first year should introduce students to appreciation of materials, materiality, space, you know, colour schemes, you know, architecture related. So I think, from my own experience, physics maths, thing do not work for us.

FG4_5 (T-48:49) - For me architecture was never my first love, I have to say, ... I always wanted to be a doctor, I wanted to be a surgeon, ... so after my fourth year in high school, when you are required to pick your A-Levels, I couldn't do mathematics, I always loved Maths and Biology ... Biology, Maths and Literature, which was quite odd. You couldn't do Biology and Maths at my school, St. Mary's. So I had to pick, it was very difficult for me to pick. So I decided to go with Maths, because I thought I could always pick on biology any time in the future. I thought if I leave Maths behind, then I would never pick on it again. So when I did maths I realised that perhaps the doctor thing may never work, so I looked at options. I was not as focussed as FG4_1, you know, looking at what requirements are needed to get into this course and that sort of thing. I was only interested in working with my hands, that is why I always wanted to be a surgeon. So I was very much interested in doing something that would enable me to work with my hands. So architecture I found to be the next best option, and I decided, why not. My class had a trip to the university [Named University] as part of the career guidance programme, and incidentally that day I was not well, so I did not go with them. So when they came back to school they told me horrific stories about the architecture department at [Named University], and I had a friend who was a very good artist, he was actually scared of architecture after that trip. And in my class, I was the only guy who applied for

architecture, cause it was like, why not, lets go do it. ... so I did architecture cause I thought it would be the best option to use my hands, and I loved it from the very first lecture we had.

FG4_2 (T-51:17) - [Inaudible]

FG4_4 (T-53:11) - I didn't know anything about architecture, it was something that I was told about three months before I starting university. Because I wanted do BSc Computer Science or IT. I wanted something to do with computers. And at that time apparently, there were too many people doing the courses, and people getting Masters without even a background in Bachelors in IT, so I was advised it wouldn't be a good way to take, so I was looking for other options and architecture came up, they explained to me what it's all about, and I liked it, I liked what I heard, so I said let me try it, I almost run away the first few weeks, almost run away, but I hang on, and actually I started to enjoy it, and it is right now that I actually appreciate it.

FG4_6 (T-54:16) - [Inaudible] Yes, like I said, I started developing that attitude of building, coupled with the fact that I had four uncles that are architects, being influenced by one particular one, we called him uncle John. He would come and bring some things for me. He seemed to drive very good cars, being in Nigeria it is a big thing, and had a big home, not that we didn't have a big home we did [incomplete] The thing is that my father worked of a french char company Peugeot. [incomplete] Uncle Johns office was quite sweet, you come from the reception, to every other area, [incomplete] Astronaut, you have architecture, so it started developing right from the beginning. Apart from that I would have been a fighter pilot [incomplete] When it came

FG4_3 (T-57:03) - Me I think it was just meant to be. Cause, ... I don't know about architecture as a course. We used to call them Engineers. But I think from my O-Level ... and my dad used to send me up country a lot, to supervise construction, so I was always giving an opinion, put this here, put this here, so I got to HSC I wanted to be an engineer, cause that is all I thought it was. Then there was a problem with physics, rather not physics, chemistry, I wanted to dodge chemistry, you needed to do PCM to go for civil engineering, that is where the architecture thing came in, you could to PEM instead [Inaudible]

FG4_5 (T-57:55) - Can I just add something, ... I just was reminded by my childhood. I used to go to church a lot with my parents. And for me the other thing that now when I look back, I think had a very strong influence on my decision later, were the huge cathedrals, the enormous space in the cathedral always fascinated me, ... yea Rubaga, Namirembe, I went to all churches then, and I went to mosques as well, as I have relatives who are Muslim. And, you know, when you look at the cathedrals of Europe, the enormity of the space always fascinated me, and the feeling I got when I was in the space I think stayed with me till now, So I have a feeling that might have been a subconscious influence to the decision.

MO - (T-58:57) Lets talk about something else, we still have not heard from the other [Named University] students about their experience at university

FG4_4 (T-59:10) - Experience, I think, I could say, I did not have a problem with the experience there. I liked the system, the fact that we had the first three years, felt like a foundation really. The whole sense of knowing ... of learning about space, of learning about materials, getting knowledge of structural engineering, getting to know about building services, literally everything that related to a building, landscape, you know, having knowledge about landscape design, And then in that way you get exposed to studio work, try to apply that, what you were learning, and also learn more from the industrial training that you have after every year. So I found that when you go for the one year out, the one year out in architectural practice, actually you more or less contributing with what you've learned in the foundation time. I call it foundation because really basically it's exposing you to all those different things. And coming back for the two years which were for architecture, you find yourself, ... whatever you've learned and trained, you actually ... cause it's all about design, mostly design in the two years, so

you find that you're ... bringing whatever you've learnt, applying them in the projects that you do, and it's not more of theory like it used to be before, so the background, the three years is a very good background. It also streamlines it to know whether you actually go into architecture or something else. It exposes you to a lot to know what you really want.

FG4_3 (T-1:00:01) - First three year I don't know ...[inaudible], and a little frustrating, because, like I'd said, I was anxious, I wanted to start doing what I knew or thought was architecture, but here I was calculating pipes, calculating beams, columns, nothing really that would get you to getting the drawings out. We were doing structural engineering and lots of, ... of course eventually it turned out to kind of fall into place. ... After the year out, I think during and after that gap year, is when it started falling into place. Yea basically that the first three years, I think I would have [Inaudible] ... coupled with other things, cause I mean if I can calculate a pipe, but I do not know how I'm going to put it on to a building, then ...

MO - (T-1:02:32) There is something that was mentioned earlier on about instructors and students, I think it was Ivan who mentioned it. He was talking about strong teacher student relations. So lets talk about Instructors in architecture schools, they're always an important part of this, you cannot have architecture education without the Instructors. We are all talking about our experiences, ... The question is, what is that relationship, again there is your experience, what you think it should be, what it is, ... The question I had here is that it is suggested that the background of the architecture educators has a bearing on the eventual outcomes of the graduates. Can you comment on that? Can you comment about your own instructors as part of your own education process.

FG4_6 (T-1:03:53) - Well I had a very horrible relationship with my lecturers, you know I was quite stubborn at that time. I talked back all the time, so we always came to loggerheads with them. It affected me so much, ...[Inaudible] I was "not very "disciplined as a child" I was always allowed to bear my mind, actually it has always helped me in my growth. The people who were my lecturers, found it difficult to relate to that. Learning is more of impartation, rather than chapter one is this, chapter two is that, where if you don't have a good relationship with your lecturer or whom so ever it is, it makes learning quite difficult in a way. So if you are friends ... And the students also draw the line between still a lecturer and a friend.

FG4_3 (T-1:05:33) - Lecturers! Ok, I think since architecture education is different from other courses where I have to read, maybe study this chapter, do an exam at the end of the semester, and I am done with it. Architecture is continuous, you're supposed to build slowly. So, it helps if you have an instructor that helps build you slowly, which means you must have a good working relationship, actually I think you should be friends. ... sometimes there are people who, (theres one I still want to kill, he is not here) ... we had a lecturer, ok an ex soldier or something, (Dr. Ing) sincerely this is a guy, who, ... it was like you were competing with him, and ... of course you don't know, he knows, he is the instructor. And they're pumping their own ideas into your head, ... If you are not strong enough, you may end up leaving, cause at the end of the day he is the one going to grade you. So I think it helps to be friendly with the lecturers. And of course you are friendly even when they criticise, cause they do that all the time, You do not take it in a defensive way, something like that ...

FG4_1 (T-1:07:23) - From my experience, I mainly appreciated my final year, you know, your graduation year, cause one, you were given the freedom to choose your own supervisors, so basically you choose someone you relate well with. So comfortable with chose your own supervisor. So I think right from our early stage of learning, when you are handling projects, as students say from third year, students should be given a choice, a number of supervisors from which to choose, supervisors they are comfortable working with. Cause from then, cause you realise, from my experience, once you were comfortable with your supervisor, you know, it took your projects to greater limits, you know you performed well with your project. But once you know, there are these projects

where you know, you had a supervisor, you were forced on a certain supervisor. So if your relationship with that supervisor wasn't that good, even your project suffers. That is when you have a student actually rarely sees the supervisor, and when it comes to presentation time, you have seen your supervisor only once, ... So I think, giving the students the liberty to choose supervisors at a certain level is worth it.

FG4_2 (T-1:08:53) - In terms of the student - instructor relationship at [Named University] it was crazy, there were a few cases of tension. I witnessed a good number of cases of purging, you know an instructor purging a student, or an instructor witch-hunting a student, but then there were also cases where students provoked that kind of reaction. But I don't know if it's because the classes were small, or it's because architects, generally people in this field are emotional. The instructors did get emotional some times, there are situations when it got bad, there were situations where students were blocked from progressing, every year the guy comes, whether he does what or what, he is in there, he is on the ship, he is not getting off. I found it disturbing, but sometimes it was valid that the student stay behind but then there were times when some instructor would openly declared, 'I am going to purge these kind of students'. There is one who declared, and I appreciated that instructor for that, because, at first I thought, 'what is wrong with this man' and then he declares 'I am going to purge, these kinds of people, and these kind of people I will lift'. So it was both ended, there were situations where it worked for some kinds of students. For example the girls, sometimes, you would have girls in the class who were relatively a bit weaker than the boys, but then they would really lift them up, it's a miracle that when they really lift you up, they would become good. And then there were also guys who were you know, meek, and they would lift the guy up, and then there were guys who were good, and they would purge them, and they would become bad. So it was kind of like that, personally I was a tiptoe, I knew that if there was a lot of politics in play, so I would always tiptoe, don't step on anyones toes, don't let an one step on mine, that kind of thing.

FG4_6 (T-1:11:18) - I would say that you guys are quite lucky, in our own time, it was imposed on you, ok based on the research that the lecture would have done from where he came from. But there was one particular one there, well we are now friends, he was not lecture but a head of department. And then, he would take some of the courses there. Like I said now we are friends, and he is a professor these days, I wouldn't mention his name. Before you would present this man tells you, 'you have failed', when he would have lectured you too. Before you present, he would tell 'you have failed', before your presentation, [Inaudible]. The first day orientation by the school, what did they tell you, 'We are not in a hurry to graduate you in this department'. So you have to work, and some of us run into problems, because we like going out to parties and all that, and not managing our time properly, which really, was a major problem for us. And we came out later to meet up some of those things. And we came to discover later that these lecturers, these professors, who we though were against us, actually helped us in that period, if not, we would have been so out of everything. What I mean is that you would not be able to work the way you would have worked, even when you get out thee is no way you would really really stand on your own. So I think that in a way, it was good for us that, ... when a lecture hates you, he makes you work better I think. Even is he holds you down, you will be able to go down. But you realise that these lectures don't really hate you, they are doing some good, because you don't know who you are gong to meet out there, because presentations are quite ... It helped some of us though ...

MO - (T-1:13:23) So you are saying essentially it is a double edged sword. ... Sometimes the tough love can work, and sometimes it can really put you in trouble.

FG4_3 (T-1:13:33) - I am not saying handle them with kid gloves no, but the way it comes out. No you can go back, present some work and if it's bad work they will tell you it is bad work, and yes you'll fail, because it is bad work. But it is something when you are being witch hunted, you know someone waits for you to get up there, and fire you even unnecessary stuff, it's more like embarrassing you.

FG4_5 (T-1:14:07) - Could't it have been just you being paranoid?

FG4_3 (T-1:14:10) - It has happened to many people ...

FG4_6 (T-1:14:12) - Yea, but if you had done your work probably, or you know his problems ...

FG4_5 (T-1:14:16) - Well, I mean my impressions were pretty made the first time I joined the school. I was especially intrigued by one of the lecturers. She helped me especially, to develop thought. So her emphasis was thinking and developing thinking, how do you develop thought, and the other element of it was being sensitive to everything around you. So it was sensitivity to, you know, to people, sensitivity to material, sensitivity to space, sensitivity to just an aura, a feeling of something, even if someone else may not be feeling that. So that made an impression on me, and I thought it was important, that there is a lecture or an architect in your very first years who makes a strong impression on a student and allows that student to develop a capacity in them that they might probably have not realise before. I think this lecturer in particular helped me develop a very strong capacity, so that was a very good impression. Well some people had very bad experiences with this lecturer, and it is difficult to reconcile the two. You know, someone has a very bad experience with them, and someone else has a very good experience. So sometimes, the bad experiences we have are, like I said, you are paranoid, cause you are new, and you imagine that these guys are out to get you. But my attitude was to always speak my mind, and keep an open mind, and I made sure that I understood that it was never personal. Sometimes it could get emotional, but make sure that it was never personal.

The other element about relationships with lecturers, I think I could characterise it into two, the lecturer you could have fun times with at the bar and still have a working relationship with in studio, without having to take it anywhere else, and a lecturer you could have both relationships with. So the one where you could chat with in studio, chat with at the bar, I found to be more developing for me, because then you could discuss projects outside the studio environment. You could call then up at any time and discuss a project. And you were able to ask the difficult questions without being afraid of being judged, or looking silly, or, ... oh crap is this going to come back and bite me in the back, when I present, that is the kind of relationship I am talking about. So the guy you only chat with in the studio, you had to be very professional about it. Then the guy, or the lady you could chat with outside studio, then you would learn more from that one The lecturers also have relationships with themselves and with students. It helps you understand how they are relating to you, how they relate back to the student. Cause it's sometimes usually you know one sided, you feel like, 'oh, it's only us, and they are out to beat us down'. Sometimes some lectures might be afraid of some students, or they do not know how to approach a student. So it helps if you have these relationships with them cause it allows you to sometimes gear your ...

MO - (T-1:18:04) Lets continue this bit on relationships, but we are going back to what Ivan mentioned, it was about other professionals, and the fact that when you went through your programme, there wasn't much inter-relationship between architects, engineers, surveyors, quantity surveyors, and then it also came up when we were talking about going out into the field, how particularly [Named University] students when they went out into the field, they went and worked with different people, and they understood better about architecture. What can you say about that in the context of the education of future architects?

FG4_6 (T-1:19:57) - Well some of us were quite fortunate that we had a faculty that had various departments in it, we had geography and planning, we had geology department, and we had building department. The building department we had other course in there. So we could relate with ourselves freely, and then relationships within the students was quite easy. We had electives from other courses which also helped, from those various faculties. So apart from the quantity surveying, and surveying who we never really really liked, because the way they were presented to us, as if they were after our neck, after the job, coming to take the architects job, so the kind of tutors we had at that time, had their own miserable experience, and they transferred it to us, and we never really really

liked them that much. The engineers and the geologists and all that, we really had good time with them. We always worked on our projects together. Except for the artisans that we never had. But that helped us when we had the industrial attachment which we had more time. In your first year, you would go to the architects office, just study their drawings, how they do their jobs and all that. And second year, you will be able to put you at the site, then you start acquainting yourself with their own terminologies, you come to tell a mason, this is a column, and the man tells you this is pillar, and then he tells you this is not north elevation, this is front elevation. Here you are a very young chap, and he is been practicing this for a very long time, and what the hell, why would you tell him anything. He too will feel intimidated. So industrial attachment also helps in bringing those people together.

FG4_2 (T-1:21:39) - In terms of studio relationships, for other consultants, and specifically looking at [Named University]. The only times when we meet these other guys was during communication skills, and yet we didn't really have to be together. Then the other thing is, I would think that it would have been good if when we were working on studio projects, lets say in third year. It would have been good if some of the engineers had some input at the design stage, especially for those kind of third year projects, where there were no stops to having an eventual working design. It would have been good if some of the engineers maybe as some of their input work, specific course units, they had a real input on that kind of project, because that is the kind of ... that would give a kind of foundation for working relationships, the way it is done in practice. Then also the other thing is that, when we were doing some of the course units, like theory of structures, lets say, it was not only independent of those guys, it was also independent of the main studio portfolio project, whereby you would just get into a class, you design columns and beams but there was no practical application on a real project, which would maybe require the other guys to come in. So maybe for architecture education, it would be nice if there is a way in which some of their course units, meet the architects course units, at the studio stage. Maybe in the upper classes, because their application of engineering is a bit more complex, so it would work well if they come in such points. Not only for the practice of, or learning the way relationship work, but it could also create a symbiotic future relationship, like the kind of relationship that Peter Rice was talking about with ARUP. So that would be good. Because these guys get to know each other from school, then by the time you get out of school, if you are the kind of architect that wants this kind of thing, then you know who's going to help you to achieve it. But you can want something, and there is no one to help you. There have been situations, at least I can speak for myself, there have been situations where you want to achieve something, and you get an engineer on board, and they are like, boss, this can't work. Thats what I think.

FG4_3 (T-1:25:00) - I think I'll, you know you talked about liaising with engineering students and quantity surveying students. I will like to add something from my own experience from [Named University], especially as regards to the year out. The year out, as I have mentioned earlier, it helps introduce you to real architecture. But I would be happier if it were more organised in the system, in the course, where it is more of like, it's more like you are still in school, but outside school. If they could liaise with architectural firms, so by the end of third year, you know where you are going, and you know what you are going to do there. Because, you can get a place, where they will place you and you sit for like a month, nothing. Some people are not lucky to have to get places to do their year out. So if it were more organised, so that the Faculty maybe has three or four firms they partner with, take in maybe two people every year, and they know, they know what they expect the students to come up with, ... so by the time you go back for fourth year, you have a better understanding of how things operate.

MO - (T-1:26:45) Lets talk about star architects. Who do you think creates them. In relation to architecture education, what creates them.

FG4_6 (T-1:27:15) - I would say basically that our educational curriculum, unfortunately, in some part of Africa, do not really give room for understanding for who they are doing their design for in terms of their tradition, and in terms of who, and the environment. Basically we come to realise that in Africa we do not have any specific space standard, and we don't have a particular architecture. So most of the architecture that we do have are borrowed. We steal them from outside there, and then we come to implant them in here. So what gives room for that is basic psychology that should have been taught in schools, and because we do not know, understand our clients properly, the kind of house that would fit, or what kind of colour would really motivate him, or where would the light be, you know we just understand the sunlight, ... ok, the sun rises from the east and sets in the west casts its shadow here, but how does whoever is going to stay in the building feel at this particular time of the day if he is occupying that particular building. So most times we don't talk about that, basically I think that to take care of this star architect thing, if we could introduce more of cultural sort of cultural architecture, or maybe psychology of the people then it would help.

FG4_5 (T-1:29:32) - I think for me, it's a decision you make at different stages of a project. It also on who you're with, the people you are surrounding your self with. I managed to pick a lot of skills from my colleagues in studio. At the beginning you can't have it all. So you are a collection of people who have different skills, and to stand out, you've got to be able, as an individual, to pick up the skills you need and you know, beat everyone at it. Be better than the person who came in with the skills, in studio. So that could make you a "star architect", you pick up skills from your colleagues, and push them to the limit. So experimentation, experimentation is key, I found to be key. Cause with experimentation, you are always surprised by the result, cause you never know what is at the end of the tunnel, you never know the end product. So that is always, that was the key for me. And collaboration, especially when you feel you need it, because you can never get everything done as an individual. You will always need input from someone else, but you've got to be able to make a decision on that input. So it is a matter of consciously understanding how much your colleagues can contribute to your project, and how much you can use their contribution, and work with it to suite your ideal goal. And it's also philosophy, because sometimes you might want to design in a context whereby no one shares your philosophy towards work or towards what you want to achieve, so it is a balance between all those issues I think.

MO - (T-1:31:15) FG4_6 mentioned time management. Can we talk about time management in architecture education. Why is time a problem in architecture school, ... cause it seems to occur very often. Why is it an issue?

FG4_3 (T-1:32:02) - I think, ... you know, ... when you are designing something, you usually don't have a solution there and then, it's a process, but sometimes I think it just takes longer for things to fall into place.

FG4_5 (T-1:32:28) - Time, ... I can only give an example. We had a project in third year, where we were going to design a library, a public library. And my approach to it was probably not the approach everyone else took. My approach to it was to start from the very beginning, from first principles. And of course the problem with time management is you have the lecturers set a very rigid schedule without consulting the students whatsoever. So you find that the lecturers would want to see schematic design, final design, and detailed design, you know after lets say six weeks, which is ludicrous for a project of such a scale. So for me I deliberately set out to do the best I could without actually meeting the requirements that were set out for us to pass that unit especially. But I passed the unit, because I showed the lecturer at the end of the day, the panel of architects at the end of the day, that the approach I took was systematic in understanding how things are put together, how space is designed, the different elements at the stages that you have to go through to put a building together, were all met are put to a very high degree. So it probably didn't matter at that moment that I never produce final drawings, which I never produced. So my presentation was full of models, sketch presentations, schemes, as opposed to final design. So if the lecturers can be also flexible to understand that the different modes of work, and attitude towards

work, and understand if a student can go through the different stages properly and manage to thoroughly finish, then the issue of time can always be, I think, managed better.

MO - (T-1:34:33) Now the reason I brought this one up, is because it came up with students. Now you raised two other issues. Why is there a rigid schedule, and what is being looked at by the instructors?

FG4_2 (T-1:34:57) - Why is there a rigid schedule. I think most of the instructors look at it from the practical sense of it, because real projects in real practice have a rigid schedule, and they do have deadlines and consequences, big financial and legal consequences. However if they push it too hard, such that the deadline is always bellowed down your throat, that sometimes it can stifle your creative process. But I understand now the reason why they were rigid and why they were strict about it. But sometimes I felt that it does, sometimes it does create unnecessary stress, that can blow you out of your way and totally destabilise you. How to go around that? I don't know, I think, that there is one of these things that are required of whoever is studying architecture, you got to develop a thick skin. But, there is a way around it.

MO - (T-1:36:20) How do you communicate that to students?

FG4_5 (T-1:36:28) - I think most times when you are in practice, what I have experienced, you are always working in teams. So you never get to do the project from the beginning to the end as an individual, which was the case at the university, you had to do the project from the beginning to the end as an individual.

FG4_2 (T-1:36:54) - We had group projects, in our fourth year, and in my experience, it was even much worse, because characters are different, and you have this guy, who is like, we are in a team now, lets relax, then you have these other guys who are work horses, so it always got worse when it came to the strict adherence to time.

FG4_5 (T-1:37:23) - I think it became worse in fourth year because it was never implemented from the very beginning so we never had an understanding of working in teams.

FG4_4 (T-1:37:32) - In different course units, it didn't have to only be related to studio work, but even other related units, we were exposed to teamwork from the beginning.

FG4_1 (T-1:37:49) - From my perspective when it came to architecture projects, the only project that gave you a really feel of teamwork, was in fifth year, and I though it would have been, we would have appreciated it if we had more projects right from the early stages, where we would have had to participate as teams.

FG4_6 (T-1:38:12) - From the environment where I came, we were quite aggressive, so you have this thing, you divide and give everybody a proportion, and everybody who stops you, that guy is in trouble. You have to push him to work, cause no one wants to fail. So you have got a specific job to do, it you are dotting, you dot, because, ours was strictly manual, no computer, so you have to work with your hands. On Christmas day you will be inking. So you have to do all that, so everybody knows what his going to do. Before the presentation everybody has to come together and then discuss it before you go ahead and present. That is how it works.

FG4_2 (T-1:38:49) - And how was the marking?

FG4_6 (T-1:38:58) - Sometimes you get a mark as a group, the mark as a group, and sometimes they break it down. The lecturer wants to know whose been participating, he follows you up because you have to be consulting. Everybody has to speak, from time to time you have to come and present our own part. So he knows your capabilities.

FG4_2 (T-1:39:08) - This was pretty much the case at [Named University]. You would have situations where someone would ride on someones back cause they know they would get the same mark.

MO - (T-1:39:38) It has finally come up, FG4_6 has finally mentioned the dreaded word, computers. Can we please talk about computers in architecture.

FG4_5 (T-1:39:47) - We used to at MUK, we had a project where you were to sit in groups for the first two stages, and then afterwards we went back to working as individuals. And that, you could tell a lot from someones ability to produce good quality work, after the group sessions, cause the group sessions were people would argue, and others were laid back. When you got split up, you know then, everyone woke up, and the guys who could do work by themselves actually pulled ahead much faster than those guys who were riding on everyone else's back. Those guys never understood the project from the beginning. So that is also another element to teamwork that could be looked at.

MO - (T-1:40:32) Computers has come up, your experience in architecture school your experience when you go out in the field, computers are here to stay. What is your experience in architecture school; is it what it should be, can it be better; is there more that can be done; what were you exposed to; what did you use computers for?

FG4_6 (T-1:40:58) - In my own days, I never saw any computers. There were computers, but ok, we never used them in school. That has really helped me, so much because, in areas of analysing and thinking, you must know what you are drawing before you go into the computer. ... It helps the job ok, it helps the work, but anybody can use the computer, and if you are not careful, you can get carried away with it, your not going to come out a good architect cause the computer will always be helping depending on the software you are using.

FG4_2 (T-1:41:59) - At [Named University] we started to use computers after the third year, it was not a strict rule, that don't use computer, but there were serious repercussions of using a computer, between first year and third year, you had to be really good. In practice it's the other way around, computers get more reign in doing the work. But I think that it is importance to minimise on ones practice of architecture using the computer. Why, because doing the architecture with the computer, by itself I think is already a course on its own, and I think if you focus on computer inspired architecture, you are definitely going to become what they call a CAD monkey. Cause there is a lot you have to achieve. It's like learning how to do this, this and that, but using a tool, and doing this and that but using your own skills. So, there here to stay cause they get the work done faster, but I think the formative stages of a project, and design should be as independent of the computer as possible. Cause if you are going to use the computer at the formative stages, then you have to be, ... your education and understanding of using a compute for design, has got to even have come much earlier, so that you have ample time, ... actually what I mean is you've got to have come from lets say, the other formative part of your education with a strong computer background such that it does not turn you into a CAD monkey. That is what I think.

FG4_3 (T-1:44:13) - I beg to differ. I think times have changed. We are in the computer age, and I think the problem with the computer is that people don't know how to use it. So at the end of the day, you end up mixing up stuff. But if the students are taught how to properly put it to use, cause honestly it is not the computer producing the work, it is you producing the work, your using it as a tool to replace the drawing board, and it does stuff in much shorter time. So I think people should just be, ... students should just be taught how to use it properly, to better bring out their ideas, because at the end of the day it more about selling an idea, the idea is in your head, it is not the computer.

FG4_6 (T-1:45:12) - If the computer should help the students, or aid them to do their work faster, the issue of time is still a problem for them, I don't know why ...

FG4_2 (T-1:45:42) - Because you are spending time thinking about how can I achieve this in this programme, as opposed to how can I achieve this. That is the problem I have with computers. You are going to spend a lot of time thinking about, ok, I want to achieve this kind of aesthetic, then you say ok, how do I achieve it in ArchiCAD. I have

to do this, this, this and this and this, so you are chasing the mouse, but you have forgotten where the cheese is. That is the the problem I have with the computer. Thats my problem with them.

FG4_5 (T-1:46:13) - I have a question for FG4_3. Do you think the computer can ever replace the sketch pad, the architects sketchpad?

FG4_3 (T-1:46:23) - No, no, no, I was talking more about, ... the sketch pad, definitely not, cause that is quick ideas. But the computer brings it out better, as in the final work. Because in my architecture school at one point we were not allowed to use, ... in one of the project, we were not allowed to use computers, it was supposed to be done by hand. And what did guys do, they did it on the computer, printed, put tracing paper on top, I mean, ... and traced on-top of it ...

FG4_1 (T-1:47:00) - From my experience with computers, we were introduced to CAD in our first year, which I think was a very big mistake. Cause what we did, definitely we threw away the drawing boards, and we started concentrating on the computer. And obviously that affected you know, your thinking process, it affects your design process, we threw away our sketch pads basically. You know we had very little time for sketching. So what happened, is after our one year-out when we went back for fourth year, thats when you realised that, you know what, my thinking process is really affected, it's really dormant. So imagine, we had thrown away three years not using a sketch pad, so we tried again, I tried again to get onto the sketchpad. But I believe if from our first year, we were introduced, you know, you know, when you wanted to achieve something in three dimensions, you go on computer, instead of using models, so from that I think students should be introduced to CAD after three years.

FG4_4 (T-1:48:13) - I think it's ok really, ... sketchpad, computer, you can use everything, ... you have the sketchpad cause in the beginning, the concepts and everything, you are not going to do that on the computer, you can't because it depends on how someone really decides how to use the computer ...

MO - (T-1:48:33) Now the wonderful thing is, when I introduced this, I deliberately did not say CAD, I said Computers. Automatically everyone went for CAD, which is interesting. So, it is interesting, this is my own take on it is, you can teach someone to think using hand, why can't you teach them to think using a computer? Is there any difference? I don't.

FG4_5 (T-1:49:03) - I think the issue we have here is the context we are looking at. ... If you look at the Ugandan context, internet speed, ... lets see, at our office, 512Kbps how are you going to get all the information you need in a short period of time. So it's a question of digital architecture, is it really relevant to the context in which you are practicing, and is it , ... do you produce as effectively as you would have otherwise. At school the computer should always be integrated in all the other elements of design, cause it can be a design tool definitely, if you are using 3D modelling programmes. It is a very expensive tool though, because ... it is, ... it is a very expensive tool if you were to compared it with the other options that we had at university. The software is expensive, the hardware is expensive, and keeping everything up to date is expensive. So you have to be able to know that you can compete at the same level as the guy, ... lets say Harvard or the FG4_1.

MO - (T-1:50:21) That is something you have to consider, and this is actually a very key point here. We are competing in a global world. So when you say that you can only teach people what we have here, are you doing your students justice by only teaching them hand drawing, and the rest of the world is being done on the computer.

FG4_2 (T-1:50:46) - You can, Lois Kahn used his hands, and he was right on top of the world.

MO - (T-1:54:09) History and Theory, just very quickly, you mentioned Europe, North America, and then Africa was a by the way. Whats your take on that in regards to Architectural Education?

FG4_2 (T-1:55:50) - I think it's something FG4_5 mentioned about not only understanding the African traditional techniques of construction, but also a modern understanding of how these can be applied. The South Africans have done a lot of that, and they've come up with a South African language which is quite distinct. It's modern but not a building plucked out of Europe or things like that. And I think that would be something that needs to be explored more in conjunction with the environment. That is something that needs to be looked into. ... There's also these West African architects who are doing something like that. He is called *Atepa*, or something like that I think right now it is non existent.

FG4_3 (T-1:57:07) - Question is, what is African Architecture? Because most African countries have a lot of European architecture over the last maybe two hundred years. So many African old buildings are plucked out of Europe and, ... the are colonial buildings. The African architecture is traditional, the mud and wattle ...

FG4_6 (T-1:57:47) - When you say African traditional architecture, one of the first thing that comes to mind is mud and thatch ...

FG4_3 (T-1:57:55) - Because the other African architecture is documented, thee is a lot of West African and Egypt ...

FG4_5 (T-1:58:15) - There is this architect in Mozambique, he is called He is a very good example of , ... Well he is African, but he infuses the African aesthetic with the Portuguese aesthetic. So when you look at architecture, it's just not the structure in its finished form. You know, it is the sensitivity of the materials in the structure, the layout of the spaces in the structure, the way the architect has dealt with culture, and infusing it into the structure, how does that celebrate the african architecture, so it's just not mud and wattle.

Focus Group Discussion - V (Part I & II Students)

MO - (T-01:01) What was your motivation for doing architecture?

FG5_1 (T-01:19) - For me I guess I thought it was an interesting field so I wanted to learn a bit about it.

FG5_2 (T-01:27) - Me I love design and teamwork, so I love architecture.

FG5_3 (T-01:34) - For me I find in architecture freedom to express design. And I love creating new things and that's why I wanted to do architecture.

FG5_4 (T-01:49) - For me to a certain I would say, I wanted to really improve from what is present in the country. You find that there is a need to upgrade the buildings and leave a good life.

FG5_5 (T-02:12) - For me, it's all about the challenge you're facing about architecture. Because you find that we have to solve problems before they occur. Find a way to solve problems before they occur, that is what I like about it.

FG5_6 (T-02:28) - For me it was the love of art, and I was interested in vaulted structures, so I was interested in how you can recreate it in the modern world.

FG5_7 (T-02:39) - For my case firstly it's my passion, the aspect of expressing myself in terms of my ideas. Secondary, maybe the outcome of it, the aspect of being independent, you find that it means more or less mean at the end of it you have leeway to be more independent other than being employed.

FG5_8 (T-03:02) - I enjoy design, and the thought of seeing an idea come to life.

FG5_9 (T-03:11) - Ok, personally as I grew up I was able to interact with so many architects. So I could see there was a big difference if you compare with the other professions. So the whole idea of creating and implementing things you think about all directed me into doing architecture.

FG5_10 (T-03:36) - For me it was simply a deep desire to create, and then secondly, the business bit of architecture. I thought, through architecture you can be able to build a legacy.

FG5_11 (T-03:57) - For me it was just about being able to express yourself and have it there where everyone can see it.

MO - (T-04:08) So you came to [Named University], did any of you have a choice of going to another university, if you did why did you choose this one?

FG5_6 (T-04:25) - It was between [Named University] and [Named University] and ... Ok, honestly it was because many people said [Named University] was better.

MO - (T-04:35) Why did they say that it was better?

FG5_6 (T-04:39) - Um, the teaching methods, the fact that it was a bit more serious and technical than [Named University].

FG5_9 (T-04:50) - Myself if I had the opportunity to study abroad in a Western country, I would have taken that option. The options I had at that time were only two, [Named University], and [Named University]. And at least I could interact with some people who had gone through either institution. Most of them advised me it's better if I chose [Named University]. Their argument was the availability of facilities, because of the drawing tables and the design approach was more creative as compared to the other side, so basically that.

FG5_10 (T-05:39) - For me I think it was my fate that I came to [Named University], because when I was applying I applied for both [Named University] and [Named University], and the joint admission body offered me a place at [Named University]. So I was totally ignorant about the quality of education as an architecture applicant.

MO - (T-06:05) So has anybody, while they have been at [Named University] actually found out what is going on at [Named University], and seen how it compares with what you've been through?

FG5_8 (T-06:19) - Yea we've contacted with students from [Named University] on internship, and also gone to see their work. I found the facilities they have there are more deprived compared to what we have here. Their standard of work is not, I wouldn't say it's any different from ours it depends on the students motivation and their capacity. So the only thing that we might be better in is the facilities that are available to us.

MO - (T-06:54) - Does anybody know anything about universities outside Kenya? Particularly in East Africa.

FG5_10 (T-07:04) - Personally I have been to [Named University], and I think our facility is far far better

MO - (T-07:14) - In What way?

FG5_10 (T-07:16) - In terms of, if you compare with what we have in studio, the drawing boards ...

MO - (T-07:27) - Ok lets, get into something more deeper than just comparison. Let's talk about your own experiences. Some of you are in sixth year, at the end, other are just coming in. Maybe you can tell me a little bit about the relationship between the instructors and the students and how that has helped or hindered you in your progress.

FG5_7 (T-08:15) - Maybe to say something. Maybe from my experience in [Named University] since first year, the kind of design approach was more of, more or less Form Follows Function, whereby as we start designing, as much as you do the brief analysis and all that, more or less, especially when I see here with my colleagues, maybe we see that most of them start with first of all coming up with a kind of form, then after that maybe someone will try and fit maybe the function into it, whereby now the aspect of modelling which in the case of [Named University] is quite encouraging in that even as time proceeds, you find that most of guys in [Named University] are doing even commercial models outside there because guys have good skills in doing that compared to [Named University] where it is not more emphasised, maybe as per the interaction I have had with them.

FG5_9 (T-09:15) - Myself my experience has been around, ... this is the sixth year. Generally I've enjoying the whole cycle, cause my approach to design is form, form based, and it's like a majority of our instructors are so much into form. So 80% have been taken. Maybe, in order to get the balance, there are some guys who are more into function in their design approach, maybe the department or the instructors should be aware of that, cause during the markings, they are very subjective, cause, they look at your model, they look at your form, your elevations, if they are not interesting, then nothing, there is no thing that would motivate them to look into your drawings, so you end up failing or getting low marks, but actually you are, you had ideas which you could explore further into the world of architecture. So for me I am comfortable with it because I am a form guy. To somebody else, I know my classmates who are more into function, they'll make sure the functions are working before they go to form. They end up not getting what they really deserve, in my opinion.

MO - (T-10:50) - Just as a, just to clarify things, these interviews do not get revealed to instructors, it's just for me, if you have any hesitations.

FG5_8 (T-11:05) - I'd like to add on, what FG5_9 said about it being subjective, I've realised that how an instructor marks your work, is based on his own experiences, and his own information, how he has informed himself, or how he feels a certain topic. And I think sometimes, it would be better if there was like a set standard of how work should be marked. Because I might be a person who is into organic forms, and my tutor for the semester is into box forms. It really creates a problem When you are forced to conform to someones way of seeing things.

MO - (T-11:53) - Just to continue on that, do you get Course Outlines and Marking schemes for all your projects?

(T-11:59) Majority - No

FG5_9 (T-12:01) - The marking schemes is so raw. They just tell you, brief analysis is 20 marks, site analysis these marks. There are no details, the subjectivity is still so big. In fact, let me just continue, ... sometimes, if for example you are in sixth year, you are in a presentation, you would expect your lecturer to know you. In any case, the lecturer decides to ask you your name, then ... in a presentation, you've been interacting for six years, then you must know there is something wrong there. Definitely, you are most likely going to fail, because immediately you pin your work they see your name ...

FG5_8 (T-12:49) - they already have an opinion ...

FG5_9 (T-12:50) - They already know the way you dress, the way you talk, the way you do your things, so maybe it helps develop criteria of awarding the marks, or I don't know how it can be done, it's so intricate, ... maybe these guys can suggest something, ... but that is my opinion.

MO - (T-13:14) - Lets maybe get a little bit detailed, since we are already getting talking about studios, lecturers and interaction, teaching methods. What has been your experience at different levels in that. We already talked a little bit about the biases against someone if you come dressed differently, something could go wrong. What other experiences have we got, particularly in design crits I guess, probably the primary way of architectural teaching. What experiences do you have?

FG5_8 (T-13:50) - Ok I guess to me the main problem in maybe design crits, is sometimes, ok in some level, they are some instructors, or studio masters who maybe get a bit personal on the crits instead of actually criting your work or your design. I guess maybe, I don't want to say a lack of open mindedness, but I think that instructors should be able to appreciate any new form of architecture that the student comes up with not just the old set standard way of designing you know ...

FG5_11 (T-14:41) - I would also like to add, that cause of the different, you know people are different, what I appreciate, is not what he appreciates. And because of that you have different lecturers, different studio masters who like different things. So when you are being crited, one would say, ah, this is awesome, out of the world, this is beautiful, then the other one will come, and probably say the opposite. So I think, the way they have just said, I am just emphasising on the fact that we should have that ... a set thing where you are appreciating what is new, yea you correct what is wrong, obviously there are things that are going to be wrong, but new architecture should just be embraced because at the end of it all, you can't just be doing the same thing.

MO - (T-15:29) - You just raised an interesting point there about instructors giving opinions that sometimes conflict. Have do you as students, or how have you as students managed to cope with that?

FG5_9 (T-15:54) - I came in 2005. At least I was able to interact with higher level students. In second year I stayed with sixth years in a room. The first lesson they told me to do is marketing. Apart from doing studio work, I should be able to market myself to the guys who are awarding marks. That is in terms of making sure you attend all the presentations, you talk to them. These are human beings, they are emotional, they form opinions immediately. So as time goes, you develop your own CV. As in, there is a way these people know you in the department, and that is the criteria they are going to use in awarding you whatever they are going to award you. Personally I found it very helpful cause it works. So that is one way I found to cope with that, the subjectivity. But I don't know whether it is the right way, or maybe these other guys also have a way, they have developed their way of acclimatising to addressing the issue.

FG5_6 (T-17:18) - To add on to what he said, you identify which of your tutors is the boss, because even though there are four of them, there is one whose opinion matters,

or who is the one who has the strongest character, he is the one who will have a bigger say in awarding your marks. So when you are given a crit and they conflict, you listen more to the person who you know will have a bigger say in awarding you marks. And you do what it is they are telling you.

FG5_7 (T-17:54) - Sometimes I find that it possible to get a few of the remarks from one, and a few from the other and then you combine them into something that you like, not necessarily what they like, but you have at least done something to the effect of what they've said.

FG5_5 (T-18:16) - Me for my case, I first find myself, in a way that the first idea that I have in my mind, maybe in terms of the sketch that I make. The first sketches that I do, maybe as much as maybe they come and crit it, they change a few things here and there, by the time I get to the final, I rarely find myself taken back. So as much as maybe, to me as much as there may be different views, but at the end of the day I know, maybe I will incorporate some of the ideas they have given me, but the idea, the whole idea remains in terms of my design, rather than me taking these other aspects of maybe trying to know who is who. Yes maybe we should talk about who has a strong say in giving the marks, it is important to know, so you don't fail, as much as you are trying to express your ideas, which may be working, but some one didn't see them working.

MO - (T-19:12) - So in terms of crits. Sometimes students go into crits and regard them somehow as a confrontation, rather than a learning experience, is that the feeling you get here, or it is a dialogue with your instructors, how do they operate?

FG5_7 (T-19:34) - Maybe at first year level, at the early years, as for my case it was more maybe at first year, they would come and maybe talk, kind of maybe express some of the ideologies, maybe like, this building was done by a student, he earned this amount, at the first year level. So you are sited and wonder, oh you mean ... So at that level, more or less you are scared, architecture is somewhat hard. But as time goes, cause now you get to know who is who, and maybe for fifth year level, you more or less get in touch and maybe at sixth year your more or less at the same level, you can interact very well. But in the other years, there is that fear, cause you don't know who is who

FG5_6 (T-20:19) - I'd also like to add, that when I came to first year, you know you've come from high school, you've written your exams and you have come to uni. So normally in school, in high school, you're listen, you listen, you do your exam and you finish. But then when you join architecture, it's not a matter of being taught. You have to, you are just being guided. You have to go out, out of your way and discover. And then even when they are giving, wen they are correcting you, you learn to, to make it not personal, cause at the end of it all, at the end of it all, they are just trying to help you, so you make it not personal, so that you can, so that you can progress. So I think that is what you learn. Cause at the end of it all, you actually, the tutors can become your friends.

FG5_11 (T-21:17) - I think it also, it depends on the tutor, and to some extent the level at which you are. Because I've noticed, as you progressed over the years, the tutors became more, I can't say more humane, but they invited us more to discus with them and we felt freer to discuss with them, than in the earlier years. In the earlier years I felt like they were imposing their opinions on us, to some extent.

MO - (T-21:56) - Lets move on to something else, about the nature of the programme itself. Maybe we can talk a little bit about, I guess it's already come up, the purpose of architecture education. I think we've just hear someone mention that it's about guiding people, not about feeding information, it's about guiding so that you can actually achieve something. What is your own opinion about that? That was one opinion, does anyone have anything that's different to that, . What is the purpose of architecture education?

FG5_9 (T-22:39) - Personally I think, when you make that step, or you decide to take architecture for your course, as a professional course, you need to adjust your attitude. You need to adjust your attitude towards the people you meet, towards the criticism that

you get, and that is the only way that you will be able to make it in this course. If you have the right attitude.

MO - (T-23:09) - What is this attitude exactly?

FG5_7 (T-23:11) - Ah, sometimes you find not many people like criticism, especially criticism that is directed towards you as a person. So sometimes you do something, you like it, and then somebody says, 'my granddaughter can do better than that'. So you have to look at what is it that they don't like. So you now look at the positive bit of it, the criticism, then you can be able to do something to the effect.

FG5_6 (T-23:51) - Maybe I can add on to what he said. It should be objective on both ends, from the tutor and from the student. We should be able to look at the guidance we are receive objectively, in order to help us develop. And the tutors should be able to guide us objectively, without looking at other issues, other than the architecture.

FG5_9 (T-24:22) - Also to add on to that, you may think the purpose of architecture is, ... The Instructor should be keen now, as in they should spend a lot of time to actually know the ideas behind the student. Every, I believe every proposal a student makes, there is something unique about it. So if the instructor takes a lot of time with the student, at least he is going to find out what they guy is trying to communicate and then try to reimpose those ideas, instead of bringing his own ideas into your design. If that happens then you are going to have a variety of designs. It is going to be more creative, we are going to be more creative and have more interesting designs.

MO - (T-25:11) - What is your current student:staff ratio?

FG5_9 (T-25:16) - We are currently, ... Sixth years we are around twenty-four.

MO - (T-25:20) - And how many tutors do you have in the studio?

FG5_7 (T-25:24) - At least for our case in our thesis, every lecturer has two students (FG5_8 - three) others two three, so two and a half. The other years I think they are many, I don't know how they manage.

FG5_3 (T-25:44) - Fourth year we are 70 (FG5_6 - five tutors) and we have four lecturers
Third year we are one to twelve. There are sixty-four students

FG5_7 (T-26:16) - There is a programme, Diploma students come in at third year.

MO - (T-26:22) - How do you relate to the Diploma students, the students who come in through the straight architecture route, and those who came in through the Diploma route. How do the two groups relate?

FG5_7 (T-26:41) - Some of these guys they have worked. They have been in the market maybe for two/three years. They know how to do council drawings, google drawings, production drawings. So their approach to design is purely functional, it's not form based. Their creativity is a bit low. That's my opinion. (FG5_8 - I beg to differ). But these guys of degree, the guys who start from first year . Most of them, most of us didn't know actually how to do production drawings, the function, the servicing of the building, so you can go and explore anything, you can just bend a paper stick it on a mounting board and present it for making. Not knowing know you are going to ventilate it and things like that. So in terms of own creativity, there is more. That's my opinion. These guys who start from first year are more creative. But these other guys are more functional, as in, form follows function they are more into that.

MO - (T-27:55) - You beg to differ?

FG5_6 (T-27:56) - I have found that the guys who, although it depends on individuals. But generally their work ethic is much better than ours, they are, ... they produce more work, and, and they understand the nitty gritty and the concepts better than we do. I don't know if it's about the teaching but we gloss over things like construction and construction details, and them I don't know how they do it, but they have a handle on those things, so they are able to combine their design with making it work, so their

functions really work and their form also works. So I find they are in a better position than the people who began here like us in first year fresh, green and with no idea.

FG5_8 (T-29:01) - She was not very far from me. You know form is very subjective, but function is not subjective, it works or it does not work. So the forms she likes, maybe I don't like.

FG5_4 (T-29:17) - I think for the Diploma guys, they are used to doing the normal things. So when they come in, it is somehow difficult to do something weird, something that is entertaining with the form. They are not used to manipulating the form.

FG5_5 (T-29:34) - But of course there are exceptions whereby you find somebody is just creative. Like in our class we have this guy, he doesn't design spaces like all the other Diploma guys do. They start with the spaces and then they come to the form. He just stays there, does paperwork, coins things, comes up with a form then starts putting in the spaces. Should also think there are exceptions.

MO - (T-30:06) - Lets talk a little bit more about the approach to architecture at [Named University]. Key issue we are dealing with, that we are talking about the pragmatics, the difference between design and the technology aspect. Are the two brought together in your design studios, or they are taught as separate subject entities. And if they are brought together, are they any clashes between the two different approaches. And by technology I mean all the pragmatics of actually putting a building together building, the services, and all that aspect, as opposed to a design studio that is just design based, and you do your other courses as periphery to that.

FG5_9 (T-31:07) - For me I would say that studio is basically 75% design, 25% technology. Most of us work with form. We are now into function follows form. So when you come up with a form you like, now that is when you start thinking about issues of how the spaces would work, how you are going to build the form to make it stand. So technology comes in later on after design.

FG5_3 (T-31:54) - I tend to think it depends on which year your in. Cause when you are in second year, you're not taught anything about, ok, you are many things about form and function. But first you are taught first how to design. So I think, sort of built up, how to design so much. When you are in like fourth year, and you have to make it work, it becomes a bit of a challenge, although now joining the two, I think it all depends on the level in which you are in.

FG5_9 (T-32:29) - Yea, to add on that, we can actually be able to look at the curriculum, and say first year, basic design, no technology is taught in first year, just in design, and thats it. Second year you do a function to an extent. Thats where you do economics, anthropometrics and stuff like that. Then third year, you start talking now about technology. Fourth year you now take it to the next level, technology taken to the next level.

MO - (T-33:00) - Ok lets, continue on that, this wonderful thing called CAD. What can you tell us about how you were introduced to CAD. And I want you to give me your own definition of CAD.

FG5_9 (T-33:31) - Personally, I encountered CAD, that is Computer Aided Design, Archicad in my second year attachment. In those offices, for you to get involved, as in, for you to do something there, to be productive at least you must know how to work with AutoCAD, ArchiCAD, all those softwares. The offices are so squeezed, they are not able to ..., you cannot go there cooking tea for them. The first time you see those drawings, the CAD produced drawings, they are very interesting. Especially the new softwares called *Piranesi*, *Artlantis*, *3D Max*, and you tend to develop that motivation that I should really learn these thing, and use it in my studio production drawings, something like that. So in the mixup of those things, trying to learn you tend to go far and you forget about what you design, that is a problem. I remember in my fifth year class, just before marking, there was a marking spot where end of year marking. Our year master told us,

if you use computer, you are going to fail, in fact he could hold your laptop as if he was going to crush it. Then immediately after marking, he comes and tells us, you guys you have to appreciate technology, we don't want sketches. Yet the day before he was almost crushing our computers, then he comes and says you should have used CAD. All those guys who used their hands, they were told to repeat, those were sketches. I think they also have a problem of what to accept. They see, if they give the students freedom, if they give us the freedom to use CAD, people will go so much into it, forget about the freehand technique, the sketch design. That is my opinion, that is my analysis of that situation.

FG5_7 (T-35:43) - For me in [Named University], I cannot call it CAD, I can call it CAP - Computer Aided Production. Because we are not taught how to design on ... , using the software, we are taught how to produce. Cause we are brought something during the course on, when you are undertaking the course, you are brought a designed building, now you produce the drawings, you produce the plans, elevations, sections, and stuff like that. So eventually for any graduate of architecture in [Named University], they have to sketch. They design on paper, then they can now produce on the computer.

FG5_6 (T-36:29) - I think we are not encouraged to explore the opportunity of CAD to the fullest. Because like I first encountered CAD in the market. You know you are sent out to go and do internship, and the only way that the offices work is with CAD, and you have been sketching, and you have to learn this thing on the job. And also I think they introduce it a bit late, because while you're learning basic design, you should also learning basic design with CAD. So that now you are able to facilitate your thought process using the computer so that you can you know, view the possibilities of the things that you can do, rather than first doing it this way, then working again and translating it to the computer.

MO - (T-37:21) - When is it formally introduced? When are computers formally introduced?

FG5_6 (T-37:28) - (Background whispering - Third Year second semester) At third year.

FG5_9 (T-37:32) - But ours we did it last year.

FG5_8 (T-37:34) - Our lot, it was introduced in fifth Year.

FG5_7 (T-37:39) - I think, the way I could view it, the last paper of CAD, there is a massive generation gap of, I am sorry to say, maybe there is the old-school, maybe the people who got the training, early enough in the early 1980s they have that mentality of having a problem with the CAD in that for them, I think for them, for what I have seen, they have a problem in that they don't think that we are able to express yourself fully using ArchiCAD. But I think now the current generation, the young lecturers, they don't have that much problem, but the question comes, why is it that you find the same people who don't what the CAD in the class, you go in their offices, on the attachments, you don't even find a drawing board. They are the people who have those computers and tell you, no you have to produce these drawings using ArchiCAD. So I wonder where that difference comes in, in that in the class you are going to use the ArchiCAD ... the drawing board, but once you are in the market and find them there, they insist on the ArchiCAD. So you get confused at that point.

FG5_9 (T-38:44) - Personally I think they are a bit justified. Considering, ArchiCAD, myself I have explored ArchiCAD a bit. It has a lot of limitations. If you are into clean lines it's going to be very comfortable. But there are some forms, these organic forms, which are very intricate for you to develop your form using CAD. And even if you manage to do it, it will take a lot of time, and then inserting these other things, like windows, furniture, it will be very chaotic as compared to free sketch. And on the other hand, I do believe that design is a mental process. After you finish making the first stroke, you will actually know the next stroke you are going to make. So once you are with your laptop, you are drawing whatever you are drawing inside your mind you are already designing, unconsciously I don't know how they can balance the two, so that you can identify the project which you will think will not need a lot of creativity, then use

ArchiCAD, and these other project which you think ArchiCAD will limit you, then you decide to use your hand ...

MO - (T-40:06) What programme does the Faculty itself use?

FG5_9 (T-40:13) - They teach with ArchiCAD, but they encourage ..., like in our year, we were doing ArchiCAD, you were allowed to use any software, but ArchiCAD was the basis.

FG5_6 (T-40:28) - I wanted to point out that I think CAD should be embraced, from the, ok after maybe first year after getting the basics of design. I think CAD should be embraced from the get go, when you start doing your plans, because, ok, according to me it doesn't make sense to actually teach people to just design on paper, and when they go out there they are crippled because they don't know what to do and the can't compete with other schools from, lets just say international schools cause they are used to designing with computers and their presentation drawings are basically rendered in computer. And all you can do is just maybe sketch and maybe you are not even good at it. So I think computers, or rather CAD gives you a fair chance to compete with other students who are really good at sketching and you're not. So I think it gives you a fair chance to show your ideas.

FG5_9 (T-41:24) - So the whole things come to the issue of the course being very subjective. Seeing I make my drawings with my freehand, I present it, and I do the same drawing, produced in Piranesi or Artlantis, the plans, the exact design, the exact dimension, maybe with some lecturer, this guy who used the computer is going to get more marks because the lines are neatly printed, but they are not questioning the ideas behind the design. Already by that comparison of freehand and computer if the lecturer likes freehand, you get more marks, if he likes computer you get more marks. Maybe the thinking should be changed so that they look at the thought process, what motivated this guy towards that design, so as to balance to two schools of thought.

MO - (T-42:22) Ok we are almost through. Just the last questions, I probably need every to answer these. The first one, is what you like the approach to architecture education at [Named University]? Then I will ask the second one after everyone has answered that one?

FG5_1 (T-42:50) - Personally I think in [Named University] the tutors take a more hands off approach, whereby they just give you a brief, and they leave you to explore. Sometimes that's a problem, and sometimes thats an advantage, because it allows you to actually explore your ideas to the fullest.

FG5_4 (T-43:17) - The other thing is that in [Named University] you are allowed to ..., there is that link between technology and art. So you find when you go into the market you are more saleable as compared to those from other schools. There is more focus on the commercial aspects ... (inaudible)

FG5_5 (T-43:39) - Yea, at first I talked about architecture being challenging. You find that, when you have, when you manage to get the ability to maybe, first you say we have many tutors yea, they have different opinions. So if you have to grasp the ability to maybe police all the ideas that they have, to come up with something that pleases them all, yea. It becomes very much challenging, thats why one of us said that maybe when you go out there, people, the architecture firms prefer people from [Named University] rather than [Named University].

FG5_6 (T-44:30) - Ok, I find their teaching of architecture in [Named University] to be a bit ..., ok it's kind of a mentorship programme, the lecturers basically pass on their ideas and experiences to you. But, my only problem with it is the experiences maybe your mentor does not understand or approaches to architecture they basically agree with, which to you is basically lets say your philosophy of design, so I guess thats the only part where there is a lot of friction.

FG5_7 (T-45:10) - For me, for the six years almost six years, the kind of teaching that I've learned, is that you have to think. No one is here to think for you. In that once you are

given the brief, you have to think, the other thing you have to be smart, it's not about being a hard worker, you have to be smart in the way in which you approach your work. And that really is that the training in [Named University], it brings in an aspect of being entrepreneurial, in that once outside the market there, you are able to manoeuvre very well in terms of not just in architecture, but you're able to engage yourself in other aspects because if you are here, you are taught these other entrepreneurial courses, and also generally because it teaches you how to be a self driven person.

FG5_9 (T-46:26) - Personally I think, ... we are talking about our experiences isn't it? ... Generally speaking, myself, the six years I have been here, I have enjoyed myself. The whole coursework experience I have learned a lot. One thing I have come to realise is, the design, the nature of life as a student in architecture is actually very identical with what is existing in the market. It's even less rough out there than the student life. And ..., for a new student really, at first year and second year it's very difficult, cause some have a background in design, some others are, this is the first time they are going to use a pencil, and a very clean paper so they are afraid to draw. And then others have not been exposed to these critical criticisms, they cannot understand all that. But as you grow, you grow, you realise that, some of these instructors are also human beings, they have emotions, they even start becoming close, you talk freely on the streets, you meet in town, you have drinks. So you actually start liking architecture towards the end of it. Like in sixth year, that when you have the opportunity to choose, a guy who you think, has your ideals, so you can proceed on your project together. So generally, ... basing my arguments on that, I think it has been good for me.

FG5_12 (T-48:07) - Myself, I think for me its been, what, its been like a moulding experience. We are taught to be tough. You're are taught to, or you find yourself having learnt to be tough whenever you are told, if it is positive, if it's negative, you take it, ok if it's a negative comment, you always take the positive side most of the time. And then the interaction within the department. I've realised that it's only the department of architecture that we know, we all know one another, from first year to sixth year, you probably know someone. If you are probably in third year, fourth year, second year, we know one another cause we've probably stayed longer together. But throughout the course, everyone knows one another, cause when you go to other courses, people don't even know their class mates. So, ok, I find that, it's nice, I appreciate that unity that is there, and aside from that I think that is the positive part.

MO - (T-49:16) And the negative part?

FG5_12 (T-49:19) - Of course the negative part, the basic, whatever way, things are just, when, what is it called, when, you know everyone has their own form of approaching things, so when probably you are being told, you are way of approaching something is wrong, and you are not being told why it's wrong. So that one is always conflicting, cause, the same as she said, it's more or less their tutors ideas being driven into you, as opposed to them embracing your ideas and trying to ... develop them. That can maybe be one of the negative parts.

MO - (T-50:02) So what would you change if you had to come back as an instructor?

FG5_12 (T-50:04) - I am jealous of the Diploma students. I think that is so wrong. The whole system of having them to be so good and so practical, and then having us to be dreamers. Yes, I accept we should be dreamers, but we should be dreamers with facts, you don't dream with, ... You can't build a bridge if you don't know what a bridge is. So for you to even ... ok for example I like Calatrava. I think Santiago Calatrava is awesome. But he had to be a civil engineer, and then an architect, so he uses what can work and explores his creativity to make it work. So if they can fuse it, cause ... I am not saying that architecture should not be about creativity, as it should be ... in [Named University] they graduate in fourth year, I am not saying we should be graduating in fourth year, but I'm saying if you having a third year entering [Named University] from a Diploma course we should be more or less the same, we should be more or less the same, cause it doesn't make sense, we are going to the market to do the same thing

and I don't know what you do. You are telling me this space will not work and I can't understand, or you can't service here, ... I am in stars, cause the units are separate, not that I am saying, ok, I don't know if there was a way that the put all the unit to work with the studio so that as you are designing, the units are still part of studio so that, all the facilities, cause, ... I don't know, I have not been to fourth year, currently I am in third year. I don't know when exactly those things come in and they really sink in. So if there is a way those things can that's what I would really want to change, to put the units and studio to work together.

FG5_9 (T-51:56) - Myself, before other people say anything. I think things have changed since we came in. It's like there are some slight improvements, like, when we came in, there were like, like three female students in the whole department, one was in sixth year, another in second year who dropped immediately we joined, our class was the highest rated, ... so now there at least, you can see that there is some balance. So the work environment within our studios is a bit improving, you know there is interaction between the female students and the male students, it motivates you to even design better, if I could put it like that. What maybe I could propose, to change is ..., is ..., is ..., the instructors they bring in to teach us. I feel some of these guys need to go to the market and have an experience of what is out there. Sometimes you find a student who knows a lot of architecture, the architects out there, the works they have done ... somethings which cannot be known by some of our instructors. I am talking because I know from attending presentations. As in, I feel a guy who has been in the market, he has done projects in the country, big projects, not the two bedroom residential. Guys who have done projects maybe even abroad, they have experienced the real life in the practice of architecture. If those guys are brought in, even if it's part-time. I know architects in town, who teach in universities abroad, maybe they go for a month, they come back. I find those guys can be very, they can be very important to the students. Cause there is that link being a student and getting the practical work, which we feel some of our instructors are lacking, some of them are not even practicing, which I think is very negative. [... Inaudible ...]

FG5_5 (T-54:23) - I believe that the major problem we have is that in architecture, that generally in Kenya, they have come to refer to architecture as a science rather than an art. And if you refer to architecture as a science, it is no more different than engineering, Civil Engineering or so, because it is all about aesthetics and all that, kind of being innovative, being creative, that's what is limiting us. So I was proposing, maybe with the intakes that we have to get to do architecture, you find that majorly they are considering science subjects and mathematics, and they are not referring to the arts subjects. Such that we find that in first year, maybe, the major intake in first year, you find maybe even at least three people only, you may have only three people in the whole class that did art at secondary level, at secondary school level. All the other guys, just sciences, they come to architecture, they are maybe taught to draw for maybe three months or so, it doesn't do them any good, they don't get to learn as much as they need to learn. That majorly affect them in successive years.

FG5_6 (T-55:44) - I think if I was an Instructor, and if I was to come back. For me architecture is really a practical subject, so, ok, I don't really seem to understand why most of our hours are really spent in studio. If I was an instructor, maybe I would encourage the students to actually go, like if we are talking about construction, you go to a site, and see what is being done, of you are talking about different materials, we go and see them, instead of you know, it's not really helping, anyone if everything is in theory, and you don't actually get to see it or to experience it. It doesn't really stick in. I guess that is what I would change.

FG5_7 (T-56:29) - I would put across three aspects. Maybe the first one is to add to what she said about exposure. Maybe taking from my experience, my class, since we came to [Named University], the furthest we have gone out of [Named University] as a group, group field work, has been Machakos, in the eastern, around 100km from this place. That is the furthest we have gone, and that was a site visit. In that you find that these other aspect of having exposure in terms of the kind of buildings that we learn,

even the local buildings in the country, we don't get exposed, now maybe for example, there is a good very good rich scenery in coast in Malindi and all that, ourselves we didn't get a chance to go to those sites ... The second thing is the aspect of, she was talking of the diploma and the architecture, I think that is another aspect that has to be looked into, because, now that I am in sixth year, through the attachments that I have gone, you find that most of the offices that, you find that even the employer will say a Diploma guy can produce this work, why should I bring in an architect, a graduate architect, who is asking me for KES100,000, and yet I can get a diploma guy, who I can pay KES30,000, and they will do the same job. So I think that aspect has to be checked into. The third thing, is the aspect of, this is from my own observation, architecture to me is more or less for the rich. I don't know how it was formulated from the beginning. In that it is on those top guys out there, the guy who can afford to build, that is where the architects go. You go to the suburban (rural?) areas in Kenya, you more or less get maybe one architect, the majority are in Nairobi. Maybe some will talk of maybe slum upgrading, but so far I have been here for six years, and I have not yet experienced the same. So I don't know how it can be done, in that, to be channeled, to the BOP, the Bottom of the Pyramid, whereby you address the issues for the guys on the ground. Maybe taking an example of the doctors, you find that a professional doctor will ..., actually they are more of those guys on the bottom in that when they are doing such kind of studies, the research, they go to the villages whereby, they, maybe they intervene with guys with malaria, they go on the ground and they experience, they get to know how these people are. I don't know how architecture can be modelled so that ..., to have the same same aspect. It's not a matter of you being in Nairobi so you can make your cash, I don't know. Let it not be for the rich but for everybody.

FG5_12 (T-1:00:05) - Ok, I would change, by the way, I would change the method of training, a bit more pedagogical, in terms of one-on-one, and flexibility with time. Not really fixed on presence in studio, where you are having to use the drawing board, rather we accept technology, and maximise the computers, to be able to embrace it in society, cause things are changing everywhere, so I don't see why we should continue staying with the traditional way of training in architecture. That's what I would change. What I like, is the way the lecturers really pull you up and help you with your progress, and they check up on you to see if you are moving forward, and they slap you if you are not.

Focus Group Discussion - VI (Part I & II Students)

MO - (T-00:11) So what we'll do, we'll just go round the table clock wise and just briefly introduce your selves, what year you are in and maybe give me a general idea of, ah, why you studied architecture. So we'll start with FG6_1 on my left, and go round.

FG6_1 (T-00:31) - Thank you very much sir. I'm called FG6_1 second year architecture, and I'm doing architecture simply because it ah, it gives you more, you, you have more possibilities in life, you have more, many possibilities in life and also you ...
[Administrative interruption by the Head of School] ... so like I was saying it gives more many possibilities in life, because it deals with creativity, stuff like creativity. Then the second reason is, because, ah, it's a self skilled job, yea it gives you self skills, skills for life, for survival. Si it means you don't have to be, you can be employed, but you don't have to stay under someone, and it has no, nothing like, ah, what is it called, like quitting because if age, ok, because of, should I say age? Yea, what is it called? (Background - Resigning) ... resigning, there's nothing like resigning, (Background - Ah, resigning) resigning, like you've, like you have to work to seventy, until you fail to draw. So, that self employment bit of architecture is what interests me most, and the life skills it provides.

MO - (T-02:39) Ok, thank you FG6_1, ah, FG6_2?

FG6_2 (T-02:42) - I'm FG6_2, in third year. I'm doing architecture basically because of the design. I've always had an interest in design, and not just buildings, but design in general. But, the, the area that I chose was architecture. I, I like architecture because it's, it's an adventurous, it's an adventurous trip, you know. Today you can be a doctor when you are designing a hospital, tomorrow you can be a tourist when you are doing a beach resort, it's, it's full of adventure and different challenges, so you don't get bored. Yea, that's why I'm doing architecture.

MO - (T-03:27) Ok, thank you FG6_2, FG6_3?

FG6_3 (T-03:29) - My name is FG6_3. Well, the reason why I'm doing architecture. Um, I decided to take architecture because I want to have a career in it. Um, the whole essences of architecture it's about designing, um when you talk about designing, I like designing, um, apart from that, um, in architecture, usually there, ... like the former speaker said, yea, the ability of self employment, the ability of, of working on your own, just you as you, having your own ideas, creating something, standing, and that's it, which becomes one of your products. That's why I decided to chose architecture.

MO - (T-04:14) FG6_4?

FG6_4 (T-04:16) - I'm FG6_4, and I'm a second year student. Um, the reason why I, I like architecture is, is that, ... since I was a child it was a part of me because I, I say my uncle do it, and a few of my relatives have been doing it, and as I saw them doing it, I really liked it since I was young, and up to now, they're ... Some of the things that are really interesting, um, like bringing up something that has never existed before somewhere, to me it is ah, it is like an adventure, or it is something that is strange every time I think about it. Because something doesn't exist somewhere, but um, you design something for someone and then you place it there. So to me, ... that is um, that is some kind of strange every time I try to think about it. And then another thing I like, ah, why I like architecture is that, it has a whole part of ah, being creative, and with creativity, it has no limit, so thats when ...

MO - (T-05:38) Thank you FG6_4, FG_5?

FG6_5 (T-05:40) - Yes, my, my name is FG_5 I in the third year doing Bachelor of Architecture, and the question is why am I doing architecture, but I think the question doesn't specify when, the why, when is the why, cause, previously before I came to the university, why would I think of doing architecture? I had basically one thing, is that, how

many choices do I have to pursue? And from our learning environment they're very few things that you would see. Engineer, doctor, teacher, and those few, if you get the chance, you'd know there's something called architecture, meteorology and all other kind of, of, of things you can study. So at that time it was more of a choice and not a chance, ... it was more of a chance what is there, rather than a choice. But then when I came to the university, why did I love what I'm doing. Every day they're, they're different reasons why I love it. At times it's money, that I see that I earn money while I'm still young while I'm still at school, at other times, it's that nature, nature of the jobs that we do. We don't do it like a bus driver, bussing, I mean, passing through the, the same road. We, we, we experience different things at different times, so that's one of it. Another thing is that, we'd, we'd enjoy is that things, things ahead, before they are really there. They, we are given that chance to, to imagine. So every day it's a different reason.

MO - (T-07:09) Ok, thanks FG_5. Now FG_5 has already pointed out some, ... the next question along the way, which was, um, you've come to study architecture at [Named University], did you actually have a choice to do other things? Particularly in architecture, do you know much about the other schools of architecture in the region, did you only apply to [Named University], or did you also apply at other places as well? And that's a general question, anybody can answer.

FG6_1 (T-07:46) - Ok first of all, me personally, um, I got to know, ok I didn't have it in mind when I was in form six vacation that architecture, as in doing architecture work, what I had in mind was something else; Computer Engineering. Then, ah, in that period, we had applied for government sponsorship, ah, to get a government scholarship. So I had applied for Computer Engineering, Land Economics, Building Economics and other courses, nothing like architecture I believe. Then the government gave me Land Economics, bachelors, government scholarship back in Uganda. I had to do it from there. Then when I looked at Land Economics and what I really wanted, it wasn't satisfying me, I wanted Computer Engineering. And when I looked at Land Economics, whereby I will finish the course and work for someone, and then have to resign after my years of service, it wasn't a good, a good, good course to me. So when the possibilities came for student exchange programme within East Africa, Architecture was one of the courses, and computer Engineering. So I, I was advised by my aunty to apply, I applied for Computer Engineering first, but there were no more chances to get it because of the course I had done in A-Level: Physics, Economics, Mathematics. They needed Chemistry and Physics, I didn't have Chemistry, competition would be tight for me. So when I looked up architecture, it had Physics Economics, Maths and Fine Art, of which, all of them I had done at form six level. So I said, I have more chances for Architecture than Computer Engineering, I also applied for it. Luckily enough, I got it, after the short listing. So when I weighed the two courses: Architecture and Land Economics, Architecture weighted more because it was more of self employing, and the other thing it was more of creativity, drawing, I took on architecture, that's why I'm here.

MO - (T-09:50) Anyone else?

FG6_5 (T-09:53) - What was the question again?

MO - (T-09:56) The question, the, you already answered the question actually, it was, it was, ah, did you, when you, why did you do architecture and how did you end up at [Named University]. Obviously FG6_1 has come from Uganda, anyone else had a choice to go somewhere else?

FG6_4 (T-10:09) - Ah, for me I finished my form 6 from Uganda, but again, I had to stay, for one year without going in any university, simply because I didn't get a, a place in, at [Named University], specifically for architecture. So all my life, I was depending on this hope. If at all I would't have got it, I'm sorry to say that I didn't have Plan B for it. It was all my life, that is architecture. So, I waited until the, the, the one year had passed, and then I applied again, and I was able to get a place here, that's why I'm here.

MO - (T-10:54) We've got two people from Uganda in this group. Interesting.!

FG6_2 (T-10:57) - In my case, I wanted to do architecture from form three. I had other options, I was going to do Industrial Art or, you know, go into, eventually go into advertising or something like that. But, I looked at my options, and I decided to go for the one that challenges me the most and the one that I had most interest in, which was architecture. When I applied, I didn't get in my first university, I got a placement in the second university.

MO - (T-11:34) Which was the first university?

FG6_2 (T-11:35) - the first university was [Named University], which I didn't get. I got a placement in [Named University], which was my second, and, I can't say it was my second, because I applied, you know, I was open, basically, and then, I also got a place here. So my coming here was based on the advise that I got from other people, and I, I've known people who have come from here as well, yea. And then also, there's that option of doing the five, five, full five years as opposed to breaking it up, so I decided to come here.

FG6_5 (T-12:23) - Well for my case, if I talk of the flow of events, I knew architecture in the second, in, in form two. I knew it from someone who is also here ahead of me. So that's where I knew what architecture is and what is the environment and the work and all that stuff. So then, that's when I thought I need to do something like this. But then when I finished form 6, I, I had to have a Plan B, and my Plan B was to something about engineering, either Civil, anything to do with the building, that was my, my thing. So then I got Mining Engineering in, at [Named University], but, which I had a lot of opportunity, I could have had a lot of opportunities after it, but then I, I took that, how do I call it? I had, I had to pursue architecture because I thought I loved it, whatever the consequences that I would find at the end, I had, I took a sacrifice, That's what I did. But then, from a broader perspective is that, I just came in here just because, ... ok, let me put it this way, I did not ... get the chance to, to have those roots in my learning that will lead me to architecture. They are things that I think other people get, like art, music, things that expose you to, to kind of, to abstract studies, which I consider architecture being one of them. So you don't get that kind of root. You kind of learn Mathematics, Science, Geography, that's all. So you don't really know where you are heading to. You just learn what you find. So it was more of, what chances do I have rather than what do I really choose. That is what I was trying to put clearly.

FG6_3 (T-14:00) - My part, on my part if I dare say, at first I didn't have any interest, of architecture, when I finished my form six. But ah, the interest came about when I was there, I just sat there and was thinking about it. As um, it came about, when meanwhile like I said, when my, when I was thinking about it. The reason which brought me here is like, my day used to practice, um, Engineering, Electrical Engineering. He also had a company too eh, which he, he had established, but unfortunately, unfortunately he passed away. So I was thinking, how can I pursue his dreams, with also, how can I continue his legacy. I was thinking about that, and I thought, maybe I can do something of science, something which I can um, continue his legacy. So when I was looking through the options, I came, I pursued HGE in my Advanced, History, Geography and Economics. When I went through my options, I came to realise that um, I cannot do any science course, as in Engineering, what what. But um, when I went through architecture, I found there was a possibility I could do it. But I just didn't go and just say, I am doing, I will do architecture straight away. I went to ask um, how is architecture here, what is it all about? I had an idea it's about building, just building, just designing, but I asked, what is it all about, what are the possibilities? And I came to realise it's the best course, you get to employ yourself, and get to do big things, get to create stuff which er, stay forever. So the whole idea of it, and after being advised, that's when I came to decide that I will do architecture, and now I am here at [Named University].

MO - (T-15:45) Ok, now you've all come to the end of your, of the academic year. So of you it's your first year, some of you, it's your third year. Um, What has your experience been so far in, let me make it more specific. What are your perceptions of architecture education at this stage of your education? (Background - I beg

your? ... Come again?) **Ah, you've finished an academic year, some of you first year, others are after third year, what is your experience, and what is your perception of architecture education at this particular stage in your year, or in your, I don't know, two educations in the same sentence, it's not good, yes what is your experience of architecture education?**

FG6_3 (T-16:37) - For my part as a first year, um, my experience here. I see architecture kind of difficult at the moment. You get to do many things that are, many many things at a very short time. We're like we're being over weighed with a lot of stuff at a go. In most cases, um, we get, we hardly get the time to read. We have, most of the time we just we do our subjects, this course called studio. Most times that's what you do. The little time we use it for reading other courses, other, other ... subjects. In most cases we end up, hmm, doing something which we call fire fighting. We stay up the whole night eh, we read and prepare for tomorrow's test. Actually the experience here is kind of difficult in first year, very difficult. Too many things, we are being pumped with a lot of stuff, most a lot.

MO - (T-17:30) Is that experience for all of you in first year?

FG6_5 (T-17:35) - Well I Go on ...

FG6_2 (T-17:38) - In first year you think like that's the hardest year ever, and then you pass first year, and then it's gone. And then second year comes and it's the hardest year ever (laughing) and then you, you get done with it, and you know it's. So every year has had its own challenges, and every year from first year, there's always been fire fighting, you know, it doesn't get simpler (laughing), it doesn't get simpler (laughing), it doesn't get simpler. My experience of, of architectural education here is, I've come to understand it's a very interactive, the whole design process is very interactive. You need to have ah, consultation with your lecturer, in the real world it would be a client. You need to have um, you need to have advice from someone who has already been, who has already done what you are trying to do. And then, the interaction also goes as far as who you are designing for. You need to find out different requirements, so architecture, architecture is an interactive process, and the architecture education here, I've found for you to do, to do something, you, you need to do numerous consultations and, and seek for advice especially when your And then on the other hand it's, it's quite challenging, cause you come with all these ideas of Ok I came with all these ideas of fantasy, but I also knew it was hard, cause everyone says it is, and yea, it's quite, quite challenging.

FG6_5 (T-19:20) - Well for me, er, I don't really what to talk about the hard or easy part. But then I will talk about what did I think I was supposed to know in the first year. From, from my point of view, is that when I was in first year, what I really grasped if it was one word, it was about creativity. I always, I was just told, be as creative as possible, think outside the box, you'll get a lot of words, but then it would amount to how creative are you? Are you supposed to be creative, and things of, of that sort. But then when I entered second year, it was different. It was all about communication. How much do I communicate what is in my mind, to a paper, to a drawing. How do I tell a person that this house is a persons house. He would put a scaling object, he would put a person or a tree, or a car or things of that sort. So the second year was about, how much can I communicate. But then now I'm in the third year, I, I see it differently. Now I am so, it's about being realistic. I would see everything is trying to push me to be as realistic as I can be. When I am taught history of architecture, I am told less is more. Why, why have all these textures, why don't you have a white colour? So, in my third year so far, I'm just being so realistic. I'm trying to, a little bit to put, put, I already know how to communicate from the second year, and I already know where am I supposed to put my creativity and where am I not supposed to put my creativity. So now I think I am just being so realistic. I would rather have a box than have a fantasy thing, and take a lot of time. I don't know, in my fourth year maybe it would change.

MO - (T-20:47) Now, FG6_2 you mentioned, mentioned challenges. Maybe you can talk a little bit about these challenges that you've faced.

FG6_2 (T-20:53) - Now the challenges, um, are to do with the, the, the design process itself. You have an idea and you want to make sure that idea comes to life. But in the middle, they're so many things that you can and can't do. You get, in the beginning you just, you just think, because in first year, I would have, let's say, like what, like what FG6_5 said. You, you, it's about creativity, yea, so, your fantasies come first. But then now you actually have to think about, it's, the liveability of that building, if liveability exists, but, the live... , how, how, how functional is that building. What kind of space are you creating for people? And that, that comes before, you know, that comes above the creativity at this particular stage in third year. So all, the challenges mainly, I would like to call them compromises. That is the main challenge that I'm facing, because you might have an idea but, you're not designing for your self. And not only that, to bring it to life, you need certain structural, certain structural ah, innovations and, you know that, the compromises that you have to make. Those are the challenges.

MO - (T-22:21) Any one else have challenges?

FG6_1 (T-22:23) - Yea, I'm in second year, so now, me I would say like this, in first, while I was still in first year it was like ah! ... Ok first semester was sketching, and I was from a school whereby I did Fine Art in A-Level, so it was some how easier. Then it came to second semester it's designing and I was seeing like, really designing a full house using free hand without any ruler, without any straight edge, it's not easy. So I saw my brothers and sisters in second year, and said, ah, it's easier that side, (background - snickering) when you get there and using the instruments, it's easier than using freehand. But then when I got in second year, I saw the challenge that comes with it. Whereby you have this free form and then using the instruments to get exactly with the real scale, that free form, it's really a challenge. And then, um, I see the challenges of using the instruments, with your freehand creativity, bringing it to full journey to real scale, the way it has to be. Then when I come to second semester, I'm seeing that everything you'll design, it becomes a challenge to you to produce in the working drawings in the production drawings. Because when you put something, you need to detail it, so it becomes a challenge to you the designer. So I'm finding that my creativity becomes my challenge in my work. So everything I do, it ah, comes back to me. I make it look like this, it will come back to me to produce a working drawings, yea.

FG6_2 (T-24:03) - If I may ask. Are the, are the challenges that you want, are they only in the education field, or generally?

MO - (T-24:10) It's up to you to define that. So if you have other challenges ...

FG6_1 (T-24:13) - That's where I would have gone to ...

FG6_2 (T-24:14) - Now I know, because ah, why I'm asking that because you, you want to study the how we do, the education basically. But do you need the other ...

MO - (T-24:24) Absolutely! If, if you, if you consider it an issue for you, then you can raise it, cause in ... In terms of what architecture education is, we'll find that a lot of things are inter linked, even though on the surface it may not, may not seem so. So if you've got something else ...

FG6_2 (T-24:39) - So, on, on a different page, on a different note. They're different challenges that ah, a person faces. I could start with the School itself eh, the School of Architecture and Design. The facilities at the moment are a problem, so you have inadequate, inadequate drawing faculties you know, inadequate drawing facilities, inadequate, so that, that, that becomes a limitation. You have to find a way to, to make up for that gap. And then also socially, you know, um, socially different challenges, different challenges occur, and, different challenges occur, and you find that people may not be able to, to complete their work, the way they would have wanted to, because of, you know, other factors, other factors that, ... Like right now, ah, there are problems like accommodation, where someone is staying. You find, architecture students, 90% of the school is staying out of, you know, out of campus, and that's, that's a limitation.

MO - (T-25:50) You mentioned.... What, what other facilities, cause you said socially accommodation is an issues, but the facilities within the faculty, ... the school itself, what are the challenges?

FG6_2 (T-25:59) - Adequate drawing tables, adequate equipment t-squares, ah, printing, printing machines, model materials, all of those small things that may look small, but ... yea ...

MO - (T-26:13) What are the sizes of your classes anyway in first year? How many students in first year?

FG6_3 (T-26:18) - You mean the number of students? First year is one hundred twenty or something like that.

FG6_1 (T-26:23) - We are one hundred forty-four (Background - That is second Year) Yea, we are one hundred forty four at the moment, but we were enrolled one hundred fifty-three, something like that. Yea, but we are one hundred forty-four, divided in three groups, each group having roughly fifty percent of that number. I mean, how much? (Background - fifty) Like fifty people rather, fifty people.

MO - (T-26:47) And third year?

FG6_5 (T-26:48) - Third year we're fifty-three ...

MO - (T-26:51) What happened?

FG6_5 (T-26:51) - I'd say fifty-four. Sorry?

MO - (T-26:54) 53, and the next year is one hundred fifty?

FG6_5 (T-26:57) - Yea, that's a big discrepancy, and, and and that we'll, that we'll talk about it, yea. Talking about, about what you said before, before I for get my, my point is that, what challenges do I face? The first thing is the abstract nature of architecture. That's a big challenge to, to many of us. I don't really know what, what, how, how exactly am I supposed to be creative, and especially that I've been through education that has just taught me maths and sciences. So I think that is a big challenge to Tanzanian students who just graduate from form six, they haven't done art, they haven't done music, they haven't done sculpturing and all that kind of stuff, then they just come into architecture. The abstract nature of architecture is so challenging to us. And then, the, the other thing is standards. What are the exact standards to say that this work is creative or not? It is very very opinion based, that teacher would, teachers would assess our works, and that is something, something that I don't think is so nice. They would, they, they have some sort of eclecticism, how to, how to put it. The things that are towards themselves are what they will go for. 'I don't like glass, your design don't have glass, I mean has glass, so I don't think your design is nice. So there, there, I don't know what exactly are the standards that would, would, the Lecturers, or the Instructors has to have to assist us in our course of study. So, those, those, those are the two basic things, and the other thing is also, what am I supposed to learn when? The system. I think that it's ok for. I normally go to, maybe Architecture five, and I would see things that are very important that are, that a first year student was supposed to know. Or rather second year things, that I think he was supposed to know earlier or after, and stuff like that. And then they come with these things like curriculum reviews, those are the things that they would come with, to, to, to reschedule the, the, the, the whole curriculum. But then, what exactly am I supposed to know when? So if, if I had a choice, I wouldn't have years, I'd just have, you study for five years, but you study anything, (Background - snickering) if I had that choice. So those are the three things that I think so challenging, other than the physical things like class room and all that, those are very common, and I don't think they're just here, they're many other places. But people graduate, people build buildings, people do it on their own efforts and I think, those are challenges that are very common.

MO - (T-29:23) Ok, we'll stay on that, this idea of standards. Um, do you get um, Course outlines, and what I am going to call marking criteria?

FG6_2 (T-29:32) - Yes.

MO - (T-29:33) You do. So the question I would ask is, how does the idea of (FG6_5 - We do) opinion come in?

FG6_5 (T-29:40) - Sorry?

MO - (T-29:41) It's ah, subjective opinions in terms of marking,if you are given a marking guide, (FG6_5 - Yes) how does it relate back to the marking that is done by the Instructors?

FG6_5 (T-29:52) - I think that it's not that efficient. I don't recall, since I came in first year, if a teacher came in and said, I'm going to mark your, your, your studio works using A, B, C, D, E. They would just come with the papers, you wouldn't even see. They would be like, I am hiding the marks so you don't even see them. I don't think we, it's that efficient. But then if you just summon them and tell them that all these marks I think they have been randomly set. Can you please review the marks. They will come with a criteria, a book, full of criteria's, so I think the implementation part of it is the one that is going so bad. But then the, the policy part, or the part of are there criteria's? Criteria's are there, they're many and they come with them. Are the course outlines there? Some come with them, some don't. Currently we have a teacher that, he's a little abstract, so he would come in class and he would teach us like as if we were United States of something like that. I don't know how to put it, but then he is very, very abstract. He does his thing his way. He didn't come with a course, a course outline and stuff like that. So I would say, every teacher pursues his way. But then for the basics, yes, we have the course outlines and we have the criteria's.

FG6_2 (T-31:03) - In addition to that eh, I would like to connect that to the, to the, the standards to the numbers, yea. I, I wouldn't, I wouldn't, if I were a Lecturer honestly, I would like to put myself in their shoes for a moment eh. I, I wouldn't, I, I wouldn't like to blame the lecturers so much at this point, because the numbers of lecturers have not increased, but the students have, and that already is a problem, the ratio, you know, that already is a problem. That means inevitably, they cannot have the same quality, yea, of education that they had, lets say three years ago, because ah, the people who are in fifth year right now are I think thirty in a class, thirty to forty maximum. So over the years, lets say the numbers have increased and staff quite, have't quite you know. So that, that, that in it's self is a challenge for the, for the staff, yea.

FG6_5 (T-32:10) - It's like an arithmetic, geometric increase. We increase geometrically, but they increase geometrically. (Laughter)

FG6_1 (T-32:17) - Well, what I can say about that, the standard. The standard is like, I ... They gave us prospectus, I read it, and I say that ah, in ah, design studio one, that is year one, these are the things you look at and the marks are mobbed here, maybe anthropometrics and ergonomics and all that, creativity has marks. But then the way they, they mark it, is that they mark it and they hide the marks from you. And at the end of the day, delivering the marks to you, it's in a cumulative kind of manner, whereby they are giving you fifty, maybe fifty percent, but you don't know where is your weakness, you get it, because they are many things involved in the whole project. So you don't know where weakness is, is it at creativity bit, at the graphics bit? Because all of them are, they have their distribution. So you don't see where your weakness is, you just get a cumulative figure, without ah, ah, without pointing out your weak points. So you don't know where really you are weak. Is it graphics, is it creativity, is it the ergonomics, is anthropometrics? Whereas in the book, it is showing very well that creativity may be thirty percent, the marks you give to the student is here, of which they are not following. So now when I do my thing, and finish it, I don't know where my weak points are. So I'll take my weak points to the, next year, because I've got a cumulative figure, and the, the same thing will happen, they'll give me a cumulative mark, still I don't know where my weakness is. So I will take the problem to the next year, until maybe I finish. So I won't really see, because the prospectus is showing you that this is the marking criteria, but

you don't know where your weak point is, because on the table there are four to five things, so you don't know where your weak point is, they give you cumulative figures.

MO - (T-34:18) Ok, seems, seems we've started talking about this idea of feedback. Um, how much feedback do you get? I think FG6_1 is saying they don't get very much feedback. Is that true for everybody, or is it true in some areas and not in others?

FG6_3 (T-34:34) - It is true, for first year, feedback is very low. I think it's because of our numbers. They 're too many and our lecturers are very few, like the former speaker said. And that's a, that's, that's how it is and we've got, um, in our year, we are divided into three groups, and each group has got two lecturers. One is the studio master, one is the year master. I'll, there is another problem nowadays, as in, you find they are very few, only few of them are showing up in class. You find that you are getting very few feedback. Only three of them are the ones who are in class all the time, only three out of the six, a big, general problem there.

MO - (T-35:27) You have problems with absenteeism of instructors?

FG6_4 (T-35:34) - Um, about the feedback. You find that sometimes lecturers are late in giving out the, the results for the, for the, for the, for the coursework that you did previously. And sometimes they are not released, you just find the final mark. So this is some kind of problem, because you don't know where exactly you failed, and where you could possibly rectify so that you could continue with the course. And then another thing is that ah, there's one problem that was not pointed out, and. There's this problem whereby you may find there are a few lecturers, for example too, during the time for the final presentation for example in ah, the first year, because you are so many, I mean, you have an idea to express, you cannot talk, you are not given chance because you are so many. So he ends up just checking on your work, sometimes, ah, he just, he just clarifies, or he just ah, he just represents himself there and then he does it. He doesn't check it properly, and then he gives a marks, so this is not convincing for a student architect that his work is roughly checked and probably he would ever know the problem with his work.

FG6_5 (T-37:01) - Yea, as for me talking of, of the feedback, we have very poor feedback, and why is that, teacher student relationship has been so very low. We came in here when we were in first year, we had six lecturers for studio, but then now in first year as a class as the same number as we were has two lecturers. That's a very big difference. The relationship between me and my teachers as a third year I would give them all, cause I know them all almost. But how many teachers know students right now in first year? Very few, maybe those who are, who have their personal efforts and maybe they are disturbing the teacher all the time are the ones that the teacher will know. So there is a very very small student - teacher relationship, and that contributes to a, to the kind of priorities the teacher has to set. I have fifty students, they are only two of us, I have to do some other stuffs (sic), I can't bear all this load. So the teachers will go for other stuff that they have. They will do outside projects, they have firms, they have things of that sort. So they, they are not purely academicians, they do other stuffs as well, and that is, maybe probably has a lot of reasons behind it, it's money, they have to support family, and stuff like that. But then, I would also have a political view on the, on the amount of, of students, that are joining universities. I think it has been a, for the political parties, they have had. They, they take it as a point that we have had a lot of enrolment this time. So they would try to write policies that, universities should enrol as many students as possible, so that they can take it as an advantage to them. We did this, we took three hundred thousand more students to university this year, but then they wouldn't consider any other thing, they would just consider the number, but they wouldn't consider the facilities, they wouldn't consider the tables. They wouldn't consider the enrolment of the lecturers, and stuff like that. So it has been a political thing that they're, politics, let me put it, politics is just getting to the education system, and that is so worse. So it jeopardises the quality.

FG6_2 (T-39:11) - And from an objective point of view, on the lecturers side, I think we the students, the amount of enthusiasm about, about what we do is also quite low. If you asked all of the architecture students, very few would tell you that they actually love architecture. Why, because for most people the, doing architecture has not, was not quite a choice, but it came about, because, ah, I hear that the, you're, you're, you're assigned a particular course, you see. So, the amount of enthusiasm about architecture itself is quite low, and that makes people not eh, not, not, not look for the lecturers as well. Because, true, true, it's true the feedback is not good, but then if you go to classes during the studio lecture times, when we are supposed to be doing consultations, in lets say a class of 50 people, you'll meet like 5 students. So honestly if you're a lecturer and you have 50 students, and you've actually shown up in class, during the, the assigned regular, the assigned consultation times, and out of 50, only find 5, you as a lecturer, your morale to, to lecture is also, you know is also reduced. So you'll also say, ah, maybe let me also go do my own things, and you know save, save up on some time. So, the enthusiasm from the students side is also a bit low, not only because of the fact that it was by chance, but, the um, there's not, there's not enough interaction for us, for people to get to love the course enough, yea. People, you know, you can reach third year, and someone still doesn't know exactly what they are supposed to be doing. They get by, you know, they, they get by from year to year, but that initial, and they are many people who will tell you, ah me I am just doing architecture, but after this I want to go open my business or do something else, you see, and that's five years gone, really!

MO - (T-41:33) Ok, this is, you've, you've made an interesting (Background - I would say this please) **Now I just want to raise one thing, because earlier FG4_2 mentioned that ah, there's an opportunity to do a, do a five year programme, ah but now she has mentioned that now if you do a five year programme when you're not interested in it (FG4_2 -Yea!), what happens?**

FG6_2 (T-41:51) - Yea, that's a big issue!

FG6_4 (T-41:52) - What happens after?

MO - (T-41:54) No, if, if you're doing a programme for five years, you're not interested in it, you've just wasted five years. As opposed to doing a split programme, with three years, where you can get out in three years.

FG6_2 (T-42:06) - Yes, so by the time you opt for the five years you have to be really sure. You have to be really really sure. But if you're not sure, you'd rather ...

FG6_5 (T-42:20) - But then, but then it's not, it's not necessarily that people would want to venture for the profession. Some are doing it as a leverage. I have to get a first year (sic) degree, and after there's something I am targeting, so it, it depends ...

MO - (T-42:28) Yea, thats why I brought this up, because if, if you are actually, if you look around the world you'll find, ah, most programmes of architecture now are split for this very reason. South Africa, [Named University], [Named University], all through Europe, all through Asia, Australia, New Zealand, Europe, they're all split. Because coming into a five, six, seven year programme, and you are not sure (FG4_2 -Yea!), is going to cause a lot of problems. So they split them. So you've got your first degree, you go out, if you don't want to do it, you're more than happy to leave and you go and do something else.

FG6_3 (T-43:06) - How do you mean split?

MO - (T-43:08) Um, what happens is, the reason you're split by the way is for this reason, you are classified as what they call Part I, which is generally the first three years of an architecture programme, generally. I say generally because in North America and Kenya, Part I is actually four years and that has to do with the high school system they have, so it's four years, and the rest of the world it's three years. Then Part II is the real professional programme, it's two years, very, very intense. So Part I, you are saying is hard, it just gets more, the last two years are very, very hard, cause that is very, very intense. So that is Part II. So, most places

now that is actually a Master of Architecture, and some places it's a Bachelor of Architecture, but it's split, just to make sure that people coming, who want to go on, really, really want to go on, and there, while the others, after three years go, and generally, it's about fifty percent who will drop out at that stage.

FG6_5 (T-44:12) - And I think that's what I like about the world, it gives people what they want to do. Just like a supermarket, you can take anything you want, ten cans of milk ...

MO - (T-44:21) Well, you did mention um, FG6_5 mentioned this idea of doing what you want at the first degree. That, that is one benefit of having that split programme is they can actually incorporate a lot more in that undergraduate profession, because not everybody is going to do architecture. Some will go on and do interior architecture, planning, others go to do engineering sometimes. So you can put a lot more into that, which in a straight programme you can't do. Um, sorry, go ahead ...

FG6_1 (T-44:46) - I wanted to, to put this point also across, the challenge, the feedback bit of it. It's not, ok, it's true that students have a low, what, enthusiasm thing, eh. Their enthusiasm is kind of low, but the thing is that they are demoralised. If, ah, if students ah, have come in class for the first day, all of them, maybe for consultation, and you consult ten people, you get it eh, and you get out, and you say you're coming back after lunch and you don't come back. I don't think the next studio time, people will be willing to come that early to class for a presentation, for a consultation, of which they know a few people will be consulted. You get it? If he checks, for example we are, if we are 50, and each line is 10, 10, if he checks the first line, ten people, and he gets a pause within and inconveniences, and then he gets out for maybe lunch, and so he in the afternoon, and he doesn't come back. I don't think the next studio people will have that same morale for consultation. So they, comes back to the same point of student, student - lecturer ratio is low. So if it is low, and then, there, the thing is like when they do consultation for these few people, they give a general comment. You get? And the general comment cannot be for all of us for sure. They say, all of you have a problem maybe in the Section bit, and for me, I've done it right, I'll see like they have not helped me. Maybe I have a problem with something else, you get it? So that general comment demoralises people. The checks are few and, ok, a few present, maybe five ok, then a general comment is given to everyone. That you people, look at these peoples works, maybe learn from their, their comments, and then move on. So the demoralised bit comes back to the students and then they don't attend the consultation sessions very well.

FG6_5 (T-46:56) - In addition to that, it's just about being as, it's just being African. That is how it has being going on. It's like, what he is saying is basically, I am not trying to explain more about what he is saying, but I'm just saying what I feel, what I get from what he has said. That we, we do what we find. I'm born in a Christian family, I find myself a Christian. Then later, I, I think of changing my religion, but then it is so hard for me to change. I just remain a Christian. I came to the university, I found that teachers just come for five minutes and they leave, and that's what I go with. So we find things in there, there, it's, it has been, especially in this place, a sort of inheriting, we inherit things we find. Architects in this University as, as, as opposed to other courses, they say we have pride in our, we have pride and we thing we are up there and stuff like that. And then when, you might not have it, but you just feel like I have it, just because you think you found it there, so it has been regrettable, we do what we find. So I couldn't put it as that, we started being less enthusiastic or without discipline but that is how we, we found the environment. But there are very few who of course pursue discipline and they are very disciplined, they have that kind of time table stuff, she's among them (FG6_2), I will point out as a comment, she's very good, she has very good discipline, which I, I, I don't have. But then it matters, for instance, she would, ok let me not put it as she, but then there's someone who does his work, Monday, Tuesday and Friday, up to around, Monday to Friday. She has, someone has a timetable of doing his design. But from my point of view if I do it from Monday to Friday, I won't do it good, I think I better take Monday to Thursday thinking and then I finish it for only for one day, I think I'll, I'll

concentrate better. So it's about, I, I would say also from a philosophy point of view, we differ the way we think, and stuff like that, approach ...

MO - (T-49:04) Ok, well will continue from that and ask everybody, what do you think architecture is? Oh it's a philosophical question, FG6_5 raised it, so I am gonna ask everybody now. ... Yea, what do you think architecture is?

FG6_4 (T-49:24) - I think architecture is more of ah, more of ah, understanding, the, the, the, structures, or I should say buildings as far as the way they are presented. Um, I could say, if at all an engineer looks at the building, he may look it in a different way or perception compared to an architect. An architect may look at it as um, as um, forms and lines and everything, with a passage and everything, that's why even the presentations it's better if at all someone is presenting, um, he presents, he presents the graphics part, I mean, the drawings, I mean, you could talk about the corridors, the rooms and everything, but um, rather than the columns, the weight of the columns, the everything. But when you look at um, other kinds of subjects, I should say, like for example you look at eh, I could sample again engineering, the way they look at eh, the way they look at architecture, it would be different. For example, if at all you come to, you take a reference for the architects who had existed before, um the 1900s, the 1800s, the likes of Sharon Herring (sic) and Le Corbusier. The way they used to do their works, up to today, I could say I could consider them standing because the description of their works, stands with their sketches, just as that. It couldn't stand so much with so much of mathematics and everything now, that's the most interesting part with architecture, because it gives you the freedom to explore what is already, what had existed, and you want to make something new from what has existed.

FG6_5 (T-51:32) - From my, from my point of view, what is architecture? As an addition to what he is saying, is that, there is a saying that, 'what a structural engineer sees as a truss, an architect sees it as a sculpture'. That's the, the power of opinion that people, that architects possess. And then, I think architecture is the opportunity to, to, to imagine, and it's the opportunity to create a blueprint that would stay forever, in case it's built anyway, in case you can convince it being built. So then it's an opportunity, it's, it's, I would consider it an opportunity.

FG6_2 (T-52:09) - I, I'd like to think, I've come to understand, from my point of view, that architecture is actually life, with relation to space. Why I say it's life in relation to space, every one does architecture, every single person. The only, the only difference is, we who call ourselves architects, are simply specialists in this particular field. Because architecture is broad: there's product design, there is landscaping, there's an actual building, there's interior spaces, so it's, it's really broad, and if you think about all of these things interlink, cause there is even urban design and stuff like that. So if you think about all these things in relation to each other, you actually realise that architecture encompasses life as it is because you are building spaces for people to live in and for people to be comfortable in. And you know, as you do that, you're trying not to destroy your environment, you know, and integrate the buildings and the environment, so it's. I think it's, it's quite broad. I think everyone does architecture because everyone decides how their home is going to look like, what they are going to put in their home. We who do it are simply, we who do architecture are simply specialists and we know the technical, you know some of the technical difficulties, technical, more technical aspects, but otherwise I think architecture is, is life in relation to space.

FG6_1 (T-53:44) - Ah, I would say, ok, my dad was an artist, a fine, an artist who was doing fine art, but unfortunately he passed away. So I'm here doing architecture. Um, we are sharing 'AR' because ARTist and ARchitecture. So architecture to me, I'd say architecture is love, ah, punctuated with realism. Realism of, that kind of emotional bit something, put it on paper, because I cannot design something I've not yet ... got a relationship with. For example if you tell me to design a mosque, I cannot design it until I enter a space of a mosque and get attached to it. So to me architecture is love, ah, try, love that is ... you try to express it in form of drawings. So when I see a piece of

architecture I see love, the love a person has with, the, the love inside a person trying to be represented in the form of a drawing.

FG6_2 (T-55:55) - I'd like, ... This is just my opinion eh, in contradiction. I think, um, it's not so much the love but how much knowledge you have of, about a particular subject. It's like writing a poem, yea, they are very good poets who write poetry about things they are not passionate about at all! And you who reads it, you read the, you read the poem and think, oh my god this really good, this person must have been into this particular subject. And you find out the person just wrote it, you know. So I think it's, it, it, personally I think it depends on the amount of knowledge you have about a particular, the amount of knowledge you have about a particular subject. Because from first year, I'm sure they're are projects that we designed that we had no passion for, but still did well in, you get. So I think, the knowledge that you have, the love yes it's a very important aspect, but the knowledge about a particular subject is what helps you design, I think.

FG6_1 (T-56:10) - Ah, I should defend myself a little bit (Background - Laughter). Ah, because this, the heart is connected to the brain, you get it. So for me to come to a point to decide to make eh, this line, be like this, not going up, means I have loved the line to be like this. For me to have this space, I've loved to have this space, so I'm putting it on paper. So, because the way I see every good thing, if a person, when, when you, when you create something you like it, you love it before you create it, that's how God created the world, he saw it was what, then he created it, you get it. And then he said, why it's good, you get it. .So now it's like, all these architects like Frank Ghery, ah, this ah, Santiago Calatrava, the way they explain their pieces, it's like they have an attachment to them, yea. So, you, I go back to architecture is love, you cannot ... (Background - Laughter).

FG6_2 (T-57:09) - Ok, ah, having said that, let me just conclude a bit eh, (snickering), no, no, no, this is the last thing eh. I, I think having said, having heard him, and having heard myself, I think architecture is also, also brings out your personality. Because for him to design something he has to love it, yea. But it's not the same for everyone. And maybe it also, you know, it reflects, it, it's like your personality reflecting into a building in some cases., I think.

MO - (T-57:42) FG6_5 you had something to add?

FG6_5 (T-57:44) - What I wanted to them, there is a difference between loving something and concluding on something (FG4_2 -Yea!),. To conclude that you want a straight line is different from loving it. You might conclude something you don't love (FG4_2 -True). But anyway what I wanted to say was that there is a saying that says, 'Architecture is music frozen into a storm'. Music has rhythm, has patterns, it has harmony, it has feelings, so there's a lot that comes with music that can be connected with architecture, so that's how someone wanted to describe architecture, that architecture is music, but then it's frozen, you see it, it's a building, it's standing, people are using it. But then, you would grasp a lot of things from it as how you would see music. You would love a building, and things of that sort.

FG6_1 (T-58:24) - Let me conclude, (Background - Laughter) I said architecture is love punctuated with realism, reality, yea. So it's, (Background - Functionality) yea, so, you, you love something, but the, that realistic bit of love that, maybe I cannot fly to the sky because I love you, (Background - Laughter) you get it. But I love you, but I find another means ...

FG6_2 (T-58:44) - So it ends up not being your initial love (Laughing)

FG6_1 (T-58:48) - No it's still love but there is the realism bit of it, so that's architecture.

MO - (T-58:53) Now poor FG6_6 is completely confused at this stage (Laughter)

FG6_1 (T-58:58) - She must be ...

MO - (T-58:59) Welcome FG6_6 you've just jumped in to the middle of a nice argument here, and since you've joined us, I'll just like to ask, what is the current Male to Female ratio in the various years, in your three years anyway?

FG6_6 (T-59:19) - Oh, very drastic one. A very large number of men and a very little of females.

MO - (T-59:19) Not many huh?

FG6_4 (T-59:20) - Is that drastic or realistic? (Laughing)

FG6_6 (T-59:23) - I think it is drastic, we have to take, we can say it is realistic, because,

MO - (T-59:33) So anyway, in first year how many females are they?

FG6_6 (T-59:36) - About forty ...

MO - (T-59:33) For 150, wow, ok, ...

FG6_2 (T-59:39) - In my class we are five ladies, and there, you know ... [Third year]

MO - (T-59:42) 5?

FG6_2 (T-59:39) - Yea, we are five in a class of fifty-two ...

FG6_6 (T-59:44) - And as you can see even here, we are just two out of how many? (Laughing)

MO - (T-59:48) In second year how many are you?

FG6_5 (T-59:39) - Second year, the numbers, I don't have the numbers in the head, but then, the ratio, if I have one to ten, then I have two, what, two to ten (Background - eight) two to eight, yea, two to eight. Particularly my class, they are fifty, and they are like seven only, ten girls.

FG6_4 (T-1:00:17) - It has been very low, it has been very low. I mean, it has been different, I wouldn't call it low. I would just say different. They have been fewer than we are.

MO - (T-1:00:28) Unfortunately that seems to be the reality right across Africa. Apart from South Africa, the rest are pretty much the same. (Background - What's South Africa?) South Africa is sitting about probably fifty percent.

FG6_4 (T-1:00:42) - That's nice!

MO - (T-1:00:43) In uh, in Australia and New Zealand it's more Females than Men.

FG6_2 (T-1:00:48) - Nice!

FG6_2 (T-1:00:48) - New Zealand?

MO - (T-1:00:49) New Zealand and Australia, now it's flipped over ... um, ok, lets talk about, since we are talking about relationships, let's talk about group work here. Do you do much group work in your various years?

FG6_2 (T-1:01:00) - Yes!

MO - (T-1:01:03) Third, third year says, third year says yes, you have a different ... ?

FG6_4 (T-1:01:06) - If I could say something. Um, probably third year, most of the, most of the, most of the, of the things, I would say maybe they would require group work, but certainly if at all group work could be seriously done from first year to the second year, I think there would be so much of achievement. Group work is there, but it is not so active, so it is not so active. I could cite out an example, we were given um, we were given um, an assignment. Um, it was some kind of ah, I should say a report, or some kind of a, a design studio, um settlement, we were supposed to plan an area and produce some kind of presentations that were not exact but they were at the estimate.

And different groups were given work, but again at the end of it all, we were supposed to present. So the teacher was like, wow, you're so many! Ok, you should not do the presentation, so to me it was unfair because different groups had spent so much time in what they were doing and it's, this one comes up like a discouragement to the people, the way they are, they are doing, and for the first time, the settlement planning thing was the most realistic group work that I'd ever, I'd, I'd ever experienced, because we had to do it from the beginning of the semester to the end. On, In the studio work, we have never had group work. Seriously!

MO - (T-1:02:44) Why do you say it was realistic?

FG6_4 (T-1:02:46) - What was Realistic?

MO - (T-1:02:47) Yea!

FG6_4 (T-1:02:50) - Sorry ...

FG6_1 (T-1:02:50) - Realistic. He was thinking in form of group working and it, realistic group work ah, project, whereby we're ...

FG6_2 (T-1:02:59) - They actually worked as groups ...

FG6_1 (T-1:03:01) - Yea, they actually worked as groups, from the start of the semester to the end.

FG6_4 (T-1:03:04) - Such as that each one could contribute among the eleven people who were .in the group.

FG6_5 (T-1:03:10) - I think I have a different comment. Yea, I think, I think we don't do works in groups, and it has never been like that. And I don't think it's possible that we can do works in groups. But then I think we maintain order in groups. ... If, if the contents, if the contents are not done in groups, we have five questions, we have five people, so you take question one, you take question two ... so the contents are done individually, but then how do you maintain the order of those fifty people, or one hundred fifty people in the class? There's where you put in groups. How do you maintain the order when they are two teachers and they're one hundred fifty students for one day presentation? There's were you'll say they you'll present in ten people groups. So I don't think we do any work in groups, we do things individually, but we maintain order in groups. But then lets talk of the normal, the normal, the normal part of it (Background - Laughter).

MO - (T-1:04:04) FG6_2 said there was, it's problematic to work in groups!

FG6_2 (T-1:04:05) - Ok it's, I would say it's a lot of group work. Why? Because there's a lot of scheduled group work that's supposed to be happening, yea. We do, just to clarify, we do group work mostly in the theory subjects. And the two times we've done it in studio, it's been disastrous! And in the groups, they're always free riders, yea! So it's, it's, you know, at the end of the day, you find that people fight, it's only two people who have done it. If you're five and you've all done it, you're really blessed, but otherwise, you know! They're always free riders and you know the free riders, I cannot say that ... they're constant people who are just lazy, no. The free riders depend according to the, they change according to the nature of the group. Cause there might be a hard working person and he is put in a group of hard working people, that time he'll dodge, because you know. So the group work is, it's there, it's supposed to be there, but what actually takes place on ground, is not quite group work.

MO - (T-1:05:13) Do you have the same problem in first year?

FG6_6 (T-1:05:14) - Um, to the first year, there is problems like that, whereby other ... First there is, I mean, I mean, there is a problem of a person forcing others to comply on what a person needs what to be presented on. So when such a person arise in a group, others tend to just be like quiet, or not say anything cause someone wants something of his own or her own, to be represented in the work, which is ... In the other hand, it is good, maybe the person is right, but on the case of others to participate, it may, it

discourage them. So I think there are kind of ups and downs, when dealing with group working. Others they find groups very interesting, others find it tiresome work, others ... every one has comments about that.

MO - (T-1:06:16) And how, how exactly are they marked? Do these free riders get penalised at all?

(T-1:06:21) Many - Not at all!

FG6_5 (T-1:06:22) - If you wanted to ...

FG6_2 (T-1:06:22) - It's not possible ...

FG6_5 (T-1:06:23) - Sorry, I wanted to just answer. If you wanted to, to know a Swahili word about free riders, we call them "Walabata" (Laughter) It was just for you to learn, don't write it down.

FG6_2 (T-1:06:39) - Ah, what I was saying, ah, what I wanted to say about the marking, is that ah, everyone gets the same, same mark for the group. If it's 70, everyone will get 70 on the course work. So, but then, group work, really, someone sacrifices because he wants to save himself from poor marks (FG6_2 -Yea!). So the five people who are five or two, who are working hard is that they are worried of their positions in the course work and standing. But the marks are the same.

FG6_5 (T-1:07:14) - Talk, talk, talking of the marks sometimes it's different. For instance there teachers who I think they're more considerate when they have different marks for group works. Cause people have different inputs for the group. And where do they get to know that this one deserves more or less, when they present. But then, there's a case from another school, Building Economics where there's a guy, it's an event. He never writes down the project, but he presents very well. He's the one who gets more marks, but he's had no input into the project. So I think the efficiency of group works is very low, and why is it very low, because of the way we perceive group works. I think group works are, are meant to, to, to, to, to make us as interactive as we can be (FG6_2 -Yea!). But the kind of perception that we have of group work is that teachers want few papers to mark, they want less time to listen to presentations, and things of that sort. And they also give us an opportunity to free ride while others are doing the work. So that's how people perceive group works, and that is what has made it very inefficient. So I don't think it is very nice to give group works to people who can't control themselves in groups. You don't give a child something that he cannot do. So I think it's nice if things of this sort were put to people who are stable, fifth years, fourth years, if you tell a fourth year, group work, he will understand, but a first year, you give him a group work, he'll be like, what is this? I'm given more time to go and play! (Background - No!) I'm just saying! (Background - Sometimes!)

FG6_2 (T-1:08:46) - So the numbers of the groups, yea, and as, ah, in relation to the amount of work that's to be done. You can find it's a very simple assignment that can be done by one person, but like he said, because a lecturer wants few work papers to mark, he makes you people 10 in a group. Now 10, when you, when that assignment can actually be done by just two people. That's like an open invitation to free ride, honestly.

FG6_4 (T-1:09:15) - I could say something about um, the free ride thing, I don't know. Er, it makes more sense if at all I took it in this way. Um, so many of the students, like we stated before that, they don't have this spirit of architecture, or the spirit of the, the subject they are, they're working on, yea yea. For example I could say (Background - Spirit of what? Spirit for work?) Spirit, spirit for what they want, what they want. They forget that the importance of this discussion are that um, possibly they could, they could earn so much from the discussion, perhaps learn something new. They only think about marks, which isn't the, which isn't the final event. I mean which is the final event, but again they're forgetting the main thing for the discussion that they are going to gain something, perhaps adding to their studio, if at all it's a theory and if at all it's a studio, to add in to what they, they really are willing to learn. That's all.

MO - (T-1:10:22) Now, FG6_2 you mentioned ah, theory subjects. Could you explain a little bit about what you mean by Theory Subjects.

FG6_2 (T-1:10:29) - Well there's the studio project, and then we have theory, yea. The theory is ah, the supporting subjects for our studio. Things like History of Architecture, History and Theory of Architecture, Building Construction, yea, building, building ... (Background - Building Technology) Building Technology, yea, Building Technology which has Construction, Services, Maths, Structures, ah, Materials, all in the same, you know, stand as one paper. Then they are other subjects that keep on coming up depending on the year: There's Settlement Planning, there's Building Economics, (Background - Professional Practice) Professional Practice. Those are what we call Theory subjects.

MO - (T-1:11:16) And how do they relate back to the studio?

FG6_2 (T-1:11:20) - How do they relate back to the studio? How, how they are supposed to relate back to the studio?

MO - (T-1:11:29) No I want to know how the relate to the studio, not how they're supposed to relate!

FG6_1 (T-1:11:33) - Ah, let, let me help eh. It's like, for example you want to specify materials, ah, building material subject, theory subject has to help you to know that what I've specified has this kind of properties, or would be working for this kind of climate because of it's properties.

MO - (T-1:11:52) Yea, that's, that's the theory how it's supposed to, but how does it actually ...

FG6_2 (T-1:11:56) - Ok, that's why I, that's why I asked, started by saying how it's supposed to relate. Truth be told, um, the theory and the studio don't quite relate, yea, don't quite relate. If, if, if they do, it's on a very small scale, yea, there's not much relationship. There's supposed to be, and it makes perfect sense, but when you come down to actually doing the work, yea, not so much. Why ... sorry, ... for instance ...

FG6_5 (T-1:12:33) - I think it relates, but the only, the only issue that I see is how much our minds are open to relating the two. Someone is given the real bread, that is the studio, and then he's given jam, and, and maybe cheese, as the supporting subjects, and then someone combines them both. Now how do you combine sugar with salt? You see? So I think it has been a problem that people can't really relate the two. (FG4_2 -Yes!). But then, as in how were they supposed to relate? That is there. (FG4_2 -Yes!) But are we really given the guidance that this relates to this, this comes in here, this comes in there, that's the big problem. (FG4_2 -That's true!). Efficiency has been so low. (FG4_2 -Yea!).

FG6_2 (T-1:13:11) - In addition to that eh, the, like, in addition to what he said, the way they relate. Um, sometimes our theory subjects are very mark orientated. So someone does, lets say you have, you have materials this, this semester, you know you are going to do glass and stone and ah bricks, you know. You get to the end of the semester, yes you have done glass and stone and bricks, and you've passed them, you might have your A's, but how to actually utilise them you do not know. So it's, it's, it's very mark oriented really at a point. You do it to pass, and you get by.

FG6_5 (T-1:13:52) - And also one point is that, we've had a difficulty. I would say when we get to fourth year, we, we get the chance to have electives, and then you have to chose an elective that you pursue, whether it's Interior Design or Landscape, or maybe it's Architectural ... ok, Architectural Science, Architectural Conservation, and stuff like that. But then, we just go by chance that we don't have teachers who would teach best in conservation, so then we'll all do urban design in fourth year, and that's what's out. So that has been the kind of, of system that we have. I expected that, for instance I have a thing that I want to do in Interior Design maybe in my fourth year elective, but I don't get that chance to have that supporting subject to my studio. I am just forced to do urban design, just because the environment is like that, we don't have teachers for

that. So that's the kind of thing that has been going on. We go with what we find. We don't go with what we really want.

MO - (T-1:14:55) Um, we'll move on and there's this question that's been here, but I've been hesitant to bring it up, what actually do you think is creativity?

FG6_1 (T-1:15:12) - Ah, let me, let me first give it a try. Creativity is ... getting what is on ground and making it look different, or serve differently. Getting what you have, ah, on ground and making it look differently, or work differently. To me I think is creativity.

FG6_6 (T-1:15:36) - Me I think, me I think creativity has to do with ... inventing something that didn't even exist in ... like, like, peoples eyes, where they, they, they, they just have some knowledge about something, then you come and you, you, you do something, you, you do something, something like extraordinary, which is to someone's capacity of thinking couldn't even thought about it. So, it's like, you're making something to be aware, while it was not aware previously. That's what I think.

FG6_4 (T-1:16:21) - I think, I think, ah, creativity is the ability to convince ah, a number of people about something, I mean, about perceiving something as good, or as ah, extraordinarily good I should say.

FG6_5 (T-1:16:39) - I think great minds think alike, ,and I just thought just like him (Chuckling)

FG6_2 (T-1:16:43) - Yea, I also thought something like that. (Background - Ahhh, your just too ...) ... that's true (laughing)... ok, fine. In, in, in ... Like what he has said, eh ... Creativity or Aesthetics? (Background - Creativity) Creativity eh, is something out of the usual, but for it to be accepted by people, it has to be right by the majority. Cause you might be creative, but you are the only one who sees your creativity. You might be creative, but create something that's ghastly and unappreciated by your society. So I think it's, creativity is a very subjective thing.

MO - (T-1:17:34) Um, Star Architects. Star Architects. Can you tell me about star architects.

FG6_1 (T-1:17:43) - You mean architects who shine? (Laughter)

MO - (T-1:17:47) It's actually a, a word coined that exists. Talking about um, Star Architects, basically people who design things that essentially could be anywhere.

FG6_6 (T-1:18:00) - Can I, can I comment on that. What I know about Star Architect is about the, a person, as kind of, something that, to whatever design made by him or her, there is something that is just typically unique. Maybe someone is just inspired on the kind of form that has, look very very ugly and having shouting colours or anything that, anyone could see and could just say, that's someone. So, the, the design made by the person is known, in such a way, they, they, the kind, the kind of taste that are being added which could just presenting as, yea, signature. It's like being a sign. That's what I know.

FG6_2 (T-1:18:55) - Do you want actually names or the definitions?

FG6_6 (T-1:18:57) - Any ...

MO - (T-1:18:58) No, no, I am just after people's comments on Star Architects however you take it.

FG6_5 (T-1:19:02) - Star Architects ...

MO - (T-1:19:02) If you have names, ... thats up to you..

FG6_1 (T-1:19:06) - Ok, let me give my opinion. (Background -No, no, no) Let me give my opinion. Ah, ok, a star is something is space that shines. To me, I could say Santiago Calatrava is my star architect. Because the way he manipulates materials, space and makes them really function with ... really it's amazing. He gets the things that have been used by other architects, and he makes the impossible possible. For example the turning torso, yearning, he's my star architect. He really, he gets what is on

ground and he uses it. His creativity is outstanding. He uses it to serve the same purpose, in a, but in a new way, yea.

FG6_5 (T-1:20:01) - I, I think I'll define a star architect in, in very different, different fields. There's an architect who is very good at creativity, he probably comments from the people who use the building, or who see the building say that the building is creative. But then again there are other star architects who are getting very rich just from architecture. I would call them star 2, probably they are very poor in design. (Background - Snickering) There architects who are very good in green, green, green architecture, they, they fuse together the environment and the buildings and then I would also term them as star architects because they are achieving what, maybe the global, the global needs of everyone. So I, I think I would term star architecture into many many fields, but then what kind of star architect would I want to be? I think I want to be a rich star architect (Background - Laughter) I better bid, I better give a twenty million need for my design, when others are giving 200, and then I will make 20 other more millions like five or six of them in the middle of the process. So I think I'll, that's what I would want to achieve financial part of the star architecture ...

FG6_2 (T-1:21:08) - In my opinion, for the star architects, um. Star architects, I'd, I'd like to think Le Corbusier. Why? Because, buildings that, Le Corbusier and Frank Lloyd, cause buildings like. that follow their sort of design eh, have been duplicated like all over the world, yea. Basic, basic um basic, they have basic principles, basic, basic things that can be duplicated anywhere in the world. I would think they are, they are successful and they're, ok they, they also have their flaws, but they've been very successful in, in, because they've been able to reach so many people. But I'd, I'd like to think, the greatest architects, I don't know if they are star architects, but I'd like to think that the greatest architects are architects that we study about in history of architecture, not, they're not particular names, yea, but say the Egyptian architects, the, people who have built architecture that we still study about up to now, yea. So they were like society, society architects, I don't know, traditional architects, I don't know. But, yea, people who designed for their time and because of that we remember them up to now.

FG6_4 (T-1:22:43) - I, ah, for me, what I would say about the star architects. I think I would group them. There were these architects, who were, I think who I should say initiated the whole of the process of architecture, by introducing the architecture of that time, I could call it Modern architecture, using so much of concrete and special treatments, the walls and everything. The likes of Le Corbusier, the likes of um, of, like I said formerly, Sharon(?), Herring (?) and, and so many others. I think those were star architects of that time, and today we have star architects that are using a combination of what had existed before. And we are having them as star architects because they're, they have the art of combining the previous architecture with the present architecture. So ... generally I would say a star architect is someone who is so creative and is recognisable ... to other people all over the world, because of the unique, the uniqueness in the designs that they are, that they've done.

MO - (T-1:23:56) Ok, we're sort of getting, getting to the end here. Um, lets, lets get back to where we started, uh, we talked a lot about dislikes about the programme. What do you, what can you tell me about what you like about the approach to architecture education at [Named University]? (Background - Come again?) What do you like about the architecture programme here? [Long pause]

FG6_2 (T-1:24:26) - What do I like? It's, it's, it's realistic. It's very realistic. You don't get. By the time you leave here, you know what you are supposed to do in the working world. You don't get to an office and you're bleak. It's, it's not, it's not so fantasy based, yea. It combines your, your creative side with what is actually in the real world. I, I, that's what I like about it, it's realistic and it doesn't give one unrealistic expectations about what they are to meet. And, the, the, we have field work, we have field work periods, and our IT periods, and all of that supports what we learn in class.

FG6_5 (T-1:25:24) - It gives me money, it give me an opportunity to create, to make. I think that's something that God did, and then after that those who believe in it. Then

after that, some of us are given the same opportunity to create and make. So it gives me a very good opportunity to have a blueprint that would stay for a long time and for that case I'm very cautious of what I design. It also, one thing I really like about it is that, I don't go through the same route. I get different designs at different times, and I, I, I think very differently at very different times. As I said earlier, I just don't go like a bus driver, Mwenge - Poster, Mwenge - Poster, I just don't do that. I go to Mwenge, the other time I go to Kalako, so I get different routes at different times, and that's, that's that's what keeps me, how do I say, I don't get bored, unlike many other jobs that people get bored. I self employ myself at times, and as well I'm using it as a leverage, I want to get somewhere. So I think architecture would be a good leverage for me.

MO - (T-1:26:35) And where do you what to go?

FG6_5 (T-1:26:36) - Ah, (Chuckling) I want to do Real Estate stuff.

(T-1:26:42) FG6_4 - I would think, ... to me, architecture here, studying here is really interesting because, I'm, I'm told by teachers who studied from this university, most of the teachers from here are from the same university. And another thing, most of the architects that are practicing out, were through the same university. So, through them, I can picture, where exactly I'm, I'm going. Much as it has a, to a certain extent a disadvantage that I'm having the same teacher all over again, who passed the same, under the same circumstances, or situation is teaching me. But again it's so interesting that I'm seeing the same teachers who passed in the same university, teaching me again, giving me the, the experiences of their past as well as, as well as teaching me the, the rest of the subjects.

MO - (T-1:27:43) You'll have to give us both your dislikes and your likes, since you didn't give us those earlier.

FG6_6 (T-1:27:48) - Um, what I like, personally, I, I like the course ever since back years, I mean, long ago time. Then when I came here, what, what, what really made me continue liking it, liking being here and all the programmes made, is just I'm being sharpened. The mind that I had, previously, is somehow slowly being sharpened on how should I think, since I'll, I, I, I'm going to expect myself to, to be a designer, particularly buildings, whereby people normally, ... most of the times spend their time there. So it's like I'm giving kind, I'm, I'm, I'm sharpening myself to create something that is, that is good for living. So that's what I like. And about the dislike, what I would tell, there, there so many work. So many work, that I have to, to accomplish. For instance, right now, we're, we're in the middle of having projects, whereby, I have to maintain myself doing the projects, at the same, same time doing the, what, doing the theory part, the other subjects that I have to learn. So it's a kind, rushing out, this way, that way, that way ... that makes me somehow tiresome, but I keep holding on ... (Background - But you look good) ... (Laughing) ... I, I keep holding on, being, being in a track so that I could design well.

FG6_1 (T-1:29:49) - Yea, hm, what I like, about architecture in this university is, it's more practical than it's theoretical. I like that because I, ok I ah, ... ok true, I don't like reading. So, it is (Laughter) more practical, yes, talking to myself, so, so, I like ah, I like it's practicability, (Background - practicality) ... practicality because I, I do much of, practical than theoretical. So I like that because you just draw, not spending time reading. Reading is boring. You read words, text and the text are not ending, turn pages. But drawing at least you are, you draw, drawing is more interesting than reading. So I like it's practicality. Then what I dislike about it, is that it really demands time, time, in terms of time, it's really demanding. That is demands all the time you have in the world, so it's really. It's like sucking you, it sucks all your energy, it really drains eh! That, ah, I really dislike that about architecture. Um, because the other thing is that, you'll, you want something, you have it in the mind, but then putting it on paper the way you like it eh, it really takes a lot of time. That's what I dislike about it.

FG6_2 (T-1:31:22) - The last, the last thing I'd like to say about the, the, the education here, putting aside the marking irregularities and all of that, eh, I think the lecturers are

really good. They do their best to give a wholesome package. If you actually, you know, follow them and you, you get, you get, they give their, they do their best to give you, like I said a wholesome package. Um with the design itself, they show you stage by stage what's supposed to be, or what you need to achieve certain things. And then also they, they tell you what, what to expect when you get out of here. And also, you know, they give you, they give you a whole idea of what it's, what you can expect, and what is supposed to be. And not just what it's supposed to be, how you can achieve your own personal interests, yea.

FG6_5 (T-1:32:22) - Yea, I wanted to, a little bit, not oppose, but then talk of the package she's trying to say here. I think, the, the environment that we've been learning, is that there's a certain wind that passes and that's the wind we follow. At this moment, almost every lecturer has outside jobs he's doing. And saying that, his mind is very focussed on being realistic, on earning the clients loyalty, earning the clients money, earning the clients, I mean being able to convince the client. I'd expect the kind of output that he will give to a student will be based on what he's really practicing at the at moment. So, I would be as a student getting everything from the teacher he's, I will be like, will a client like this, will a client know this, will a client say yes to this. That's the, that's the kind of environment that I think we are now in, in. That's the kind of wind that is passing now. We are being taught as if we are practicing, rather than being given the opportunity that there's 'A', 'B', 'C', 'D', which one do you like, you like 'A', ok let me help you with 'A'. But then they would come with like, I, I, I don't think this is a good concept, I think a good concept are this and this and this.

MO - (T-1:33:39) So, anyway, an interesting point he's raised, which I had expected to come from more senior students, about the difference between architecture education and architectural practice. Is there much of a difference do you think, or they actually should be the same?

FG6_5 (T-1:33:55) - It has to come at its time. You wouldn't, it wouldn't be nice talking to a first year, without, telling him about the practice, while he knows, he doesn't even know the basics. So everything I think has to go in its time. You introduce them a little, you give them that kind of pride, that we have a lot of money outside. But then you don't tell them how do we find it, cause, the'll start finding money, and stop studying. So I think it comes at a, at its stage.

MO - (T-1:34:16) Ok, since you are talking about things coming at their time, we'll now finish off with the one thing that has not come up, ah computers. ... What can you tell me about computers in architecture education? [Silence] ... Wow, nobody can (Laughter) ...

FG6_6 (T-1:34:35) - ... Let me start with that, let me start with that ...

FG6_5 (T-1:34:37) - ... We're trying to digest it ...

FG6_6 (T-1:34:38) - Ok, ah about computers, ... what I could comment on that is just, first it is based on self, self ownership. What I know from that, cause if, ... the, the, the number of computers in let me say like ... if there is any, cause in my, ... what I know, I don't know if there, there some computers that students are allowed to use, since I'm a first year. I don't know if the basement is all for, for other, other, other students, or it's for teachers, or particularly higher, higher students. What I know is that, is that, is that we own our own laptops and by owning our own laptops, we just find some informations or anything by all our expenses, doing that. Maybe sometimes we can even capture some wirelesses, some sort of that kind. And talking about studies, maybe like computer studies, that you, that most of us would even expect like for example, for us first years. The, the subject known, known as, I don't know, IT, I don't know its name ... (Background - Industrial Training?). No, not industrial Training, the one dealing with computer ... (Background - Information Technology?) ... Is it ... ((Background - Within Industrial Training?) ... Wait, the kind of subject that deals with computer ... that we were supposed to learn ... (Background - There was supposed to be ...) but we are not doing

in. That's, that is what I want to address here. We're not doing it, which is somehow, you might have a laptop, but you might don't know how to use it.

MO - (T-1:36:36) Why aren't, why aren't you doing that subject?

FG6_6 (T-1:36:38) - ... We're, we're not doing it? (Yea?) ... So many things that, that just happened, which is ... They've said, the coming year they'll, they'll, they'll have the subject, but for us, we don't have it. I don't know the reason behind, all, all, what I know is that we are not having that particular subject and ... Maybe if that could, could have been in, in, in our, in our schedule, in our timetables, we could have, we could have learnt a lot. No matter, we had some kind of basics where we came from.

FG6_4 (T-1:37:14) - I wanted to supplement on her point. Is that um, of late there's this perception whereby the say that um, most of the students rely on, on the Archicad and the rest of the programmes to create or design their projects, which is discouraged so much by very many of the lecturers because they tend to think that it's kind of a weakness to the students. But again, it has, it has proved a weakness to many of the students. As um, a second year student, like I, I have so much of limited knowledge as far as the, the program, using the program, the architect, the architectural programs, say Archicad or AutoCAD. So little knowledge because we are, this kind of education is not scheduled, it's not given time in our course of study. So it's kind of a problem, even me working on my own lap-top, I find it kind of hectic because I have to find my elder brothers, the five year, fourth year, or anything, so that I can achieve my knowledge. But, not getting it directly from the lecturers or anything like that, so it's kind of a challenge.

FG6_5 (T-1:38:32) - Well for me, I want to talk of it in a different way. Computers in architecture. If I take a computer as a tool, in the architectural practice or study and education and all that, I would think of other tools that are alternatives. I would say a pencil is the alternative to, to a computer. Now, how is it with computers and architecture in our, in, in our environment. We missed the opportunity to use the pencil tool at an early age. So when we come to the university, we are, they start training us using a pencil. So they tend to discourage us that computers have to wait, we have to use pencils first. So that has been the thing for the first year, the second year, we just learn using pencils, because they think that is what is supposed to be done to, to make your art, art, your hand have good art and stuff like that. And then they will allow you to use computers at the end, which I think it's not that nice. Computers should be used from a very early stage, but, but then we go as our environment is. It ha been a problem with art and stuff like that, so we tend to use the pencils first, then the computers later. But then, there's were we come again, is there a good opportunity to get the computers, do we have opportunities like that? How many can afford a good MacBook Pro like this one? Or how many can afford a not just a MacBook Pro, but of good quality, that can run these kind of softwares? So then the opportunity comes second, that we don't even have, many that don't even have that opportunity, we focus, I mean food is an issue, how about a computer? So there are a lot of issues that can come in. But then I, as opposing to what, what wind is around here, I think computers should be used at a very early stage, we should be so competent, but then we should just get to know what is the theme of the computer. It's just a tool, which people do not understand. They think it's something that will help you design, helps you, comes up with creativity and stuff like that, but it's a tool. And it's very efficient, it's very precise, when you know how to use it.

FG6_1 (T-1:40:37) - Yea, ah, what, what I want to say about computers is that, we know, we know, ok we know how to use them, but how they relate with architecture, or how they support architecture as the subject is that we are completely ... blank yea, and we don't know how they, how are they supposed to be used, as in to help us produce something, an architectural piece. We don't know, we don't have knowledge about that, and the way it is, the knowledge that, that we know is how to use it as any other programme, of which I don't think it should be like that. It should be like a supporting, like we say supporting subject, say it should be one of the supporting subjects in our curriculum, to support us achieve something in the design studio or in architecture, yea.

MO - (T-1:41:33) Um, what do, is there actually a formal course in computing by the way? (Background - What?) Apart from first year. The, apart from the IT course that you talked about, is there a formal course that talks, that deals with computers, or CAD or whatever?

FG6_2 (T-1:41:47) - There use to be (Background - Formerly ...)

FG6_5 (T-1:41:48) - They said they'd have a curriculum review, then they will yea, they will keep it, and things like that. But then we had, it was formal that we did industrial training and we just learned computers for two months.

FG6_2 (T-1:42:01) - Yea, in first year, when we were in first year, (Background - At the end of ...) at the end of first year, we, it was every year, yea. At the end of first year, instead of, instead of ah, the first years going (Background - Going to site) to the field, they would stay at school and do computer for two months. So, that was the background ...

FG6_1 (T-1:42:13) - But, but then for us, they are in third year, for us in second year, when, last academic year we're in first year, ah, instead of them teaching us these computer programmes, they sent us to the site. So we don't have the same, same opportunity they had. So we are let me say, blank.

FG6_5 (T-1:42:34) - We could say, the system was corrupted ...

FG6_2 (T-1:42:35) - Saturdays? What were you doing on Saturdays?

FG6_1 (T-1:42:38) - No, we were doing, but it was not official, (Background - Ahh) and the time we meet it was, eh, it was inconvenient.

MO - (T-1:42:47) So, what programmes are generally used anyway? He mentioned ArchiCAD, AutoCAD, thats it?

FG6_5 (T-1:41:52) - Ah, depends on the stage of design, but from a, from a, from a, ... I would say from conceptual design, people are using Sketch-Up, for the BIM part it's ArchiCAD mostly, and very few are using AutoCAD, which we think is outdated but I think it's very good, just that people don't know it. And then we also use the, the, the rendering engines like Artlantis, yea, Picasa and all those kind of other softwares. Then others also use those for publishing, like photoshop, and things like that. But if we just ask anyone anywhere, most of my, if you, if you talk of majority, it is ArchiCAD, Artlantis, ArchiCAD, Artlantis.

MO - (T-1:43:31) Anyone does any environmental, uses environmental design software?

FG6_1 (T-1:43:36) - Like?

FG6_5 (T-1:43:40) - Using an environmental software. ...

MO - (T-1:43:41) Ecotect! ...

FG6_5 (T-1:43:41) - ... But the environment itself you don't even care about ...

MO - (T-1:43:44) ... Ah, why don't you care about it?

FG6_5 (T-1:43:46) - ... Ah, I'm just saying, I'm just saying ... some don't ...

MO - (T-1:43:49) ... Ok. Ah, one final, one final question for everybody, so everybody has to answer this one. If you were to come back as an instructor, my friend here mentioned we have a lot of alumnae teaching here, what would you do differently?

FG6_2 (T-1:44:04) - ... If, ... what would I do differently?

MO - (T-1:44:09) ... Yes ... [Long pause]

FG6_1 (T-1:44:15) - ... Let me start, cause (Laughter) ... because, I'll be (Laughter) ... what, what I'd be, what I'd address first of all is, if I'm to be a studio master, I'll when I do the consultations and the, the, the marking, I'll try to show the weak point for

everyone, ah, that is aligning the marks as it is in the prospectus, creativity, if it's out of 30, when I give someone 10, I tell him. If I talk about graphics out of 20, I give someone. Then I deliver them to, ... I make them available to them, so that they can see their marks and their weaknesses as regards to what, to the marking criteria, yea. That's what I could do different.

FG6_2 (T-1:45:12) - I think I'd, I'd do my best to give ah, to give the students as much feedback as they need, as as much, you know, especially ... Ok, I'd do my best to give them as much feedback as possible and try to encourage a good relationship with, teacher - student relationship. And not just, were not talking just friends, but, you know, ah, in terms of punctuality, and, for them to respect me, I have to respect them as well, you know, so. That, that kind of relationship, but for other things, I'd like to say I honestly don't know, because that would depend upon, that would depend on the circumstances at that time. Things like, I might want to put in my best, but if I'm teaching 150 students, honestly, you know. And, and it's, I think the rest would depend on the circumstances, I don't know what else I'd do.

FG6_6 (T-1:46:27) - Alright, my side I think is that, since I like this, this course, I'd just, I'd just devote myself, whenever I get that chance, to induce that kind of, that kind of loving the subject, cause what I believe is that no matter how hardship the situation would have been, I mean, could have been, a person, when a person decides to love, I think it will make a person hold on, on that thing and put more effort on that. So I'll just emphasise the students first to like, cause I, what I've come across is that many of the students they just opted, by not, by not, by not liking the, the, the, the, the course. But I believe if you like the course it would go best for you. For instance, I have an example, myself I wasn't chosen for architecture. I was chosen for some kind of Inform System Manage, Manage, ... (Background Management) ... Management. It deals with computer and all this stuff. But I didn't, I didn't have that passion in the course. What I did is to fight to, to, to change the course. So I changed the course. Personally I could say that I'm doing well, no matter it would have been little, I just perceive it as I'm doing well, I'm developing well. More than how, more than those I just found there. Which is others, they just take it as, ah, had it been, I could have know the thing, I couldn't even chosen about architecture. I just came here abruptly, the others are just complaining. So what I would emphasis is that love the course, no matter hardship you'd face, dealing with teachers, dealing with students. But since you like it, you'll do it the best for it, that's what I'd emphasise.

FG6_4 (T-1:48:41) - What I would do is um, be more efficient as far as lecturing the students is concerned. But the best part probably that could be unique to me that seems so much of a sounding, a sounding um, subject, ah, the connection between the university students and the society that is surrounding us. Very few people understand their, the, the, the, the work or even the existence of architectural ... course or, or school, so ... if at all you, you, you sample an average number of people from outside, most especially from the schools around ah Tanzania here, it is, very few, very few students know about the presence of this course. So what I would do is ah, organise events that probably could associate or could make this subject be known outside. For example at the missions um, and any other kinds of related, related ah, events that could probably increase the knowledge of the existence of the architect, probably it could also render, it could render an advantage to other citizens of ah, So that could increase perhaps even the market for the architects, because, the university is increasing the number of architects being produced, I mean, the degree, at the degree level, there are very many students that are going to be produced so soon. Very big number, yet the number of people who understand the presence of architects, or even the, the importance of an architect being there as a designer in the construction team, they are very few people who understand the presence. Many understand the presence of engineers and then and other specialists. That's all.

FG6_3 (T-1:50:44) - On my part, I'll endorse ah, I'll support the other people. Um, it would be better, what I'll do actually, I'll try to increase the enthusiasm. This course, um, architecture, it has a lot of challenges in it, but if we can make, maybe try to play with

peoples psychology, maybe make it fun, make it, even though it's sometimes maybe challenging here and there, but if we just make it enthusiastic , make it fun and so on, I think it would be the best solution. That's what I'd do.

MO - (T-1:51:16) FG6_5 you're last.

FG6_5 (T-1:51:16) - Yes. I'm last. Maybe I will conclude better. (Laughter) I'm just kidding, I'm just kidding. But then, what would I do? They're those long terms goals that I would have had. I would be so close to the contents, I would do something about the schedules, I would do something about the exposure of the students, and many, many other things. But then I'd be a little certain that to do this would be so hard, to take out politics out of the university would be so hard. And to bring computers to every student would be so hard. So there's where I'll end up with the saying that, if you can't get what you want, you help what you become. And what would I have become? I would have become that I can't do all these things. So the last thing that I'll do is that I'll just try to make at least one person just like me (laughter) that's the only thing I'll do.

FG6_2 (T-1:52:07) - Like you? Why? Why don't you encourage them to be who they are? (Laughing)

FG6_5 (T-1:52:13) - So that's, that's the last thing I'd do if at all I failed to do everything that would have been a very, very good long term goal ,short term goal, very good written, I mean things that you would want to do, so that's the last thing that I would do, make someone like me.

MO - (T-1:52:28) Ok, that, that is it!

Focus Group Discussion - VII (Part I Students)

MO - (T-02:06) So each of these are what you call Focus Groups. They're basically supposed to be a general discussion, that's why sometimes they go over, when the discussion gets going, I just let it go. That is the whole point. I'll introduce some questions. Before it will basically be you talking about yourselves, and then it becomes a discussion among us, and we just keep going. ... So we'll start off by basically introducing yourselves because I'm not sure who you are. Just introduce yourself, your name and reasons why you decided to do architecture. We'll start with my left ...

FG7_1 (T-03:37) - My name is FG7_1 ... I am pursuing architecture and I'm in fourth year, yea

MO - (T-03:58) Maybe you can tell us why you did architecture?

FG7_1 (T-03:59) - Wow ok, it was, ... it's a long process, but maybe to cut it short, why I did architecture, was like, I wanted to be self employed, that is one of the, the reasons why I wanted to do architecture. Then, maybe, another thing is, ok that was when I was young and I've, ... I looked at it like when you make a design and it's like, it's a building there and it's really interesting and every time when someone passes by, it's like, wow, who made that. So I wanted to be kind of famous or something afterward, after achieving something like that. But now when I got into the system is when I discovered that, oh, things looked a little bit different from what I wanted to view. And when I've looked at it and ... I can see why I'm more interested now in architecture is, one of the things is, I want to like, cause I intend to base myself in Uganda, that's home, especially in Eastern Uganda, my region, and one of the things I see is like, the traditional architecture itself is being eroded, and when we're having designing, when we are doing design, we don't follow maybe the environmental implications within our local environments, and I am looking forward to to having design, maybe based on culture, the local culture, how people interact. That's one of the things I would love to, do, ... and in so doing, then I'll be trying to restore back and give people back the pride of the what, of traditional architecture, or the indigenous architecture within my region, I'm from Teso region. That's basically what I have seen currently. But however, I wouldn't be limited to that alone, In case get an opportunity any where, then, that's really very grateful from my side.

FG7_2 (T-06:30) - My name is FG7_2, I'm from Dar. I'm fourth year architecture. Why I, why I study architecture? Basically the main reason, when I finished my A-Levels, I was like, I wanna do something that can make me live my life, that is being self employed basically. But I don't have, I didn't, I don't need someone to make me wake up in the morning, go to work for ... I need, I wanna work for myself, I wanna be self employed. That was basically it. Then coming to study architecture, yea ... I've got more reasons of course, and more ...[pause] I've got more reasons for studying architecture, ... [pause] ... Because[pause] , it's not just about, what ... cause I had no idea what this designing thing. All I know it was like, it's ... I'm gonna ... [pause] ... it's a kind of job that will make me live my life, and be self employed, so coming down to the field and know that you have to design, you have to have your ... [pause] ... like your own [interruption - fourth member of group walks in] I have to do your ... it's basically ... knowing how to design, that made it more interesting to me, and more difficult to me of course.

MO - (T-08:47) Just going around introducing ourselves and finding out why people decided to do architecture.

FG7_3 (T-09:00) - First of all I would like to introduce myself, I'm FG7_3 year five student bachelor of architecture

MO - (T-09:35) Why did you do architecture?

FG7_3 (T-09:39) - Why am I doing architecture

MO - (T-09:43) Why did you decide to do architecture? Not why are you still here, that is a different question, and we will come to that later ...

FG7_3 (T-09:56) - Initially, while I was very young, I use do, I like, I mean, I like to do the artistic work, like sketching and drawing. Then education went on, till I get to to, senior stage, the secondary stage of my education, of which I can dare to say that I, I got the right track, because I went to technical school. Of which, at that school, we were having the option of doing the, the, drafting, drafting work, including architectural drafting. Since I also had the interest in artistic work, then doing the architectural drafting, it was something interesting to me, because, I was in need of doing the work of which I can see the physical, the physical output. Why, when I used to do the sketches, I used to draw things in reality, because when you make a section maybe, because at that time, we were being asked to do maybe a section of a certain object. You can see that object, and therefore, what you are, you are, you are putting on the paper is something real. It's just a part of communication, you're just translating something from the, from real thing, to, to, to a point that you can communicate with someone by putting the drawings and the sketches. Then from that part, it was the progress for, for me to move on in architectural field completely, because ... Then from there, I went for, for, for higher education, I mean for, for, for A-Level education. But there, it was just like a path, and my intention was to come at the college, by the time I would be entering the college to pursue the bachelor of architecture. That's the short history.

FG7_4 (T-12:19) - My name is FG7_4 my history with architecture starts as far as when I was in form 2, as I was doing my O-Level studies. Basically, I came to this decision when I started thinking what I wanted to spend the rest of my future doing. So it's like, I asked myself, what can I do best, where are my strengths. So I found out that I've got a strength in Art and Maths. So I said, well what career combines these two things? So later on, through an architect who is designing one of our homes, I came to learn what architecture is. Se ever since I decided that, well I am going to do architecture. So it's out of interest that I came to study architecture.

MO - (T-13:36) Interesting, after going around, it seems that the general issues around, are pretty much the same for all students around. Now three of you are from Tanzania, and one from Uganda. So maybe tell me how you came to this particular architecture school?

FG7_2 (T-13:56) - There is no any other school ... in Tanzania

MO - (T-14:01) How about you, how did you end up here?

FG7_1 (T-14:04) - [Laughing] .. Well, the story is quite long. After form 6, because we always fill the JAB (Joint Admissions Board) forms. So, I had desire for architecture, and so I filled to [Named University], because that was the only university I knew maybe I would do architecture from and my aim was government sponsorship. But I turned all, during, around Feb Around April, there, a colleague of mine was saying, there are forms for IUCEA. The IUCEA, ok it's the exchange programme. So he told me, that lets try it, lets go and fill the forms. First of all, I rejected it. He was telling me, LETS JUST GO! The only thing that, I had passport size photographs ready, but otherwise I wouldn't have filled. Christians would say, it was Gods plan. So he forced me, then I went, I went and filled. When I reached there, they told us to fill two courses. One of the courses was Architecture, and the other one was Land Management Evaluation, but I did not know much about Land Management and Evaluation, so, since I had interest in Architecture, I filled architecture. So thats how it happened, so. But of course that was within the East Africa. So I filled, but I know it was the [Named University]. So that chapter was closed there. When the results came out, I ... well I performed, but not really so good enough to get government sponsorship at [Named University]. You know how it really gets hectic. So I was admitted at [Named University] for Bachelor of Quantitative Economics. While economics was of my, ... it's a course which I loved to do. So when I was in Gulu, for at least two weeks, they called me, the Registrar from [Named University] called me, that whether I could accept the offer of doing architecture this way or I would still continue with my course. I said, I love architecture more than the

course I was doing. So I said maybe it's better I took the architecture. So I came to the [Named University], and by then this was a constituent college to the [Named University]. But that very year is when they got their autonomy, is when we got our autonomy, so I was sent this way, and that's why I am in [Named University] ...

MO - (T-17:11) Ok, maybe you can tell me now a little bit about what you think architecture is? [Long Pause]

FG7_1 (T-17:28) - It's really an interesting question, and probably, ... to me how I define it, it's, it's all about man and his surrounding environment around him. By that I mean, like, spaces, the voids, I mean, living spaces, and within those living spaces we create comfortable living environment for someone according to the desires of that particular person required, maybe. So all the occupants of that environment, so it's all about creating comfortable spaces for the occupant, or the client of that environment or that particular project, or something like that.

FG7_2 (T-18:25) - Architecture, the study of design ... living spaces for human beings

FG7_3 (T-18:58) - What I know about architecture, basically it's all about the, the built environment. But, when I talk about the built environment, it involves so many elements. And the built environment ... basically I can say the built environment is all about the life of the human being. Therefore when you talk about the life of the human being, you are touching several aspects, like the social aspects, the way people are living, ... thus the culture of the people. ... The geographical location, because when you talk about the built environment, it is all about the natural environment and something which you are going to invent in the natural environment, to create, to create, a better, a better, a better life for that particular society. ... On top of that, I'll consider, I mean I talked a little about the culture, at the way culture it can be the part and parcel of architecture. The economy, the economy, the people. But the economy is much more determined by the, by the lifestyle, because according to the economy, it depends on how do these people live. Because we have several society, like our society, where for example the society of, where for example, this society called Kumbai, Kumbai society. These people the way they live, if we talk about the economy of these people, it's almost not there, because the way they live, they depend 100% on the nature, the environment. Therefore, you can't talk of the economy, cause when you talk of the economy, it's all about the currency, the currency of the particular society, and then they don't have such thing. Therefore, it depend on the society, the economy is there, part and parcel of architecture. Ah, in totality, the architecture in there to create, ahh, the proper, proper, and satisfactory living environment for the human and for the nature of the environment.

FG7_4 (T-22:08) - From my point of view, the word itself, architecture, or when you are talking about an architect, you're meaning, it means you are referring to a master building. But, as far as I believe that architecture existed since the existence of mankind as he started to find a way of sheltering himself. But at the moment, when you look at architecture, it is a very broad multi-disciplinary field, or profession to say so. So when I look at architecture, I think it's a set of disciplines. There are so many disciplines, the industry is so much diverse. So it is the art of putting together these disciplines, combining these disciplines in order to, in order to create space. But, it's not only space, but adequate living conditions that are comfortable to human survival.

MO - (T-23:18) Has this changed much since you started? Your perception of what architecture is? Since you started your programme. Has it changed since you started your programme, your idea of what is architecture.

FG7_2 (T-23:33) - Personally, it changed. (FG7_2 nodding yes)... At first I thought architecture was all about, almost like, civil engineering, maths, and how you make the building exist, the physical building. But now I tend to find out that, you can even design just an empty space, it doesn't really have to be need to be a building, you don't really have to do a lot of mathematics into the building, for you to design, for you to be an architect.

FG7_1 (T-24:11) - Maybe I would also like to add on something, one day I was, I was with one of my lecturers, and he was like, in case you have a building and someone, or your client asks you, ok, thank you for your work, then he tells you, show me your architecture in your building, so I got confused [snickering] ... I asking him, but architecture is all about designing buildings? Then I, it's when my mind came to open that the building itself may not be architecture, cause you can design a building, like, maybe, you look at it like you've designed a hall, then a very short roof, I mean roof height or something like that, and it's very wide and so low and something. So when you get inside there, then, you feel like, ah, this is not a place for me to, what, it's not, you don't feel comfortable in that place, so it means like, there is something, there, is something wrong there you see. So, and finally I came to discover, maybe my past perception was completely wrong with what I've perceived currently. By then I knew architecture was a building, but now I discovered it's, architecture is how you address that particular building in relation to, maybe the demands or the function of that particular building. For example if, maybe if you have a novelist, or something like that, so you find maybe his most comfortable area of living is a library, so how do you dress that part. Maybe it could be like that is the most part in the whole of the house. So the library is, the most powerful, ... it's something you have to put into consideration, ... that's like the functionability (sic), how you create the functions in relation to the what, the spaces, to satisfy the client, or to satisfy, to satisfy the user of that particular area. That is, to me that's the architecture.

FG7_4 (T-26:29) - From my point of view, before I joined university, I thought that architecture was more about drawing. But as I joined university it's like we were introduced to architecture that is more about art and technology. But as I proceed, I see architecture as a system. It's a combination of different systems, not just, when you look at a building, a building is a system, but you can also look at the site as a system, .You can look at the built environment at the urban scale as a system. You can look at, at the immediate surrounding also as a system. So, there are so many systems, how you put these systems together, I think that is what architecture is all about. Not limited to, to a building only. It also involves other issues

FG7_3 (T-27:49) - I'm not very far from FG7_4 but, initially of thinking of architecture is ... technical disciplinary, that it involves, I mean, I mean it has the technical part of it only, that you need to know the technique of drawing the building, that is all. How you can design, how you can create a building, that's finished. But, now ... I've come to realise that architecture, it had the great, the great role to, to create the, a well harmonised ... life system of a society. , Because I am realising that architecture, ... is touching so many parts, of the social life, and therefore, it's not only the creation of building, but this, it's all about the creation of living, living systems that is well harmonised by integrating the, all the components of the life, the life component of that particular society. Making them well harmonised to create, to create a real situation.

MO - (T-29:14) Ok, now lets get into the nitty gritty of what we are here for, talking about architecture education in particular. You've; described what your idea of architecture is, maybe now lets describe your experience in architecture school. What's it been like, what are the challenges that you've faced, opportunities, your four or five years here.... [silence] ... Anyone can start. ... [silence]

FG7_4 (T-29:53) - From my point of view, ah, ... before I joined here, I believed that coming to university would make me become an architect. But it's like coming to university, is like discovering what I can do, it's all within me and the university, it's like it is trying to bring it out. So, some people believe that architects are made, others believe that architects are born. So the perception of what architecture is, varies among students and it also varies among the trainees (sic). Now from that point of view, it also gives a very personal perspective of how the training should be. So from my point of view, first of all, I believe that in the training course, there is so much to do with the personal ability of a student, in terms of talent and gift, and how first of all the person can develop his own skills. Then it is one thing to have a talent, but it is something else to develop that talent into a skill. So I believe that, from my point of view, I've been

developing my talent into a skill. And, ... in that case I believe that one of the resources that are important, first of all, in training architecture is the environment in totality, since it involves creating things. There is a certain state of mind in which a student has to be subjected to, in order to, to bring out what ever idea this person wants to develop, ... and that starts with the immediate surrounding in which that student is exposed to. First of all the experience that the student is having, how the student, learning starts with the environment in which the student is, what the student sees, what the student is exposed to. The background in which the student coming from. That I think is the, is the first learning environment in which student has encountered. But the second one is what the student acquires from, from the teachers. That is the second realm that I see to learning architecture, because it's like they open the eyes of the student into see what he wasn't seeing before. But the third thing is exposure, what the student sees, what the student sees is going around, around the world, what other people are doing, what is taking place in, in the other parts of the world. So I believe that, from my point of view, these are three areas which have helped me to get the perception of what architecture really is ...

FG7_3 (T-33:30) - Ahhh, Here my colleague, aah, I mean, he has tried to touch almost all the critical, critical area that can facilitate a good training of architecture, [inaudible] ... But aah, me I think, we have got several components which we need to combine them to make a good, a good training of architecture profession. The first one is ahh, is a talent. Aahh, you can make, you can make someone to be an architect, but you can make someone to be a good architect, if he is talented aah, or he's having a talent aah, oriented in, in architectural perspective. Therefore if somebody is lacking a talent aah, oriented in architectural perspective, it's very, it's very very hard to make, to make him or her to be a good architect. He or she can be good, I mean she can be an architect, but to make him a good architect is very difficult. Aaah, the second thing is the environment, the learning environment. Aah, and the learning environment, refers the, the way, the way, ... aah, the connection between the two party, the student and the, the lecturers or the, those, those nani, ... trainers. The connection between, it has to be in a good ratio, such that, aah, these people who are delivering something to student, they can be in a position that they can make, they can make a good follow up, because architecture, architecture, architecture course is like a man to man course. It's not like you provide a lecturer in a class then off you go. You need to make follow up, step by step to your student. In whatever he or she is doing, you need to make follow up, so that you, you can know that whether he or she is doing the core thing or the right thing. Therefore the ratio is vey important that whenever you are, you are conducting, aahh, a training of architecture, you should know about the ratio of the student and the teacher or the lecturers. Aaah, the environment, aaah, I mean the second part of the environment is like, is, is the, the working, the working area or the working station. Aaah, architecture course is, is a bit different from other courses. Aah, someone who is pursuing architecture, he or she need to have, to have ahhh, their own special place for, for conducting his or her studies. A very special in what sense? Aah, because even the, the, the facilities like tables we are using for, for, for doing architecture, this course is different. It's not like a small desk that you can put their then, you just do your work. It's not like that. You need to have big space so that you can put, you can put this kind of drawing table and all that. And, you need to have aaah, a permanent workstation because it's a course which demands a very much concentration. You need to have a very high concentration in your work. You need to spend, you need to spend aaah, enough time doing your work. Therefore having a workstation which is not, is not, aaah, permanent, ... it's a disturbance in one way or another, because you move your stuff from here to there and, settling down at this space, then you move to another space, settle down, it takes time, you gain momentum, then you move off, you go to other spaces, you try to cope up with it, ... it takes time. It disturbs the, the course and the, the way you can, you can do your studies. Therefore, it can end up to, to, to, ... to give out, aah, not, not good product of architects as it's supposed to be. Aaah, another thing is the, the what, I mean, he has already talked about the, the exposure, the exposure, and the, the material that can make you to be exposed. Not necessarily you need to

travel from one point, I mean, from one part to another, but at least you need to have aah the relevant, ... relevant, ... relevant aah, services like internet. You can use internet, instead of travelling from one point to another, because travelling from one point to another, sometimes it consumes time, and so much resources, that rather you can use internet which is rather efficient. Another thing, I think is how ahh, student relate to, to, to lecturers. Because, architecture, as I said earlier is not like me lecturer, standing in front of the class give out the lecture and then off I go. But I need to create aah, a good relationship between me and student so that aah, he or she can be open to me . Because you need to, to learn a lot, not just by studying books, not just by looking in the internet, but you need to ask. Architecture is all about reasoning, and therefore you can't reason, aah, without being given the capacity of reasoning, because seeing something from the internet, maybe something from western, here we are in the tropical maybe, in the Africa, it's different. But if you can have a very good communication with your teacher or your lecturer, it's very easy for you, aah, to determine and distinguish things from one point to another.

MO - (T-40:31) Let's talk a little bit about this learning environment, which has come up a few times now. What is the nature of the learning environment here at [Named University]?

FG7_3 (T-40 :44) - I talked about the ratio between the, between, between the, the student and the lecturers. Here we are not, we're not having a good ratio between the lecturer and student.

MO - (T-41:03) What is it for your years anyway? I got it for the first second and third years, what is it for the fourth and fifth year?

FG7_3 (T-41:10) - Fourth and fifth year? Aaaah, let me talk about the, the fifth year. ... In the fifth year, the ratio is not good, but it's not bad as in the first year and second year, yea, but it's not good.

MO - (T-41:31) What do you consider good?

FG7_3 (T-41:32) - Aah, ... good is something relative ...

FG7_4 (T-41:36) - We are fifty, ... ,

FG7_3 (T-41:39) - No, we are forty ... (FG7_4- forty-five ...?) No, we are forty three ...

FG7_4 (T-41:45)- Forty-three, and we have two studio masters, ... so the ratio is like, one to twenty-five.

FG7_2 (T-41:53) - For us we are thirty-five studio, and we have three lecturers ...

FG7_1 (T-41:48) - ... Thirty-five, (FG7_2 - disagreeing) we've got four actually ...

MO - (T-42:01) Four? How come you guys are so lucky?

FG7_1 (T-42:04) - We're blessed [snickering] ... hard luck, we have service, ...

FG7_4 (T-42:16) - You are thirty-five now?

FG7_1 (T-42:17) - Twenty-eight,

FG7_2 (T-42:18) - Plus those who are repeating,

FG7_1 (T-42:20) - Those who are still repeating, then, aah, and I hope landscapers are not part of us ...

FG7_2 (T-42:26) - Ah, by the way, fourth years we have landscape architects and interior, ... for us we are in ...

MO - (T-42:31) You do have, you do have, er some joint course?

FG7_2 (T-42:34) - No ... eh, it's only one, professional practice ... the studio, they have their own, and their own teachers.

MO - (T-42:40) Ok so this is only architecture? ...

FG7_2 (T-42:01) - Generally ...

FG7_4 (T-42:47) - ... that is an aspect, defining environment, but the second one is concerning permanent working stations, while in the past, the number of students was a little bit, aah, minimum compared to what they having now, but for some reasons the number of students has been increasing unproportionate (sic) to the resources in terms of class rooms and learning facilities. So that has compelled the training to become a little bit different. So at the moment we don't have permanent working stations, so we shift from class to class and work station to work station. The aspect of workshop as he said .. There has to be a connection between the theory and the practice. So when it comes to workshop, we do learn things in theory, but aah, we don't have ... like I said we are not that practically oriented in terms of workshop is integrated.

FG7_1 (T-43:51) - ... the equipment ...

FG7_4 (T-43:53) - yea, in terms of equipment ... resources ...

FG7_2 (T-43:56) - and the teachers

FG7_1 (T-43:57) - the stations ... the studio work ... that's messed up ...

MO - (T-44:03) so how do you cope with that the, if in your theory subjects you don't get enough opportunity to test things, but you have to apply them to the studio project, how does that work out?

FG7_4 (T-44:14) - At the end of every year, we normally have industrial training. So we go to different sites and sometimes we visit different architectural firms, whereby they connect us with the, with the site works. But it's still a challenge, because not everybody gets the opportunity to do so. So you can say, it really, it really depends on the personal initiative the student takes in order to get in touch with those things.

FG7_2 (T-44:55) - Ok, I will, I will like to add about the working environment, the learning environment. Aaah, talking of the equipments, they talked of the working stations only, but then there are things like books, model materials, plotters, scanners, computers, those for presentation purpose, beamer, they are really not enough.

FG7_4 (T-45:27) - Two things that FG7_2 has just mentioned. She has mentioned books, and, and, and computers. With the case of books, we, we have a library, but the truth is architecture is, it's changing dramatically. And in that case, they don't update their books, with what's going on. They are not very current learning materials. So some lecturers of the department will have current books, but at the main, main library, most of the books are quite dated, but they are trying to keep them relevant.

MO - (T-46:06) How about access to journals?

FG7_2 (T-46:08) - What?

MO - (T-46:09) Journals ...

FG7_2 (T-46:10) - Journals, no ...

MO - (T-46:10) Yes? No?

FG7_1 (T-46:14) - Yes, some at the library, magazines, journals

MO - (T-46:17) Which ones are the key architecture ones?

FG7_1 (T-46:23) - hmmm, it's been a while I was there, so I can't, I can't remember, so I doubt ...

MO - (T-46:31) That is always a prime issue with architecture is, because books take a long time to get published, you end up relying on journals because journals come out every two months or every one month, so ...

FG7_2 (T-46:43) - Yea, serials are not that many.

MO - (T-46:44) You don't have many serials, ok. Ahhh, I think FG7_4 mentioned travel. How many of you have travelled around Tanzania, outside Tanzania?

FG7_2 (T-46:58) - All of us.

MO - (T-46:59) All of us? Ah, ok. Is that arranged by students, the school, or?

FG7_2 (T-47:03) - The school.

MO - (T-47:04) The schools, right.

FG7_1 (T-47:05) - As well as students ...

FG7_2 (T-47:08) - Every semester for every year, every first semester of every year, (FG7_1 - academic year) we go for two weeks.

FG7_3 (T-47:14) - Not every year ... up to fourth year ...

FG7_2 (T-47:17) - First to fourth year ...

MO - (T-47:24) So how do you think that has helped you in your progress through the, through the years?

FG7_2 (T-47:31) - Exposure is, ... Like, getting to understand the culture of different places, and how you can design according to that environment and things like that.

MO - (T-47:44) How about outside the country?

FG7_2 (T-47:51) - We can't afford that.

FG7_1 (T-47:53) - May be to add on what she said. Is, every time we go for that short we call it in-semester field work, we go basing on a certain topic. Yea, for example In first year we go basing on, I think design (FG7_2- sketching) sketching, improving on your graphics, so it helps you in exposure as well as trying to improve on your graphics. Then later on when we come to second semester, I mean, they try you in design. Then, aah, second year we always do Housing, ... is it? (FG7_4 - Yes) ... yea it's Housing, so it's ... (FG7_4 - Housing and Town Planning) and Town Planning something like that. So, how we get exposed is it helps us to know the codes and regulations of architecture, maybe as Town Planning, in relation to other aspects of the design team, for example, Town Planners, Engineers, and all these kind of things. Then in third year, we do much more of conservation. (FG7_4 - Yes) Yes, with conservation we always visit historical areas, how do we, impr... maintain the heritage and, ... even through that it helps us to, to see the past designs of maybe a hundred years back, or fifty years back, also you can incorporate that, those design principles in your current design, which is like you're putting contemporary back in the olden days. So that's the kind of exposure we do get when we go out into the field.

MO - (T-49:36) How about clients? Do clients ever factor into your design studios? (FG7_4 - pardon?) Do clients factor into your design studios?

FG7_1 (T-49:46) - The clients, wow, not really, but sometimes we have some associations, like I (sic) have the architects day whereby we do some bit of exhibitions. In that way they are able to maybe view what we do. But for them to come to class, or something like that, no!

MO - (T-50:08) So how, how are your studio projects run. Are they given to you or, ... as a design brief, or do you have to manufacture a design brief based on parameters you're given.

FG7_4 (T-50:22) - In the earlier classes, like first year, second year and third year. ... The first and second, they prepare the brief, no, the brief is being prepared by the lecturers. But in the, from the third year, students start manufacturing their own projects, so it's like they put in, in place, because they chose their own projects to do, they get, ... what the lecturer does, he just provides like a scheme of what is to be done in the semester and an overview of what a certain group of projects that are available for that semester, then they chose, students get to chose from, from the list which project he is going to do.

MO - (T-51:07) But their is no one ever acting as a client?

FG7_4 (T-51:14) - The client become the lecturer [snickering]

MO - (T-51:17) The lecturers act as a clients

FG7_1 (T-51:18) - Yea, or something more of like that ...

MO - (T-51:14) Ahh, What else can we get into here ...

FG7_4 (T-51:31) - Maybe if I can highlight something, ... You just mentioned something to do with the client, On a personal basis students do encounter clients starting from lets say second, late second, third year. As they start doing their own personal projects. So the encounter between the student and a client can start as far as then, but only on a personal basis, not as a formal academic issue.

MO - (T-52:00) So how, how does that work exactly? How does that work exactly, does it ... hinder, or does it improve the work? ... this idea of working with clients. How does that impact on the students' progress in architecture?

FG7_4 (T-52:27) - Year, it's, like I said it's both positive and negative. Positive in the sense that first of all, the student gets experience, but second the student builds a network of people, but ... on the negative side is that it robs time from your class work We didn't mention it earlier, but when we were in third year, five people in our class got the opportunity to travel to Germany. It was a study tour of some sort. And we visited aah, Hapag City University ... **(MO - Which one?)** Hapag City, ... **(MO - Where's that?)** It's in Hamburg, and we found out that the students there get time to work in, with firms outside their college, and they get paid, but it's also part of their, there is a way of, of integrating it with, with, with, with the academic issues within the college. So it's like, ... what I can say is that, it's an informal way of getting experience as students connect with clients on a personal basis. So what I can say is that, at Hapag City they have a formal way of, ... of, of recognising what the student is doing outside the academic issues, different from what we are doing here.

MO - (T-54:05) The reason I brought it up, because it's sort of an ongoing issue. Legally, students are actually breaking the law, by doing that. So, the question is if you are breaking the law at that stage, what's going to happen when you graduate? Are you actually going to follow the law at all, since you've already been breaking the law from second year? Anyway, plus it also has another impact, in that, if you are going to be doing that, are you actually practicing architecture, or are you just churning our drawings? So, is it actually helping you learn, or it's actually stagnating you because you are already drawing, so your perception is that architecture is drawing and you are going to continue drawing, doesn't matter what you are taught in school. So you get to the end, and architecture literally becomes just the piece of paper. I don't know, how does that happen here?

FG7_2 (T-55:05) - To me I think it really depends on the person, the student himself. Cause you can get a project, like, you're not restricted, you can ask any one, any teacher, and you do it in a right way like it's supposed to be. Or otherwise you can just do it the way you know how you do it, since you know how to draw, you can just draw for the client. So it really depends on that person, or that project, how is he or she gonna take it. ... How he's gonna do that, how he's gonna deal with the client.

MO - (T-55:37) Sure, now this actually came up in, in the undergraduate, the Part I interview. About, ... the difference, the fact that now, a lot more students are coming in, not because they applied for architecture, but they were just offered it, just because there were X number of places and they needed X number of students. Do you think that has an impact on the overall perception of architecture and probably even the outcomes?

FG7_2 (T-56:11) - Yea, it has a big impact.

FG7_3 (T-56:13) - Aaah, ... I have to say that, aaah, ... ok, that thing has its own impact, the architectural perception, aah, and, aaah, and the architectural, the architectural, I mean the output, the output that will be, will be, will be given out, after, after those kind of people graduated. It's like, ok, you are offering the chances for architecture, x chances for architecture, and people are just out there. They don't have anything to do,

maybe they don't have, they missed some chances from, from other courses. They just pop in and then, ok, this is the opportunity, we need to be in the college, they just get in to take those chances. As I said earlier, architecture it has to do with the talents. So if someone popped in, and he or she is really not having interest on architecture, aah, eventually she is not going to make, to make, or he's not going to make a good architect. He's going to be an architect, she's going to be an architect, but he or she won't be a good architect, because first of all, he is not talented and he is not interested in architecture. He's just doing it as alternative, after missing all the alternative of doing what he was willing to do, then he's just taking it as a last alternative of moving forward his life, of which it's very bad. It's very bad, cause, you're not, you're not going to be passionate with the field that you are doing in. And you won't be, you won't be inquisitive in your, in your, in your, in your, in your, actually, your profession, because you are just there so that you can move on your life. You are not there so that you can, you can, you can do what is supposed to be done in architecture.

MO - (T-58:34) Ok I will ask this, because you've just mentioned some of you had a chance to go to Germany. How many actually went by the way? Both of you in fifth year went? So I can ask this question, ...you've seen one school, ... how many schools did you see there? (Only one) But maybe you can answer it anyway? What do you like about the approach to architecture education here at [Named University]?

FG7_2 (T-59:11) - Here?

MO - (T-59:12) Yes, here.

FG7_1 (T-59:14) - What do you like about ...?

MO - (T-59:15) The approach to architecture education here?

FG7_4 (T-59:11) - Architecture education?... [long pause] ...

MO - (T-59:30) There must be something you liked, you stayed! [Laughter]

FG7_2 (T-59:35) - Just because we have no other option maybe ... [long pause] ...

FG7_4 (T-59:42) - From my point of view, I can say that the only thing that ... that I can say that is a bit advantageous to us is that, we start practicing at a very early stage.

MO - (T-1:00:05) So you like the practical approach?

FG7_4 (T- 1:00:08) - In the case of personal projects. But as I, as we also say earlier that, you mentioned something to do with that being illegal, it also depends on how you do it. For instance some people get their projects from the lecturers, in that case there's a transfer of knowledge. Others get their projects from firms that are outside the college, so in that case also there's a transfer of knowledge and practice. But for those works that are, that do not engage the lecture or professional outside the college, that is just like, it just robs time ...

MO - (T-1:00:59) You've actually raised an interesting one, you getting projects from your instructors, or from practice. It now goes back into a different sort of architecture education, which you will actually face when you graduate. Which is the one on one with a mentor. Which, by the way was, until about a hundred year ago, that was about the only way you could study architecture was working with a mentor. You went into ... , you actually applied to somebodies office and you went in their, you paid them, and you worked for ten, fifteen years. And then when you, ... to graduate, you actually had to win a competition. That's the way you graduated. So what you are mentioning is maybe just another way of dealing with architecture education and maybe it actually needs to be formalised. I don't know. It's happening in Germany where they actually have a formal relationship with practice. It happens in other places, the university I work in has the year-out, where it is actually a formal work-experience time out. So it may be something of interest to everybody, about how this practical experience actually works, and why

it should be of interest to everybody to engage in. Anything else you like about [Named University]?

FG7_2 (T-1:02:18) - Me what I'd say, I like the presentation part of it, cause it really gains my confidence. Makes me more confident, yea. Starting to present from first year, first semester, yea. And travelling ...

FG7_1 (T-1:02:48) - To me, well, there's not much I'd like to say, but...

FG7_2 (T-1:02:54) - You said field work ...

FG7_1 (T-1:02:55) - yea?

FG7_2 (T-1:02:56) - Field, IT ...

FG7_1 (T-1:02:59) - ... the field, that's, they call it Industrial Training, yea. ... It's really more interesting, and maybe, ... I was thinking like, there is also the part of rewarding students, especially poor students and I think it's like a motivation factor, so it motivates people to work hard. And probably maybe in some universities, I don't know, maybe such kind of things do not, they don't give them. Then also part of model making, it really keeps on, like, when you are trying to make a model, it keeps like, open up your mind, when you are trying to make design, so it gives you more alternatives, yea, cause you are like, seeing the product in front of you. So it's something that's more interesting, and when you go into the paper, and go into another paper, it will last. ... So these are the things I like besides what my class mate has said.

MO - (T-1:04:04) Is model making, do all of you have to do models in all your projects, or is it an optional extra? [Snickering in the background]

FG7_1 (T-1:04:11) - I think it depends on the lecturers, but For our lecturer, it a must that you got to make a model ... and probably more than one ...

FG7_2 (T-1:04:21) - I'd like to correct, it don't depend on the lecturer, it's there in the curriculum. You are suppose to present with models but, what happens now, you don't have model making material, so some lecturer, you tell them that, you don't have, they are kool, some others, you just have to look for them and come with a model.

FG7_4 (T-1:04:37) - If you can't make a physical model, then you have to generate a CAD model.

MO - (T-1:04:43) Ok, lets talk about CAD, since CAD has now come up. Interesting that CAD always comes up very late in these discussions, very interesting! So, tell us about CAD in your Bachelor of Architecture programme.

FG7_4 (T-1:04:58) - In our case we started learning it just after first year, but we started applying it in the third year. And, it's like from the third year, all the way to the fifth year, most of the work is done on CAD. But, on the other hand, design, in order to have an original design, to have something that is original, you still have to start working from paper.

MO - (T-1:05:29) What do you mean by, "Original Design"?

FG7_4 (T-1:05:31) - Original meaning that, aah, it's easier to connect, it's easier for a designer to transfer his ideas faster using a sketch than generating it on, ... on the CAD. Meaning like, CAD is just there for visualisation. It's like, it's like a lab where by you test your ideas, but how you bring out those ideas is something that is more natural when you, when you sketch it out. There's a, there's a more natural flow of ideas as you sketch them out, rather than when you want to put them into the computer, because when you start feeding it into the computer, your just feeding in information. In the same way you use a pencil, you use a computer. But then, the, the, the efficiency, the, the quickness, into which you can bring out those ideas, varies between when you draw, and when you use a computer. So I can say that there different approaches. First of all there are those students who start their work directly on the computer, and they're students who put their ideas on paper and then thy feed in the information to the computer to finalise their work. Now in those two different scenarios, it's, it's, it's more

common that for those who've started their work on paper, they have more, I dare say, ... I'd like to use the word 'original', in meaning that, it's not just something that has been provided, or a prototype from the computer.

MO - (T-1:07:27) Anyone else who have opinions about CAD?

FG7_3 (T-1:07:33) - CAD, aaah, in fact aaah, ... to me I can talk two things, the positive one and the negative one. Aaah, if, if you're not going to be keen enough, CAD can mislead a student, aaah, in production for design work. Because in CAD, you are, you are, you are, you have the opportunity to lie, to lie, aah, to lie in the presentation, or to lie the panel, that this is work, and it look like this. Because, as FG7_4 has said earlier, that once, aaah, you haven't done a physical model you can do a CAD model. In CAD the way it is, you can hang up a wall. You can just put a wall hanging up. But a physical model, it's very difficult. You cannot hang up a wall in a physical model. It will be seen that this, this will not work, but in CAD you can hang up a wall and no body is going to discover that this wall is hanging, and you can lie like that, you can just pass like that. But, on the positive side, if you use CAD, aah, effectively and efficiently, by the time you are done with your design work, aaah, you'll be in a position to know each and every, I mean each and every detail and how is it going to be constructed. Because once you are using CAD and once you are using it effectively and efficiently, aah, you are in a position, or you'll be doing like, assembling of building element, like walls, beams, columns, and therefore if you are keen enough, you'll be knowing that, ok, how am I going to connect this element and this element. Therefore it depends and, this one it has to do with the, with the lecturer guidance. The lecturer, aah, they have the, the responsibilities of, of knowing how are they going to guide the student to use the CAD in a positive way and to make a student to get benefited from the, from the CAD, CAD programmes.

FG7_2 (T-1:09:52) - Me, on the other hand, I think to some extent it restricts someones idea. Like for me, I can do my design, but then at the end of the day I know that I have to ... Like in third year, either in first or second semester, it's a must you do the thingy in CAD. You must present - first semester ... first semester third year, yea - You must present your work using CAD, ArchiCAD, or AutoCAD. (FG7_1 - ArchiCAD). Now when I'm thinking, when I'm doing my design, I can be restricted, just because, I'm not, I'm not, like, ... I don't know CAD that, that well. So I'm trying to design a simple thing that latter on I can put in CAD and have my, do it easily, find my way out easily. Then I, know, 'this is too hard', like, 'I don't know how to use CAD', I don't know how I'm gonna put this wall to be curved, and then to incline, so I do't put that wall there, yea, thats my contribution.

MO - (T-1:11:01) So when we talked about CAD, ... we were talking about CAD, it seems that we went immediately to drafting rather than Design. Has anyone actually used computing as a design tool rather than as a drafting tool?

FG7_2 (T-1:11:24) - hmm, I tried this semester actually ...

MO - (T-1:11:27) Using which programme?

FG7_2 (T-1:11:29) - It was Sketchup

MO - (T-1:11:30) Using Sketchup. Any other programmes? ... And drafting, which ones do you use?

FG7_1 (T-1:11:36) - Artlantis Render ...

MO - (T-1:11:38) Aaaah, Render is actually after the fact isn't it? You already have a design, you're actually just presenting it.

FG7_2 (T-1:11:44) - And there's this other programme, I've forgotten the name, ... I saw someone using it, for the outside work, whereby if you are designing a residential, you just fill the data, like one bedroom, two bedroom, a living room, a dining, then ...

MO - (T-1:11:59) I know exactly which one you mean ...

FG7_2 (T-1:11:36) Yea!

MO - (T-1:12:03) It costs a grand total of 25 dollars! You can buy it anywhere ... Aaah, How about using computers for, uum, technological exploration, say environmental design aspects, do you ever do that?

FG7_4 (T-1:12:22) - No we don't, but ... I think starting from the fourth year, second semester, we have an option to choose and elective to do. But those who opt for, what do they call it?

FG7_2 (T-1:12:39) - Architectural Science

FG7_4 (T-1:12:40) - Yea, Architectural Science. I think that they, they get to learn, aah, some computer programmes that can help them to simulate different environmental issues into the design.

MO - (T-1:12:53) So Architectural Science is an elective?

FG7_4 (T-1:12:55) - Yea, it's an elective, so not everybody gets to, to chose that.

FG7_2 (T-1:13:01) - Which we have very few teachers who can do that.

MO - (T-1:13:05) They're actually very few in East Africa, thats a reality ... uum, ok, uum, I think it came from FG7_4, about, something about, About what actually is architecture. This idea of the process verses the product ... we were talking about CAD actually, then you started mentioning the product becomes more important than the process. Uum, how would you view architecture exactly? Is is a product or a process, or is it a combination of both? Does one take precedence over the other?

FG7_4 (T-1:13:56) - I, I can look at it in two dimensions. The first dimension is the architect, as the person doing the work and the second dimension is the client, as the person who receives the service. From the architectural point of view, the process matters, but from the clients point of view, the product is more important. But, I think what is important is how, in the, in the learning environment, what is important is how, to bring these two aspects together. How you can assist a student through the process to achieve a product that the student inspired from the very beginning. And in doing so, first of all there's a great, aaah, there's, ... it's very important for the trainer to get, to penetrate into the mind of the student, to know what this student is aspiring to do. And that brings us back to the first point that, there has to be a connection between the trainer and, and the student, so that the trainer can help, can guide the student throughout the process, without imposing his, his, his unlikes (sic) or his, his ideas to what the student has. The trainer should guide the student through his idea to assist him in developing it into a final product. But also, aah, when it comes to design, there's also a different perception of what architecture is, across trainers. Others believe that architecture is a plan, once you have a workable plan, then that's architecture. Others believe that architecture is the form, so once you have a nice form and they believe that functions can just fall in. Others believe that architecture is all about environment. Others believe that architecture is about structures. So when, when you're talking of the process, I think that, at, at a training level, the student should be able to, to, to go through these aspects. But once someone graduates in masters, then he can chose in which line of, of, in which process he can use in order to generate a product.

MO - (T-1:16:33) So, this idea of the instructors having different areas of specialty and having different opinions, Is that a good or a bad thing? ... How do you perceive that?

FG7_1 (T-1:16:48) - Ah, well, for me the way I look at it, it's a two way traffic. Whereby, some part is kind is good, but the other part is, it's not good, cause, like you, it's like having a certain fear. That means you are restricting someone, so even his sense of exposure becomes like minimal, I mean, he's rigid to the instructors, what, instructions. But, aaah, why it becomes good, is for example if he has some special, I mean, he has

specialised in some aspects in some field, then the student, or the person being instructed, probably can get the best out of that. Yea.

FG7_2 (T-1:17:37) - Me I think they are all good, but then, at the end of the five years we should know like, all, ... form, structure, the plans, yea, when you get out of the university, cause they all, they're supposed to be in the right way..

FG7_3 (T-1:17:59) - Me I think each and every approach has got its strength and its weakness. Aaah, the very important thing, aaah, a student, a student is supposed to know, aaah, the weakness and the strength of each approach, and therefore at the end of the day, aaah, you can be in a position to determine which, which approach, aaah, can be suitable, aaah, in what kind of situation, because it's not, it's not true that, ok, ... aaah, maybe having the form, having the plan, believing in structure, one of which is, is, is very much best compared to the other. But, It can be very much best compared to the other, in a certain situation. Therefore, a student must be in a position, or must know how to analyse, and how to, to take these approaches in, in, in a very proper situation.

MO - (T-1:19:13) We haven't talked about, well we have brought it up, but we haven't really talked about it. The relationship with your Instructors. Is that a cordial relationship, is it strained, is it just there, you accept it and not worry about it?

FG7_2 (T-1:19:30) - for me it's just there ...

FG7_1 (T-1:19:31) - Instructors in terms of ...?

MO - (T-1:19:33) The relationship between your instructors, you're calling them trainers ...

FG7_1 (T-1:19:37) -Ah, I see lecturers ...

MO - (T-1:19:38) Yea, ... Whats that like?

FG7_1 (T-1:19:43) - Well, sometimes it's relative, and ...

MO - (T-1:19:48) What do you mean relative?

FG7_1 (T-1:19:51) - When I say relative, is, ... uum, ... there is a time when you're like, one side it's good, the other side becomes a challenge, especially when the approach during consultation, maybe you've gone off topic but the way they help you out sometimes it's more discouraging, and when it discourages you really feel there is a lag in the work you have given in, the time you have offered, and all that, and someone is, oh, 'what have you done, this is really ridiculous, I don't expect it out of you and ...', you reflect back with no appreciation and kind of think really brings some challenges and maybe one thing is here we have levels of lecturers, we have the senior lecturers, we have guys who have stayed here for maybe some probably approaching more than five, five years, and we have those ones who have stayed here for about less than five years or something like that. Aaah, with all these groups of lecturers, the way, they approach, I mean when they are offering their instructions, it kind of differs. You find that the professors and the old guys, they really, they know how to handle students, but the medium class, ok, they also have the ability to handle students, but sometimes they have some limitations. Then the, the young, the junior lecturers or the tutorial assistants, sometimes we get a bigger challenge with them. Ye, they try to, maybe during consultation, they try to, to limit a student because of their understanding. Maybe if you try to bring something new, then, they are like no, or something like that. Maybe they fail to understand it then it brings chaos. Sometimes, aaah that kind of interaction with them is a challenge.

MO - (T-1:22:09) Almost there, just a few more questions left. Uuum, now that you are close to the end, or some of you are already at the end, you have experienced pretty much the entire architecture curriculum, the formal architecture curriculum, you've still got a few years ahead of you out in the field. What would you do different if you were to come back to teach in architecture.

[Pregnant Pause]

FG7_3 (T-1:22:48) - In fact before, before you make a decision, that ok I can do so and so and so, .aaah, you must know the root, the root of the problems, or where these consequences comes from, then knowing that, it's easier. I'm saying that, why am I saying that? Because, aaah, the difficulties which we have experienced in the past, and some of them are still existing in the meantime, aaah, they have, they have so, so many connections with the different parts. Therefore, it's not, it's not like a problem that, aaah, they need, aaah, a certain group of people to solve them. That these people, they need to change their mind, or they need to act in this way so that this problem will be, will be off. You need to, to combine, to combine several, several parts. Therefore, your, your personal ethos may not, may not work, may not work, aaah, effectively, or may not help anything. And if you go back to reality, aaah, everything is being, is being, is being controlled, by the politics. Politics is controlling almost everything. I guess, I mean, no, I'm not guessing, but I think, aaah, the good thing we can do, we need to, to differentiate the professions and the politics. We need to take, to take, aaah, the academic issues in a way that they're supposed to be, to be taken, rather than interacting, or, I mean, interacting them with the, with the, with the politics. It's very difficult to solve a, a problem which has been, has been, aaah, has been bonded with the, with the politics interest. Therefore if, if, aaah, I'll get an opportunity to get back here, of course, I'll work as an, an, an advisor, because if you, if you look in the real situation, its almost, aaaah, there is nothing you can do on your own. You can do something, but you need, you need, you need, aaah, you need some supports from other parts. And if you won't get those supports, therefore you can't do anything.

FG7_2 (T-1:25:56) - For me what I would do if I get the chance to come back and teach, I will not own a firm and be a studio master here. Like, I'm having my own firm, then I'm also a teacher here, and to make it worse, a studio master of a certain class.

MO - (T-1:26:17) So what would you do?

FG7_2 (T-1:26:19) - I'll just teach (FG7_1 - Full-time Lecturer) Full-time lecturer.

MO - (T-1:26:24) What proportion of instructors here are actually full-time, and are actually here? Just a ball park figure?

FG7_2 (T-1:26:31) - I think that, ... the list, I don't know, it could be long, but then they're not there. I don't know the exact number.

FG7_4 (T-1:26:43) - You will appreciate that we have two categories of trainers, of lecturers. We have those who work through the university as a firm, and they don't have firms, but we also have a group of those who own firms outside the university. So it's like, for those who have firms outside the, I mean, have firms outside, they devote most of their time there, and they are not available here, but for those who work here, they are available in the offices, so, when someone wants to get consultation, they just fix an appointment with the lecturer, or they can just come into the office and find anybody to seek assistance from.

FG7_3 (T-1:27:33) - On top of that, aah, me I can talk of the attitude. Every firm outside, outside here, aah, I don't think if it justifies someone not to, to spend the required time at the college, or to cover the time he is required to cover for, for the lecture sessions. But it's all about the attitude, because some of the lecturers they're just here, they are not having the firm outside here and there not, they're not doing, they're not doing good as those, some of them who are having the, the, the firm outside here, the campus, or Therefore, me I think it has to do very much with the attitude of somebody also.

FG7_2 (T-1:28:30) - Talking of that, I don't know, whether there is this thing here we get our tutors from what, students who perform best, eh. So, whether you qualify to be a teacher, whether you can teach or not, it doesn't really matter, so long as you have the best GPA, you come hear and you become a teacher. So that, that's why you have people like those. They have all the time, they are employed here, they are full time

employed here, then they, ... they are never there in classes, or they don't deliver that much, the way they are supposed to.

FG7_1 (T-1:29:03) - Maybe to add on what she is saying is, ok some of these lecturers are students also, maybe pursuing Masters, PhD or something like that. So you find like, the time they have for studio is limited as compared to the time they have to, for their studies. So, they have to share the time between the students and also their personal research and believe me even if you were the one, you would want first of all your part to be more what, more eloquent, because it's more possible that one time you will leave the university and you go out there, still when your CV was not working good and they'll be what, they'll be a challenge. So, more likely they will have to devote their work to, their personal work, in spite of being tutorial assistants.

MO - (T-1:30:15) Is there anything else you would like to add?

FG7_2 (T-1:30:18) - Talking of it, but the, the personal experience through studying architecture, I found out that this is a very expensive course. Yea, sometimes a student fails to present their work the way it is supposed to be, not because he doesn't know, but because he is not able, he is not equipped enough.

Focus Group Discussion - VIII (Part II Students)

MO - (T-03:59) So just give me your first name, your year of study, and briefly why you decided to do architecture.

FG8_2 (T-04:09) - Um, my name is FG8_2, I am a fifth year student. Ahh, why did I decide to do architect? Um, I think it was more of ... I started of as .. I always wanted to do it since I was, what's it called, ... since I was how many years old, probably like twelve, I decided this was what I wanted to do. So, I guess you pass through the education system and you get called into this and you get called into this programme, and you pass, and you get called into this other programme, so I think mine just came about as a result of the education system.

FG8_3 (T-04:52) - I'm FG8_3, sixth year student, ummm, why I decided to do architecture, I would say mine is like fate, cause when you are choosing those umm courses in high school, it's, there is very little you've known about the course, maybe it's what other people tell you about it. Yea, and then I decided to choose it.

FG8_4 (T-05:31) - My name is FG8_4 first year student, I chose architecture because I found out from long ago that I liked art and drawing, and I was good at it. Then I was also fascinated by buildings, and the fact that architecture is not just the buildings itself, it's about the human life and it involves a lot more than just drawing, so I want to explore that, and that is why I chose it.

FG8_6 (T-06:00) - FG8_6 is my name, I'm a third year student. I decided to do architecture because it was the next best alternative of a creative option. So, ... I like creative things, and apparently that was the only thing I could find palatable at the moment.

FG8_7 (T-06:35) - My name is FG8_7, I'm a third year student. I decided to do architecture when I was choosing my courses in fourth form, and that is when I noticed it, and I was like, why not architecture.

FG8_8 (T-06:56) - I'm FG8_8, and first year architecture. And, why architecture? Well, I was, I'm always fascinated by, I was fascinated by beautiful things, the aesthetics of buildings, furniture, even products, everything from spoons and forks to cars and clothing. So, it was a natural choice, and then also the problem solving mindset, and I really like these and mathematics, reading, and I like exploring things, especially human beings and how they behave and the mindset, and just by reading through what architects do, it seemed like a fascinating choice, and to have fun.

MO - (T-07:55) To have fun?

FG8_6 (T-07:56) Yea to have some fun ...

MO - (T-07:57) I hope you are having fun ... (laughter)

FG8_6 (T-07:59) - A little bit, sometimes a lot of stress

FG8_9 (T-08:05) - My name is FG8_9, third year student. I chose architecture accidentally actually. I never thought that I wanted to do architecture, it's something that I decided to do last minute, and the more I thought about it, the more it appealed to me and I realised that they are many opportunities there, so ...

FG8_10 (T-08:33) - My name is FG8_10, I'm fifth year. Umm, yea, mine is a beautiful story.

MO - (T-08:42) Yea? Do enlighten us

FG8_10 (T-08:44) - I never thought of being an architect ever. And better still, I joined university to do something else, and a month later changed. I thought of, I could do other course units, but I never thought of architecture. And why I am saying it's beautiful is because ...they are not many students in this position, and I can say I was influenced by a long term friend, she's finished the course from the same department, and yea, the

day I was changing my course, she just happened to talk like a week before that, and she influenced my decision, and I'm here and I like taking it.

MO - (T-09:24) What were you, what did you want to do before?

FG8_10 (T-09:27) - Medicine

FG8_12 (T-09:35) - My name is FG8_12, and my passion for architecture began when I actually was in high school. I used to do drawing and design, and I wanted something that I can combine that passion part and a bit of science. So I decided to, to do architecture because it would give me that opportunity to exercise both art and science, because I actually liked science and the art also. So I was slated to do architecture because that would give me the that opportunity to exercise both art and science.

MO - (T-10:16) What year are you in?

FG8_12 (T-10:18) - I'm in first year

FG8_13 (T-10:18) - My name is, ... my name is FG8_13, I'm a first year student. I've always wanted to do architecture ever since I was small. I got that word actually from a relative cause I didn't know what it was. Eventually I knew it, and architecture it's a, it's a good course, cause by the time you finish you can diversify, you can do a lot of things, you learn a lot, you'll always learn even if you are working, from the engineers and ... the mechanical, structural all of them. You can do interior construction. You learn a lot

MO - (T-11:12) Right, as we were speaking there, they were a couple of things that came up, umm, I think it was FG8_9 who mentioned she joined architecture school accidentally, FG8_10 joined after her first preference was medicine, and, who else was there, FG8_7 mentioned that she made her choice in fourth form. Can you tell me about the application process to architecture school in Kenya? ... Maybe the first years can answer because they are closer to that selection process. What is the process that you go through?

FG8_12 (T-12:03) - Ok for me I can say, the selection is very competitive. Ahh, on my part I've tried to apply here several times, and also in [Named University]. And, basically what I can say because eh at the moment in Kenya, it's like the two major institutions that are offering architecture is [Named University] and [Named University]. So you find that the, because of the high numbers of students who want to venture into the architecture field, the competition becomes very high. Another thing, I think because of the input that is needed for architecture, eh, you find that, because of the, the, the input that is needed, classes cannot be taken lightly thus, so it actually gives more competition that for the large numbers that are trying to apply.

MO - (T-13:08) How many of you actually applied both at [Named University] and [Named University]. ... Only one? ... who applied for architecture both at [Named University] and [Named University]? One, two, three ...

FG8_2 (T-13:25) - But at the, what is it call, when we were filling out our application forms in high school, you'd remember that if you were choosing like [Named University], and you were choosing architecture as a, what is it called, as a, as your first choice, you'd have to choose [Named University] as well as [Named University] ...

FG8_9 (T-13:41) - That's not .. It wasn't a must. Cause I remember I only wrote [Named University], cause here is where I wanted to come. So I decided that if they didn't take me here, then I don't want to go to [Named University], so I chose another course.

FG8_6 (T-13:55) - I think it was compulsory, there is an option where you had to tick more than one ... (courses) ... yea, you could not just put one whatever. Apparently you had to fill in, so you had to put in maybe [Named University], and if you still wanted to do architecture, that is when you had to go further and repeat the same option maybe in another university, that is depending on what exactly you wanted to do.

MO - (T-14:22) Do they require specific subjects?

(T-13:24) Many - Yes

MO - (T-14:25) they do. Which ones are those?

FG8_6 (T-14:27) - Mathematics, Physics, ah, and Geography (Background - Chemistry, Biology), ...

MO - (T-14:37) So there is not ... How many subjects do you do in your final year of high school?

FG8_3 (T-14:27) - Eight, nine ...

MO - (T-14:37) So there is not ... How many subjects do you do in your final year of high school?

FG8_3 (T-14:27) - Eight, nine ...I think the selection actually are for the subjects. It's based on ... there is usually a way they, they they, group the subjects, like there is Group 1, Group 2 ... usually called, but I forgot. There is a group for like sciences, then you must have passed like in two or three sciences, humanities, like that. There's not specific subjects, but subjects in the groups.

MO - (T-15:18) So how many of you, if you applied at both, did any of you put [Named University] as your first preference? All put [Named University]. Ok, so why, those of you who did, actually everybody should probably answer this one. Why was it that you put [Named University] as your preference for architecture?

FG8_2 (T-15:44) - I'm guessing [Named University] holds a reputation. That was my first, that was my first, ... idea, the fact that [Named University] had already, had already had a, ... history, is what I, ... it's very reputable, it's very well known. Ah, [Named University] tended, tended to be, I found like it was a bit new. Yea, it was, according to the universities, it was intentionally, ... the first intentions for [Named University] were, it was a university of agriculture and technology, so I was looking at [Named University] in terms of that.

FG8_3 (T-16:29) - I'd say, my reason was, it's more established, the school of architecture started a long time ago as compared to [Named University], yea.

FG8_4 (T-16:44) - I would say reputation also. But, there are some issues about qualifications of architects from [Named University] like they wouldn't be registered or something. There were some issues, and that one was a bit shaky. And I think also the fact that, ok [Named University] has come up, but then if you compare like the history, you would find that in Kenya, mostly the best came from this place, and I still think the best architects come from this place. This is just the place to do architecture.

FG8_6 (T-17:26) - Ah for me it is basically, architecture is a practical course, and when you try to look at proximity of the two universities and the surrounding environment, you find that [Named University] is more placed in a bush (... laughter ...). So there is nothing that you can learn practically from there. These guys want to make relevant examples, they have to come all the way to town so that they can maybe see ..., but you find that for us, the lab is just there. You just walk to town, you see practical things and, that makes learning easier, so I believe that was a big influence.

FG8_7 (T-18:10) - For me I was initially a student at [Named University] before I transferred to [Named University]. And I tried to transfer my course from ... The course I was doing, I was doing Horticulture, I tried to transfer to architecture, but it became quite hard. That is why I applied to [Named University] [Pause] And also because of the reporting date, we reported in October, when [Named University] they reported in May, so it was more convenient for me.

FG8_8 (T-18:39) - Yea, well I, mine was yea, a bit methodical. I went, I went online, and just looked at standards, then I found out about RIBA, and I found out that ... then I, I, I went to the RIBA website, and looked at international schools that are, that are accredited, [pause] looked at schools that are accredited, and looked at the stages for an architect. I, I used the UK as the standard, and from the UK, I found out about RIBA, then looked at the universities in the region. Looked at [Named University], [Named University], and, and, [Named University]. Then I found out there's stage one and stage

two, and I found out that it's only [Named University] and [Named University], that are stage two exempt for, for RIBA or Commonwealth Association. So that was, that was one, two there was the issue of walking in the old mans shoes, so it feels like I'm basically yea, walking in his shoes, and The other thing then, it came down to [Named University] and [Named University]. [Named University] was cheaper, still RIBA 2, but it's out of town. I wanted to be in [Named University], in the, in the middle of town, in the thick of things basically. Um, the buildings are here. There are other considerations also here, so everything that comes with being close to the city are here. So there was also that consideration.

MO - (T-20:40) That is probably the most in-depth search I have ever heard.

FG8_8 (T-20:44) - It was, it was a lot of soul searching [laughter] to quit my job and come back to do architecture ...

MO - (T-20:49) You were working before were you?

FG8_8 (T-20:50) - Yes I was ...

MO - (T-20:50) As what? What were you working as?

FG8_8 (T-20:54) - I was, I was in Banking ...

MO - (T-20:56) Ok. So what made you make that big move?

FG8_8 (T-21:00) - I was, bored! [Lots of laughter] ... It was routine work day in day out, I had to do a couple of night shifts, I did an audit also actually at the same time, and, and realised, you know what ... There's no formula for life, you, you can figure it as, as you go along. You shouldn't be scared of making big moves.

MO - (T-21:25) Ok, we'll, we'll get back to, to RIBA and, and Validation. I think, probably, apart from the first years, all of you were here for the, the validation last, no 2010. So, so we'll talk about that in a little bit.

FG8_9 (T-21:42) - Um, where do I start, ... I think here from what I heard, [Named University] people are machine minded. They do there stuff, there drawings, they do them very quickly, they do them very efficiently. I just think that [Named University] would offer more creative latitude, and mostly it's to express myself [inaudible]

FG8_10 (T-22:15) - Ok, now that I didn't come here to do architecture, first of all. My reason wasn't really choosing a university based on getting the best out of architecture school, but, yea, my major reason for choosing [Named University] ahead of any other university in kenya was the city link, it's next to the city here, and the reputation.

FG8_2 (T-22:41) - Yea for me, what I would actually say, that in some way it was about, ... I would try to frame it that, you know, architecture to me I believe it's something that you do for the edge, as in, the more experienced you are, the more you become more experienced, the more you get into the roots of architecture. So for me I would actually, I considered the two institutions, and I, I saw [Named University] has that edge in the education for architecture, definitely for the education for architecture, so I knew I would find the best education from [Named University].

FG8_13 (T-23:30) - I had applied at [Named University], they didn't call me, so I landed here. [Laughter] Ok, and a good note is that [Named University] it's far from town, I live in Nairobi, that's another expense. But I wouldn't want to judge the two, cause by the end of the day, it's experience that will sell you, your creativity. So you might get a good grade here, or over there, but when you go out in the field, it's a different thing altogether.

MO - (T-24:03) We've got one more person just joined us. Do you want to introduce yourself.

FG8_5 (T-24:27) - My name is FG8_5. I'm in third year. I chose to do architecture because. ... Well, getting into it, I didn't know to much about it, but when you finish high

school, at the end of forth form you're given a list, a bunch of choices that you can apply to in university, and architecture seemed like the most interesting out of those.

MO - (T-24:56) The next question you asked, we asked was, why [Named University] and not [Named University]?

FG8_5 (T-25:06) - My reasons were pretty similar to what somebody just gave, because it's nearer than [Named University], and also, most of the people who I asked recommended that I do it over here instead of at [Named University].

MO - (T-25:22) Ok, now FG8_8 mentioned that he investigated other universities outside Kenya. How many of you actually did that as well? (Students with their hands up) One, two, two ... Which ones did you look at?

FG8_2 (T-25:38) - I looked at a few in New Zealand as well as the UK, ... and the US.

MO - (T-25:45) Wow, thats quite wide, ... and you settled here. What, any particular reason why you didn't pursue the other ones?

FG8_2 (T-25:52) - Oh, no, no, no, that's not for my undergraduate ...

MO - (T-25:55) Ok, ok, so after the first, first degree, ok ... Um, yea, FG8_10?

FG8_10 (T-26:03) - Yea, thats only medicine.

MO - (T-26:04) Only medicine, ok, yea, ok, yea. And why did you decide hear after all that

FG8_10 (T-26:09) - Ahh, ok I, I actually got admitted to a couple of universities. Umm, but, ok, the, the, the admission times after. Ok, I was to stay for a few months to get admitted there after my admission in [Named University], and again, considering the expenses, it was so may times more expensive to do medicine from those sides than [Named University], and, ok that was another factor, and, yea, after a long inspiration I thought, a couple of factors if I wanted to be prepared to do my Masters, so I felt that those would be answered in my undergraduate [inaudible]

MO - (T-26:59) Umm, this brings another question about your particular programme, which is a split programme. All of you started after the change was made, so I can't ask the question about the changeover. Umm, what do you think the benefits, or differences are between the two systems, [Named University] has a single one, but you're in a programme where you have the first four years, Bachelor of Architectural Studies, and then two years, Bachelor of Architecture. I think FG8_2 has already mentioned the opportunity to go to another university. What are your, what is any one else's take on that?

FG8_8 (T-27:39) - That was, that was that's another thing I forgot to mention. The, the split was very important for me to make a decision, because, I looked ... The deciding factor between the two, the two universities, [Named University]. It came down to the two of them, and there were, there were a couple of, things that I mentioned before, that was also another one. The fact that, after four years, ... you, you, have options, you can more on, the adventure can continue.

FG8_6 (T-28:17) - I'll, I'll want say that, umm, that is the only thing that I don't like about this university [snickering] Yea, because I, I want to believe if the slit, as my, my friend is saying here, sorry for using you as an example, that you reach at four and it gives you options, you know. That is not, it doesn't cultivate a good spirit for a person who was sent to do, to do architecture from the very onset. You'll find that, that is my belief as well as opinion, I'll reserve it. That if, we're supposed to, to, to look at the six years, one gets to, to look at the whole thing more seriously, cause, cause you know that you really have to, the target is a bit far, you know. And the kind of energy you put in there then, the way you'll want to, to bring things all together, it is more different as opposed to, to the way you'll want to do it with the two split tier kind of programme. So I, I, I, tend to believe when you go all the, the, the way, and that is why they are calling them machines. But ah, the truth is even in the market, you find that these guys are more

preferred, um basically because of that intensity, these guys undergo, very much intense kind of work they do, that is when you try to look at [Named University]. I was, I was in Edon International, it is an international firm, and all the guys who were employed there are mostly, are guys from [Named University], you know, and ah, the question was ... The, there is a guy who actually applied to go there and he had a first class from here, and, you find the other guys are second class, but they were employed there. And you try to look at the intake, because of course questions have to come, the market is where we are heading, it's not England, so apparently why, why make such a kind of choices, and you'll find it will have to come to the kind of ... the way we are taught, and the way we are prepared psychologically for, for the market, and you find these guys, because of the intensity, they have to look at six years, that is when I can make it out of campus, but for you, you have to look at it first, I make four, then from their I'll, I'll maybe continue on to finish and stuff. So I believe that psychologically affects how, how we think and look at architecture.

FG8_10 (T-30:46) - Maybe I just, um, yea. To comment about the programme, ... the, the system here. I think they, there just letting people [inaudible word]. It has its merits and demerits true. I think it's a good thing to, to, to have been implemented, but again I think, it wasn't probably well thought before it was done, and maybe something more has to be done. Ah, for instance we can't say we didn't have similar opportunities after the first degree, fine. Ah, my classmates, we graduated last year, and even though I'm a sixth year, but maybe we ... As much as we have the degree, it's not something you can really miss, ok you're proud of it, but it's not something you can really do much with. Um, there is something I just learnt last week, even our own university, the Department of Planning, they can not admit me to do a Masters in Planning. Yet I am meant to be, I'm meant to understand that we have a degree, yet my own university doesn't recognise that degree, to allow me to do a Masters in a related field. If I go outside to get, to search for employment, I will be with someone, just in someones office, not even a technician, I'll be taken, ... I don't have any, ... (background - profession) anything much to show for it. So better still, the registration bodies, they don't recognise this. There's nothing you can be registered with this degree, so ... I think it's a degree just there. It doesn't have anything to it. So, it really, we need to continue the system, something has to be done, yea.

FG8_8 (T-32:30) - I'll disagree with both you guys. For staters, um, our, like I said, our, our, er, ... The RIBA system in the, in the UK is three-two, three years, two years then two years. Um, ... stage one is first three years, which is what, I think that's what, that's where the direction our split has taken, the first four years is what the UK covers in three year, then the fifth year and sixth year are what they cover in their stage two, and we are accredited for stage two. Anyway in, that's what my research added up to. What I meant by option was, look I've done the equivalent, my four years is equivalent to UK three years, yea? So I, I should be able to transfer to the equivalent in South Africa, to the guys who have finished, ah, the first stage. So if there's a common standard and we are all part of it, it should be easy, it should actually be inter ... , interchangeable, you see, eh, as, ... What I meant by, by option is, yes fine, I've, I've done four years, I don't feel like, I don't feel like architecture is the thing for me, you know. There, there, there're no fixed rules about what should or shouldn't be in life, you know.

MO - (T-34:03) Just, just eh, following up from that, both sides, we can probably go a long thing on this line of questioning. Do you have many students going to do other courses after the fourth year, and do you have students coming in at the fifth year? (Students shaking their heads) No? Ok.

FG8_10 (T-34:26) - I can give an example. From our last, our last class after graduation, it's only one student who never came back.

FG8_3 (T-34:35) - Yea, in our class, there were only two students, who later came back to fifth year.

FG8_2 (T-34:41) - The only, the only thing people tend to do is take a break after fourth year. They decide that maybe they want to, you know, go work for like a year, then come back and do their fifth year.

MO - (T-34:52) Interesting, um, it was interesting hearing both sides, cause [Named University] looks at it in a completely different way, the students there. [Laughter] Um, I've handed you out my business card there, how many of you have actually heard of that university? (Raising Hands) One! Ok, Two!

FG8_8 (T-35:15) - I've been there, not heard [Laughter]

MO - (T-35:17) Ok, you've even been there, ok ...

FG8_8 (T-35:19) - I'm from Uganda, it's, it's a few minutes drive from home.

MO - (T-35:25) Ok, every single university I go to I find a Ugandan [Laughter]. Ok, um, the question is how many knew that this university also has a split programme. (Raising hands) Ok, yea - only one. We actually started the split programme in 2000, [Named University] started in 2004. Very similar questions are still arising about what we do after the first year, eh, the first degree, and how many come back. Interesting, in our case, the number of students that return is less than 50%. There are other reasons for that, and we can discuss that afterwards. Um, but because we are on this line of thought, a very key question comes up, um, we've mentioned the fact that when I go into a, a single degree programme I know exactly what I am going to do. When I come to a split programme, there are lots of questions: what am I after four years? So the question I have to ask now is: what do you think is the purpose of architecture education? (Background - Pardon) What is the purpose, what do you think is the purpose of architecture education?

FG8_6 (T-36:41) - Well I would want to say that the purpose that is as to why we, we study architecture is to enable us to, to be able, in terms of professionalism, to, to create buildings, to, to create spaces and stuff like that. So, so, if um, if one is going to be educated in architecture, at the end of, of it, you have to show that you are able to make buildings. You are able to, to look at ah, environmental factors and try to see how, how people are using the buildings, the building science part of it, trying to know how you are going to use materials and all the relevant issues that are supposed to be applicable when you are coming up with a built environment. That is, that is what should define one as a person who is educated in architecture.

MO - (T-37:42) Ok, any other opinions on what architecture education is?

FG8_4 (T-37:50) - I would say, first it teaches what other architects have done, because what we do mostly is what has already been done. And then it's to solve problems in future, by, through our own creativity. Um, in first year we haven't really, I wouldn't say I've seen it in class yet, but I think what they are trying to do is creativity mostly, not necessarily a standard, like a standard system of this is what you do, and this is the limit.

FG8_13 (T-38:33) - Um, I also want to add that, what we are being taught is that we are not just going to draw up a building and it's going to appear on our what. I think we need other people to put the whole thing together, not just building everything.

MO - (T-38:50) Which people would you say?

FG8_4 (T-38:51) - Engineers, Quantity Surveyors, everyone else, we need all that.

FG8_8 (T-39:01) - I think that, you, you study so many different things and then you come out of it ..., um, ... um ... , to solve problems. ... That's one way I look at it. Because you study all these thing: law anthropology, psychology, and other things that are common courses here, and basically, that's one result that you are going out into the world to solve problems, ... that's that's one way I look at it, on top of the other opinions.

MO - (T-39:52) Ah, we've raised an interesting question again, um, we're talking about other disciplines, solving problems, profession, professionalism, getting tongue tied, professionalism, you have to say it fast, it's much easier. Which brings

up another question about, um, how the course is structured and for this I'm talking about what we call, most architecture students, or most architects think is what is the core of the programme, which is design, relative to other courses: law, planning, building science or architectural science. How do you say that is handled here? So is it, is it done as, um, you have a design project, and then all the other, I guess what you would call support courses are taught around that project, or is the project, which is the design studio, taught separately from the other courses?

FG8_6 (T-41:17) - As for that what I can say is that, we, we have what we call studio, if I can interpret what you are trying to say. Um, that is where you do your projects. And it is your obligation to use what you've learnt in these other courses, that is: law, building technology, building science, to apply them on ah, on the project that you've been dealing with. So it is ah, it is you as a creative person who goes and, ah and fetches all that information that is relevant to the project as per the other teachings that is. So you'll find maybe what they can do when you are doing the project, the lecturers that is, the studio team, they'll make reference, they'll just make references to maybe some aspects of building technology, building science and ah, then you're supposed to. Now because it's more of like ah, the presumption is that you've been taught and ah, you're not, they're not supposed to be like, to start repeating the whole thing, so. You're supposed to use that information, or knowledge that you have earned from the other disciplines, and apply them relevantly into it.

MO - (T-42:32) Is ... now, you are in, you are in third year. How is it dealt with in the Bachelor of Architecture. Is that, put it, is it more explicit or not as to how different courses fit into the studio, or feed into the studio?

FG8_10 (T-42:53) - Um, ok, more in my answer, actually ... when, when, previously when we had CAA accreditation. It's for, one of the recommendations was as a department we need to like really try to, to integrate the theories and the, the studio design projects, because it felt, as much as all that we are doing is relevant, sometimes we, we do, we do. [Background noise ... inaudible] ... Like for instance we find, we ... [Background noise]

MO - (T-43:33) Sorry. I, I will probably be able to hear it, but I, I, I will let them go past. [Laughter] It happens. When I was in [Named University], the same thing happened, cause I was actually out on a balcony interviewing people, and they kept walking by, could't hear anything. So it took me twice as long to transcribe. Anyway please go on, sorry.

FG8_10 (T-43:55) - Um, so you find maybe you're been given an introduction to something like, Theory of Structures, that is specifically the structural engineering bit of architecture, and then you realise that you don't have the right application to that particular design project. As much as you did theory, you didn't do that. So, actually what they, what the team was proposing was, we try to have, ah, ok, not just ..., probably we have the same, the same tutors for the theory subjects to be part of the studio team, and that way they will be able to directly, have everything applied to all studio designs, and that way ... [inaudible]

MO - (T-44:44) Must be a common issue around East Africa.

FG8_6 (T-44:48) - The, the only thing I can say is, that thing has really many disadvantages.

MO - (T-44:52) Which?

FG8_6 (T-44:53) - The, the idea that you are supposed to make presumptions, that, um, um, the, the teaching is happening, the, the technical, other subjects maybe is, it's happening on its own and you are supposed to, as a students to bring it, onto your studio project. Because apparently you might find that you have not been taught on certain aspects. Maybe the lecturer doesn't, doesn't make appearances and so forth. These are projects which requires some of the stuff that this guy should be teaching. So

you find that when you, you, the studio team is expecting you to be understanding these things, maybe to, to the level that they are giving you that project, but apparently that has not been given unto you. That is by the, the lecturer who is supposed to teach you at that subject.

MO - (T-45:47) Ok, um, as I said we'll get back to the, the RIBA and the CAA Validation. Obviously that has had an impact on what has happened in the last year. Those who went through that, what can you tell me about that process and, ... I'll, I'll go one step back, um ... I think it's, Sam rightly pointed out that there are, the number of universities in East Africa that are validated by CAA and RIBA, they are two in Kenya, and as of December last year, one in Uganda, right. So now they are only three in East Africa which are validated, so that's [Named University], [Named University] and [Named University], the only three. Where do you see, how do you see that factoring in to what happened in the last year of your education, cause [Named University] was done, is it November 2010? Is that correct? I know I was here just before it, so ... so I think, yes it was November 2010. What was your experience of that and what impact did that have on what happened in 2011 into 2012? ... Not many people can answer that ... one, FG8_9, FG8_10, FG8_3, FG8_2, FG8_5, FG8_6 and FG8_7.

FG8_8 (T-47:27) - I wasn't here.

MO - (T-47:29) You're not, yes, sorry, yours is easy [Laughter]

FG8_10 (T-47:36) - Um, maybe what I point out is, ok during the CAA, they did not meet all the students. It was like a team of a few students like this. So they were trying to find out ... Ok, I can say every student was represented, cause we had like a, a few students from every class, but maybe now, that would not be the case here. But, what I would say, um, when they were closing up, the, the, the programme, we had like a, ... um, what would you call it, a small workshop where they gave the reports, and recommendations, and I think at that point we got to know what was done and all that. And I can say maybe some of the things we can see from that is, like the recommendations I spoke about, about having the same theory tutors being part of the studio team, I can say for the fifth years, the last semester that we had. So most of the theories, you'll, you'll find the tutors were are teaching, while at the same time, picking up very important points, elements that we need to probably focus on in our studio designs, and I think that is really positive.

FG8_9 (T-49:00) - Because by then maybe I was in first year, I don't really remember, but, I don't see a big difference. I think things are just like they were before. ... Um, only that this time, like in third year now, we are being asked to take our studio projects to class, maybe for building technology so that, ah, we understand it better, so I think that aspect is positive. Then we'll be able to make connections, but otherwise, things are like before.

MO - (T-49:40) Any one else before I move on, move on to talking about building technology, or building science as various people call it. Um, we have a number of different areas of building science. How is that approached here? Um, I'm going to split it into two areas, in terms of technology: architectural science, and computing. I want to know about these two areas. Um, how is that approached here, how is it implemented in design studio, and on the computing side particularly, what programmes do you use, what is the focus, do you have separate classes for it, or is it left up to you? How is that approached? So that's, architectural science and computing, and I am deliberately calling it computing than anything else ... [snickering in the background - students having a snack] Yes it's hard to talk when you've got food in your mouth isn't it?! [Laughter] ... we'll start with computing first, maybe that's easier.

FG8_6 (T-51:04) - My, ... What I know is ah, computing is introduced at first year, that is when you try to be exposed to, to the programmes that you can use to manipulate your drawings as well as designs. So usually you find there is an exposure to the Adobe

family, as well as Archicad, and other computer aided design, designing programmes. You'll also notice that, ah, ... at the same time you are being introduced to computers, you are being discouraged to use them, um because of now what you, you called initially architectural science, because there is a certain belief that goes very strong, that um, architecture begins with hands, that is sketching and drawing. You'll find, as much as you, you are being taught about computers, initially towards computers, they think they know better. When did you start to use computers?

FG8_3 (T-52:11) - Um, third year. Yea, ok, did I cut you short? Ok, we're, we are encouraged to use the softwares as drafting tools, not designing tools. That means you have to start with sketching and then later that's when you incorporate the softwares.

FG8_6 (T-52:30) - Yea, because you find that ah, for, we were told, that is what we were told, that it was, we were the first guys to be able to use computers at second year, that is, um, and you ... They make things easier. You know, because as much as somebody is going to tell you that you use computers as, as tools, it is the same way you can use a pencil, a pencil is also a tool, so ... I, I believe it, it should be, it should be something that is open, because what really matters is what justifies the, the means, which is the end, so Yea, you'll find that the result is that you first do the architectural designs, that is graphical and sketching and stuff, prior to moving into the computers, as much as they are introduced at, as early as first year.

FG8_9 (T-53:27) - I think it's really important that we are encouraged to use, to think it out first, and maybe sketch a bit, before we go to, into computer, because what happens, even before when we were in first year, or in second year, we were given maybe computer work is a lot of happy accidents. Like you do something, and you realise, oh, it's like, it's done, you're happy with what came out, you didn't really think about it, it's an accident, it's there, it looks nice, so you stick with it. Now, it's not something that you thought of before, and something that had functionality, something that just occurred. So I think, um, it's important what they are doing, asking us to sketch first, before we really move on to the computer work.

FG8_10 (T-54:12) - Um, in our case, it's not that we are taught in class, it's not that we have a computing skills unit, we learn these things on our own.

FG8_12 (T-54:26) - But for (Talking over - first year) first years, we've been lucky that we have, (Talking over - a separate studio) a separate studio (Talking over - adobe and archicad) ... for computer aided design (Different people talking over). ...

FG8_8 (T-54:37) - We haven't gotten into Archicad yet. We started with the Adobe design suite. Um, we actually started with, the first exercise was Excel and then Adobe. But you can imagine what Excel has to do with architecture.

MO - (T-54:53) Hmm, who wants to answer that one? [Laughter] what has Excel got to do with architecture? He's questioning, and he was in business. [Laughter]

FG8_8 (T-55:03) - It was, it was, it was, it was, that was one of my worst nights.

FG8_6 (T-55:08) - Sometimes you can use it in making reports, so you can't just throw it out.

FG8_8 (T-55:13) - Yea, but, but the question was, define architecture, and use graphical representation using Excel? [Laughter] that was the first assignment!

FG8_13 (T-55:22) - But they actually told us that we shouldn't (interruption), oh, let me, they told us that we shouldn't rely on one media, or software, in our problem to be doing all this architecture, actually we need all of them, and all this we are doing for presentation purposes.

FG8_8 (T-55:40) - The, the interesting thing about that particular class, is probably the approach from the tutor. You know, it's an encouragement to think, ah beyond the product of the drawing. It is the encouragement to ... Um, he, he, he opens up the discussion, it's not really about the focus on the technology, it's thinking the design process. He tries to discourage the, ... how do I put it, the over dependence of IT as a

means to an ends, as opposed to you going through the whole process of developing an idea, testing it, and then presenting it. Yea, that's what I've, I've picked from that.

MO - (T-56:34) Excel is actually going to be your best friend. [Laughter]

FG8_2 (T-56:38) - Maybe, just to add on, on that, you also notice that during that class, actually, eh, from the assignments that we were given, there more, there, they, you really need to think much before even you get hold of that mouse [laughter] Eh, because, I think he is trying to ... To tell us that, as much as you a computer, you have to think first before you, like there is an assignment that we were given, you had to listen to some music, Bob Marley, and then come up with a poster. So you see [snickering] its very hard for you to just go into it and you, the computer and you have to do the assignment. You see, you have to think about it first, what does the lecturer want? So I think in other words the way you are saying, they are trying to tell as that, as much as we have the computers, they are going to be a drafting aid, eh, tools. But we have to think first before we get on with the mouse.

MO - (T-57:43) Ok, ah, I'm going to go a little bit past that. We've talked about computing in the 1-D environment, talking about Excel and Adobe, a little bit about 2-D, drafting, 3-D, Archicad, how about 4-D? Does anybody know about computing in the 4-D environment? Anyone heard of it?

FG8_6 (T-58:07) - Virtual reality?

MO - (T-58:08) Ahh, that's one part of it, yes, there's a bit more [pregnant pause] Using computers as information modellers, rather than just presentation. So we are talking about, um, energy performance modelling, um, wind flow patterns, looking at Building Information Modelling (BIM). Um, how many of you have dealt with that? Is it actually taught? Is anybody aware of it, as in the instructors?

FG8_2 (T-58:51) - Are these programmes like Athena Calculator?

MO - (T-58:56) Which one?

FG8_2 (T-58:56) - The ones you are talking about, the 3D?

MO - (T-58:58) Ahh, the 4D?

FG8_2 (T-59:01) - Ok, yea the 4D.

MO - (T-59:02) The 4d, well, things like AutoDesk Ecotect for instance, um ...

FG8_6 (T-59:09) - Things like, as in measuring the temperatures ...

MO - (T-59:11) Yep ... predicting temperatures, predicting sound patterns, etc.

FG8_6 (T-59:15) - you have. That is, that is not something that we are taught here. In terms of, as far as I know, maybe somebody can correct me, because I am not familiar with fourth to sixth years. But as far as I've gone, that is not something that you get taught here. But what we are taught here, that is the the architecture, that is the building services, that is where you are taught. But when it comes to computers, you are told, there are softwares which do these things, and it's up to you to go to the internet and try and see whether you can find those softwares and see how they work. Mostly it is self inductive learning. Yea, that is all I can say.

MO - (T-1:00:03) Now, which programmes do you use for your 3D CAD work and your 2D CAD work? You mentioned ArchiCAD, anything else?

FG8_10 (T-1:00:10) - Sketchup, Artlantis, Piranesi ...

MO - (T-1:00:19) Which one?

FG8_6 (T-1:00:21) - Piranesi ...

MO - (T-1:00:21) This is the third time I've heard this one? [Laughter] Piranesi. I went, I went, the first time someone mentioned it, I had to go and look how they spelled it.

FG8_2 (T-1:00:29) - 3D Max ...

MO - (T-1:00:35) Ok, but they are mainly on your own accord, they're not. The ones that are formally in the faculty are which ones?

FG8_6 (T-1:00:44) - We, we don't have a code for that. It's it's your. The way you are comfortable, and what you really think is good for you, that is what you use.

MO - (T-1:00:54) Ok. Not a problem. Right. We're not getting controversial yet, so let me spice it up a little bit. [Laughter] Someone has to. What do you like about the approach to architecture education at the [Named University]? Off course you know what the follow up question is going to be after this one. [Snickering] Yea, what do you like?

FG8_9 (T-1:01:30) - I like that it's practical. We are given projects that are physical, though the result is not really that, but you can, you can see it and you can start from scratch, so I like that it's practical.

MO - (T-1:01:47) What do you mean by practical?

FG8_9 (T-1:01:49) - We get projects in town, like on empty plots, so that makes it more real.

MO - (T-1:01:56) So you get real plots!

FG8_2 (T-1:01:58) - I like the fact that, um the projects are, what is it? ... like um, relate to what is going on in the country like at that particular time. Like last year when we, when we were doing the counties, when we were doing the assemblies, when we were doing the migration boarder points, it relates to what is happening like at a bigger scale.

FG8_4 (T-1:02:23) - I like the interaction with the lecturers since we have nine hours of studio every week, um, and also the fact that during pinups, there is ... , I would say healthy competition, because it's comparison, and so and that pushed you up.

FG8_6 (T-1:02:46) - I would say something about the freedom. No body is on your back. Ah, as in you, you, you can decide to do your project at any time, so as long as you be in time, so it's ... [Snickering] it's something that is quite good. So you just measure and weigh how, how swift you are, how good are you, when does creativity strike you. So if it strikes you one day to pinup, that is when you do it. [Laughter] It's quite free, it's democratic.

MO - (T-1:03:23) Told you this was going to get controversial.

FG8_10 (T-1:03:25) - I think I would like now compare it to the other courses. Our mode of teaching we probably get to learn. It's a bit not normal really. It's like, you make mistakes and you learn, or. ... You're always being exposed to new knowledge through sharing it out. You try a design approach, and if it doesn't work, you have to change certain things. I think that way it prepares you for even other aspects of life. In a way it makes you flexible, you can handle even other social matters, and other things in life differently, from maybe relating with other students.

MO - (T-1:03:58) What do you mean "it's not normal"?

FG8_10 (T-1:04:01) - Ok, ok, maybe normal is not the word to use. But it's unlike other courses where the, the tutor will come and tell you, 'this is the course outline, go read this and this and this, and then the exam will come from those notes and such'. Now in our cases, the nature of yea, architectural design projects is, ... you try different alternative submissions and you pick out the best alternatives. So you are not being told, taught by someone who is, 'this is the way to do it'. So, yep, that aspect of it.

MO - (T-1:04:35) Ok, so they are no set answers.

FG8_9 (T-1:04:38) - and I also like that ah, it's an informal learning environment. We don't sit the way other people sit. We don't have to go down one line specifically, or do stuff the other people are doing, to use So it makes learning easier because the lecturers

are approachable, you feel you can learn comfortably, and ah, ... what else do I want to say ... [Laughter]

FG8_12 (T-1:05:08) - Also maybe, just to add on that, eh, I'd also appreciate the, the learning environment. As in if you go around the, some of the, the schools and maybe campuses around, you notice that the environment here is very good. We even receive students from other areas who what to study, make their studies within this building. So I think for me, this building is quite, the environment is good, a quiet environment, eh, few population, eh, small library, but the entire building is like a library because of the environment. And also another thing that makes it more interesting to, to, within this school is that you, when you are in class, the, the approach is quite different, as in there's nothing which is wrong and there's nothing which is right. It is a matter of arguing out your ideas, so it really opens up your mind in terms of thinking, in terms of exploring other things, and we also learn from each other. Today you come, think that you've done the best, pin up your work, and you notice that you are not the best, [Laughter] so for me I think that is, is a good learning strategy as compared to other classes who are doing a lot of theory work, a lot of reading, and other ...

MO - (T-1:06:46) Ah, so now we are getting into the real discussion here. We mentioned, um, we mentioned ah, freedom, freedom to do your work on your own, no one is on your back, because as long as you pin up at the end, no one's worried. Um, now, this has come up before, um, in all the other focus groups, this idea that, how we work in studio impacts what happens at the end. What can you tell me about, about the way studios are handled? Um, trying to work out a good way to put this. The feed back which happens within studios, is that considered part of the assessment, or it's, is it mainly informal and all your grades are allocated at the end? All your marks.

FG8_7 (T-1:07:51) - Ok, ah, for projects we usually have desk crits during the studio hours and ah, after lets say after a week, we get an interim pin-up where we are given grades and ah, in our class we get hand out sheets to know how we performed before the next interim pin-up again. But at long last, after the project is done, ah, we get our overall pin-up, yea, with our overall grades.

MO - (T-1:08:18) So the marks are split up along the entire project? [Nodding] Ok, just wanted to clarify that. Um, we talked about staff in the courses, maybe we can go through and tell me how many students are in each year by the way. In first year, how many students do you have? (Softly - 88). Second year? Do we know? No idea? Third year? (I think that, I have a friend who was telling me they must be around 49 .. 60)

FG8_9 (T-1:08:56) - 70, yea, because we are, we are 60, and you remember they came in when they were about 80.

MO - (T-1:09:06) So third year, there are 60?

FG8_9 (T-1:09:07) - Yea, they are 60.

MO - (T-1:09:08) Ok, forth year?

FG8_9 (T-1:09:11) - 56.

MO - (T-1:09:13) Fifth year?

FG8_10 (T-1:09:07) - 53.

MO - (T-1:09:18) And sixth year?

FG8_3 (T-1:09:19) - 36.

MO - (T-1:09:22) So in first year there are more students than in our entire Department? Ok, so in terms of that, the next question is the student-staff ratio. In this case, we will refer mainly to the studio I guess. How many tutors or studio tutors per student? Oh, the other way around, how many students per studio tutor?

FG8_3 (T-1:09:19) - I don't know if they have changed, but there usually like four tutors in each class. The studio team I mean.

FG8_6 (T-1:10:04) - There is usually, there is usually fours, and one won't come ... but maybe he doesn't come ... [Laughter]. Yea because I remember in first year, that is what we were told. All the way actually, usually we are told, usually we are four and there is another one. [Laughter]. The other one comes maybe when the semester is ending, or sometimes technical appearances, that is the truth.

MO - (T-1:10:29) Ok, so ...

FG8_12 (T-1:10:31) - But I also think in, in first year, you can't really say that you are allocated in terms of one lecturer for a group of students. What they've done this time, eh, because of the large numbers, the, our class we have been divided into three eh, groups: So you find we have Studio 1.1, Studio 1.2 and Studio 1.3. But we are just one, one group, only that now, for the purpose of, eh, sitting arrangement, and making use of the sitting space, we had to be sub-divided into three groups. So the lectures would go, some would start from the other side, the others would start from this other side. At the end of the day, all the lecturers will have a look at your work. But when we have an input that needs eh, maybe more clarification, we come together so we get it from one central space.

MO - (T-1:11:27) Ok, ah, ok, we have somebody new joining us. Do you want to introduce yourself.

FG8_11 (T-1:11:36) - I am FG8_11, a forth year.

MO - (T-1:11:41) Ah, we finally have a forth year. ... Ok, um, ... Just briefly can you tell us why you did architecture at [Named University]? And then the other, the second question is, what you like about it? Since you are at the end of the first degree. ... Why did you do architecture? Why did you do it at [Named University], and what do you like about it?

FG8_11 (T-1:12:18) - Why I did architecture at [Named University]? It was an interest I picked from, I had a relative who was an architect, so at times we would go together to site, so it's where I picked my interest from. Why I chose [Named University], was because of the connections, and the freedom that they give you as you do your design, and ... what I like about architecture, creating something out of nothing.

MO - (T-1:12:50) Good, now. ... We are not getting controversial yet. Ok, lets up the anti then. What do you dislike about the programme?

FG8_9 (T-1:12:58) - The fact that we are many. We are so many, ah the lecturers, [laughter] the ratio of between the students and lecturers isn't, isn't sufficient. Like, in our class, we are 60 and we have four lecturers who come, actually three who come, oh yea, three who come regularly [Laughter] and there are two others who don't really make regular appearances apparently so we have three, and we have really hefty projects. So by the time you get a crit from one lecturer you've taken really long and you have. We are dividing 60 by 3, so you have 19 other people who would like crits, so if he crits three people in one session, but he is not really getting to the others. So we have serious problems.

FG8_4 (T-1:13:52) - Ah, for the theory units, I dislike the fact that. Ok, first of all, to train an architect, you need an architect to train an architect. But then we normally have, ah staff from other departments, like um, ... lets say for example if it's maths, and there is someone else who teaches maths from another department, yes they are probably more qualified, but when it comes to linking it to architecture, they, they wouldn't know much about it, and it's a bit frustrating we're unable to understand.

FG8_6 (T-1:14:29) - I think that that normally happens for the foundation units. So that you're taught, for example, using the example of maths, you will be taught the basic concepts, then when you get to the higher years, when you start doing things like Theory of Structures, you will need to basic, ah, foundation that you were given in Mathematics

for Architecture. That is where the connections start appearing. Cause I know at first even when you are doing things like Sociology, Anthropology or Maths, you sometimes wonder why you are sitting in this class. But later on it starts to make sense I think.

FG8_5 (T-1:15:07) - I, I, I dislike very many things that people do here. [Snickering] One of them is ah, sometimes, you ... it's not dislike, but as in you don't like how, how, how maybe our lecturers handle the studios themselves.

MO - (T-1:15:28) And can you elaborate on that?

FG8_6 (T-1:15:30) - Ah, you'll, you'll find that, um, ... the way sometimes, you know how you can, you can, you can, sort of set the mindset of students that apparently today being something that we are going to do, and when you don't turn up, or you keep postponing things, that, that doesn't augur well with the creative mind. Then you find um, as well as um, I don't know whether these guys knows, but um, I also dislike partiality.

MO - (T-1:15:59) I beg your pardon?

FG8_6 (T-1:16:00) - Partiality, you find, ... sometimes it doesn't really add up on how, how, how we are rewarded grades and stuff.

MO - (T-1:16:14) Going to get back to that one, cause it's an interesting line of thought. Seems most of you like it. [Snickering] Let's talk about the partiality and the relationship between students an the instructors. ... What are your experiences about that one?

FG8_4 (T-1:16:34) - I think ah, what I've experienced before. We, we had a first pin-up, then of course they graded and then they know who are A students, who are B, C, Ds. And then ah, during the next pin-up obviously they'll expect this person to get an A obviously, but even if the work is not that (background - good) that good, and then the fact that this person got an A, it means that in studio, the lecturer would be more interested in seeing what that A student is doing, rather than (background - a B student) [Laughter]

FG8_9 (T-1:17:16) - I think mine, our, our studio team was different. I do not know if somebody would disagree, because ... we were given chances to change. Because I remember we had our first pin-up and ah, there were some people who didn't do very well, but then at the end they started getting better and better, till maybe ah, they get to the top. So, I think they give us an opportunity, but they don't really fix people into ah, specific boxes.

FG8_8 (T-1:17:51) - That, that could also be a factor of how, how you handle ah, how you handle um, whatever challenges you go through as an, as an individual. Ah, they are not giving you the attention, you go out and get it. You feel you deserve a better grade, you ask for it. So, it can help clarify certain issues. Basically I try ... sometimes ... to ask ... you try to, you try to, you try to you know, ask questions, and, um, be heard.

FG8_11 (T-1:18:37) - Um, yea, I think I'm supporting what he said, because what I've noticed is that if you take interest in what you are doing, and you actually follow up with your lecturers, they will start giving you that attention. If you are not that good, they give you that help that you need. That extra (Background - Is it supposed to be that way?) ... sorry?

FG8_6 (T-1:18:55) - What I don't know, is it supposed to be that way that ah, you are not supposed to be given attention because you are not good? I believe it shouldn't be that, if you are not good, you are supposed to be given attention, equal attention because all of you are students, so that you can improve, rather than, you know, upsetting classes and openly doing that. Somehow it discourages others, and it, it spells out your doom.

FG8_8 (T-1:19:19) - The, the issue of setting classes of this is A grade and this is B grade, is, ... for me I don't, I don't see it, cause in my studio, they move round, move round trying to run each table, you have ... we are split up into two, three zones. Ah, we,

basically equal distribution of students. You have, ... four studio masters, ah, lecturers coming in, and starting, one starts from the other end and maybe two from this section and then they switch off. At the end of the day, if you're keen, you have gotten about three comments, which for me is good enough cause ... Then I go back and think about, oh, he said this, he said this, what's the middle ground, and how does it relate to what I want? ... That's my take on ... If you are quiet, sometimes you will get passed over, such is ...

FG8_13 (T-1:20:11) - If you're not good they won't pay attention, you have, it's a two way thing. You can't come sit at the panel, and expect them to come over to you. You have to go looking for them at the same time, so you are not being neglected, it's you.

MO - (T-1:20:25) So, so the, the idea of followup, that brings up another key issues about feedback as part of the process here. Ah, do you think you get enough feedback, particularly particularly during the interim sessions, interim pin-ups to help you move forward?

FG8_7 (T-1:20:40) - Yes, ah, ... Ok for us, for the interim, ah, they, ah, they use a form sheet to, to grade your marks, ah, depending on, lets say it's sketching, ah, design with models, and ah, response to site, everything. So from that we grade how you've responded to everything, then they give you a copy of the sheet later on. So I think we get enough feedback.

MO - (T-1:21:10) Is that true for all the years? No?

FG8_12 (T-1:21:24) - I think for me what I can suggest, I am saying that, you see when they are doing the interview marking, the good thing it's not one lecturer who is, who is giving the marks. So, you find that they work in groups. They, they, they go to each individual projects and, lets say like [Inaudible] ... they look at it and then decide what to give you. I don't really know if that's how they do it, but I usually see them working in groups. They'll come to your work, look at it, and then by the time they are moving to another person, they have decided on the grade they're giving you. So for me I think if, if the three lecturers, or four, that contribute to giving you that grade, then I think that is the right way to approach the marking.

MO - (T-1:22:19) Ok, so are you given, um marking criteria before you are graded? ... Yes you are?

FG8_10 (T-1:22:32) - Yes, I would say yes, because for every project, you are given a brief, which is guiding yea, the, the students. So at the end of the day that is what they use to, to grade you.

MO - (T-1:22:47) Um,related to that, do you do, evaluation, ... Ah, I would't say evaluation. Do you evaluate your own work as you go along, or are you taught to do that using the same marking criteria?

FG8_6 (T-1:23:05) - You, you, you, you have to evaluate it, because um, for us, third years, it's more of, you're given things which are like report cards. So you'll find what exactly, there all those areas where exactly they're paying, they're paying attention, it's model making, the perspectives, the layouts and everything, so you'll you'll see where, the submission of all that work to give you a certain grade and how exactly your grade comes about. So if you find that you've maybe you have a D or something in um, in um, and that is what is making you to fail, maybe in model making, then you can go and maybe ask what exactly I have to do, you can consult and maybe improve.

FG8_12 (T-1:23:50) - Another thing that should be reflected in all levels. I think it would be a good idea, if you know you are failing because of painting, or maybe because of sketching, because if you are just given an overall grade, you really don't know where you are, where the, the catch is. But I think for, as an individual, you also know your weakness, you always know that I'm not good in sketching, and that one is clearly shown, because you find that maybe you have three pieces of sketching but 15 pieces of painting, definitely you have a problem with sketching.

MO - (T-1:24:32) Um, lets talk about another area that, it has to come up, but gets hidden a lot. Group work, teamwork, collaboration. I am interested in this one because it is a key, ... I mentioned right at the start that collaboration is an important part of architecture. How, how is that handled in the design studio? In your projects, in the studio itself, as in the space, or is it not dealt with at all?

FG8_6 (T-1:25:16) - Group, group work isn't really marked, I can say that because, um, the, the first project which we actually do as third years was group work, that is, you are given something that is, you, you like in first get information for the project that you are given, information that you are going to use for all the projects that you are going to do in third year. So we were give, you are made into, into groups and ah, do work which is ah, actually done in groups. But apparently, I, I don't know whether they give grades for the same, or something like that, I don't know, group grades, that is what I don't know.

FG8_9 (T-1:25:58) - I also think that group work in the context of design is not, isn't handled well at all in our class. We don't have, ... the group work we did was only for research, for, for information that you might need, to make work easier because, ah, it would be pointless for us all to do the same thing, and come up with the same things always. So I don't see any group work in design.

FG8_13 (T-1:26:28) - For us, we can decide, we don't really have to be told, be a group, to form a group. You end up having a lot of time. So like, before lunch you can decide to like, gang up or just sit there and explain to each other what's going to happen. A few minutes, then you go. That's the kind of group work at times you do.

MO - (T-1:26:48) So what are perceptions of group work and teamwork?

FG8_4 (T-1:26:52) - I think group work normally come, not only around exams but I think the group work sprung up just before exams.

MO - (T-1:26:59) Just for studying?

FG8_4 (T-1:27:00) - Just before exams. ... For studio work, it's mostly individual work, even if you do it together in the studio, every one does their own thing.

FG8_12 (T-1:27:10) - Ok, for group work also what I can say, we don't have formal group work groups that have been created. Ah, that is, group A is FG8_4, like that, no we don't have that. (Discussion in the background) The kind of group work that I've, that I've seen, you'll always find, you don't even realise that you are already in a group, because if I am seeing something nice, with someone, I'll just go there, another guy comes there and they discuss within 5 or 10 minutes then it's finished. So I think that is the kind of group work that, that you'll always find it in studio. Not really the one that the, has a list. That one doesn't work for studio.

MO - (T-1:27:52) FG8_10 you have something to add?

FG8_10 (T-1:27:55) - Yea, I would say, ... ok, the perception of groups, rather, take teamwork, you know, in the design projects, is not very positive, and I think it's about the logistics of working as a group. And maybe the reason why it's, it doesn't work for most students cause we have competition amongst us.

MO - (T-1:28:21) So why is there strong competition between students?

(T-1:28:25) Multiple - [Snickering] Cause to please ... To make a name ... It's a normal process ...

MO - (T-1:28:31) I didn't hear any of that. [Laughter] Four people spoke and I have no idea what anybody said. So maybe FG8_12 can say something, may be FG8_9 can say something, and then FG8_8 can say something.

FG8_12 (T-1:28:43) - I think competition, you know there's, you know architecture the way I can say is, you want to be the best, ... you want to give the best, because it's actually an art, something which is visual, so, you find somebody has done something nice, you feel like you are not achieving the best, and. You'll always want to, to reach his

standards, or her standards and by that aspect, then that is already competition, you try to, to compete with that guy.

FG8_9 (T-1:29:15) - I think it's also, in addition, the psychology of giving your best means I have to be, the best. I have to top everyone. And also because of that, peak on the normal curve, you know, people will get A's but there also people who must get D's to show that [Laughter] the ones who got A's, [Loud laughter] to show that learning is happening (background - yea). We can't. Ok fine, they're people who will probably do better than others, and they are people who don't do as well (Background - shouting - The question is ...), and the people who don't do as well ...

FG8_8 (T-1:29:45) - It's not only about the normal curve. Do they really deserve to get A's [Laughter] despite the normal curve, because in my, you know, come on, it's ... the attitude, the work ethic, it's totally related to the, to, to the D he has gotten or the E-. [Laughter] So what's wrong with that? If it's the normal curve, then maybe it's a normal curve in Mandichi or something ... [Laughter] yea!

FG8_12 (T-1:30:08) - But, maybe, just to add on that, I think ... [Talking over]

FG8_8 (T-1:30:11) - ... I think you get what you deserve, you don't want, you get, you, you ... end of story! [Question in the background - Does that really happen ...] If you've worked hard and you think you've got something better, go ahead and hand it in.

FG8_12 (T-1:30:26) - But, I'm thinking, what about if all guys do good work. Would you let the, the guy who has done the best work as the last person? How do you grade this one? ... [Talking over]

FG8_8 (T-1:30:38) - When the class, when the class, when everyone in the class gets good work, I'll answer that question, but for now it's a dream ... [Laughter] ... for now it's a pipe dream.

FG8_6 (T-1:30:49) - I, I believe the reason as to why guys compete, it's because they want to be in the lime light, you know. It comes with identity and things to do with ah, esteem. But ah, you, you find in the process also, there is, as much as you are trying to say grading, all of you can be best and that is good competition, that is what good competition, or maybe you can be, everybody, like the lecturers tell us that um, the grading, they grade you according to your own, you know, they don't like as in compare you. That is usually what they say Everybody is graded according to his capacity. So um, I don't believe like um, it shouldn't be that I come to you to ask, maybe help me on how to do this, I think I like the way you've done this. If I'm going to be graded in my own capacity, then there is no worry for you because you'll still remain in your lime light, because it is just you and stuff. So you'll find, I, I tend to believe it is more conflicting and ah, selfish um kind of drive to stay in the lime light, because if it's just personal and you, you don't have to worry that somebody is going to be as good as you.

FG8_8 (T-1:32:07) - I think some people are selfless, some people are the other, the opposite of that so, some people help, others don't, others keep to themselves and still do good work. It's, it's a fact of human nature.

FG8_13 (T-1:32:21) - It's about, it's about what you what you want to achieve by the end of the day. How far you can go, you are not being selfish, you are trying to beat your own personal record, how far can you go. Even in life after school, that's what will be happening. We'll try to do your best, we won't do just good work.

MO - (T-1:32:38) I'm going to through a curve ball at you in a little but ... [Interruption, lots of talking, and laughter] we'll get to that in a little bit, we just got, we got someone new joining us, maybe he can introduce himself.

FG8_1 (T-1:33:00) - My name is FG8_1 and I'm a sixth year

MO - (T-1:33:31) Ok, ah, maybe you can tell us why you joined architecture school? ... Why did you decide to do architecture, and why did you decide to do it at [Named University]? It was a long time ago I know, but ...

FG8_1 (T-1:33:16) - I decided to do architecture because I wanted to do architecture! (Laughter ... That is not serious) ... yea, because that's what I wanted to do, and I wanted to become an architect. And when I got the opportunity to do it in [Named University], I thought it was a good thing, and I came and joined and started doing architecture.

MO - (T-1:33:37) Ok, and you, and you had something to say eh, about group, about competition?

FG8_1 (T-1:33:42) - I think as time goes by competition starts diminishing a bit. Because in sixth year, it's not so much about competition currently, it's so much about teamwork, and group-work, because any time somebody has something that he or she is tackling as a project, and lets say, he posts it, or she posts it in the computer, and says, this is the project I am working on. You realise a lot of people chip in. If somebody has information about that project, people try as much as possible to give you that, the, the information you have on that project. When you are presenting in class, people engage, it's not now only the lecturers who respond. Even the students themselves respond, to such an extent that, ... you have support from the students and the lecturers at the same time, and if there is something that is not right, everybody will point it out. Right now, before, because I was told about the meeting, but I was on site with some students all so, bit it was my site. You find out that, they are people willing to take you there and help you do the analysis together. So as time goes by, I think, the competition thing starts ending, and it is so much about team-work, because you realise at the end of the day, you all want to become architects, and you realise that, there's nothing like the best architect, or the poorest architect in class after some time, [Laughter] ... maybe this person who was always the best. They're things which he or she doesn't know that you know. So at the end of the day, it's about the project and ... maybe production, I don't know, you don't know what the lecturers are looking for, because you realise there's somebody who is so good in designing, but the person cannot present himself or herself well. Maybe your ways of presenting are relatively poor, you don't have, you can't, you don't have good renders, you don't have good colours in your work (Background talk), ok, the, the quality of paper. So at the end of the day you realise everyone in the class has something he or she can, can help you do your project with. The person you used to think that he's the worst, might be the best designer, because he's the person who works very well with a paper and pencil, but when it comes to computer things, the person is not very, very good with that. Other people are very good with computers, that when they are given a project, they can start even rendering immediately, whatever they are thinking, the form and everything. And it becomes, it becomes really good. I think he, he or she becomes maybe the best even before the project starts, but you are still on [Inaudible word] ... So I think competition somehow starts ending as time goes by, cause you realise everybody wants to become and architect, and all of you, all of you are good in architecture. Maybe the difference is some are lazy, some are very active, some can work for long hours, others work for short hours. I think that's where the difference comes, but it's not about the worst, nor the very best, because I think everybody has the same potential of, anybody in class at sixth year has the potential of becoming a very good architect.

MO - (T-1:36:50) Ah, ok, thanks FG8_1 for that insight into what final year think. Ah, we are pretty much at the end, we've got probably two more questions I want to ask, and um, I would, getting back into the fact that everybody has to answer these. Um, ... this one has to do with the previous two questions, one about what you like about architecture education in [Named University], and other is what you dislike. A relates question is, if you were to come back as an Instructor, which happens vey often in universities, what would you do differently if you were coming back to teach at [Named University]?

FG8_1 (T-1:37:38) - If personally I had the powers to, I could remove the grading, so that architects either pass or fail.

MO - (T-1:37:47) Why is that?

FG8_1 (T-1:37:49) - Why is that? To reduce the competition thing in class, so that, at the end of the day you come out as an architect. You either pass architecture, or you fail architecture. The other things maybe it can be a little bit personal, but on that sheet of paper, it's written either let's say FG8_10 passed or FG8_10 failed, but nothing like FG8_10 First Class, FG8_10 Third Class, FG8_10, [Laughter] whichever class it is. I hope there's a way that it could be done that way so that people can engage and people can work hard. That is one thing I could do. The second thing, given the opportunity to, I could try as much as possible to see if the projects could be done from first year to sixth year. Some of these projects could be done by, all the years. It's a project, the school has a number of projects, which of course we do, and regardless of which year you are in, you can indulge in a certain project, and if a number of students choose a certain project, if there is a possibility that per year, not all the projects, but per year there is a project, if there, maybe the last project where students could do it from first to sixth year and it's the lecturers who, uh lets say I have a project like housing, and it's the, the housing lecturer lets say is M1, so M1 has students from first year who want to do housing. Ah, FG8_5 has projects, students from first to sixth year who are going to do urban design, so that there's that mix. You know after sometime, you all think maybe the same way, but if you sit with a first year and discuss with him about your project. Whatever that first year always has about that project is always very very different from what a sixth year in the same class has about the sae project. And I feel, if there's that mix from first to sixth year engaging in a project, I think we could produce very good results, rather than having sixth years doing a particular project, fifth years doing a particular project, that is my take.

MO - (T-1:39:56) Just on that one, I'm going to ask another question. Do you have, ah, electives?

FG8_1 (T-1:40:03) - Yes

MO - (T-1:40:04) Yes, What sort of electives? Are they theory electives or design electives?

FG8_1 (T-1:40:10) - Both

MO - (T-1:40:11) They are both.

FG8_3 (T-1:40:13) - I can't say really, because ... we do the same projects even after we, we have these electives in third year. [Inaudible]

FG8_1 (T-1:40:32) - I think it's good because we do theories, and at the end of the day, there's landscaping, there's, I think it's [talking in the background] ... yea in fourth year, people do a project in interiors.

MO - (T-1:40:45) But, are they electives, or, guess what you can call, compulsory electives. So do you have choice, let's say, this is a landscaping studio, this is interior design, this is something else, and you have to pick one? You can't do all of them.

FG8_1 (T-1:40:59) - Yes

MO - (T-1:41:02) Now, before we go on to answer, to keep answering this question which everyone has to answer, about what you'd do differently, um, I forgot to ask this before, um, I went into that. It's related to competition and um, what is now regarded in architectural circles as 'star architects'. Anybody hear that term before? Yes?

FG8_6 (T-1:41:29) - You mean guys like um, Ghery, those other guys ...

MO - (T-1:41:33) Yes, yea. So it's related to competition, group-work, team-work ... and, these star architects. Do you think architecture schools are designed to produce star architects, or they are designed to produce architects who can work in the real world?

FG8_6 (T-1:41:56) - I might say that the approach should be that um, like, um, our colleague has said, that um, you shouldn't be an architect not, but a graded architect, because at the end of the day you find that we design differently and think differently, and there's someone who is saying it is creating something out of nothing. So long as you are able to make something which is functional, something, then definitely you are an architect. The appeal is what actually makes people to be, mostly that is what influences the differences people get, the appeal part. The functional part of it, you'll find that possibly you must have gotten it right for you to, to get that pass and stuff like that. So I, I don't believe we should, we should be thinking of things like star architects, but you find it is something that is happening almost all over. You find like um, um, there is a certain article I was reading about Cornell University. You find these guys like um, Richard Meir goes back there, he tries to, he actually invests in that university, he was, he was there, so he invests there to bring out the best out of the same, and you find most of the market is looking out for the first class and all those very huge grades. But, apparently like ah, our colleague said, maybe those guys who are being taken for the first class, are not the best. So you find that presumption which is set by the university ends up messing up.

MO - (T-1:43:24) so you are essentially saying that grading is subjective?

FG8_13 (T-1:43:28) - Yea. The school should just produce architects, like good architects. After that it's up to you. You are on your own. You can go venture, do what you want.

MO - (T-1:43:43) Ah, right, so we can now go round and answer this question, what would you do differently? FG8_1 has given his answer.

FG8_2 (T-1:43:50) - Not me first, cause I don't know ... [Laughter]

MO - (T-1:43:55) Ok, FG8_2 has passed, FG8_3?

FG8_3 (T-1:44:00) - Maybe it's not something that I would do personally, but um, I would try to balance out the lecturers with the student.

MO - (T-1:44:11) How do you mean balance out?

FG8_3 (T-1:44:12) - Um, ... you can see the difference between the sixth year class, the, the number of students in the first year. And they are not increasing the, the number of lecturers. That means like, our colleagues were saying, students get less attention, like you are not assured of a crit every time there is studio. Maybe that could be dealt with.

MO - (T-1:44:39) Ok, FG8_4.

FG8_4 (T-1:44:41) - Ok, one thing I would like, I would introduce is, ah, just discussions during studio, where the lecturer, it's more like a class, where people ask questions, on a class basis. What happens during studio is they go around and look at each individual students' work, but then there are questions that you'd like to ask in class and ... maybe ... other students could answer better compared to the lecturer. And if we could have discussions where the lecturer can be there but then we are all able to give views. That helps a lot because what we do, other students are better at than, rather than what the lecturer can give you, or has time to give you.

MO - (T-1:45:28) Ok, ah, FG8_5.

FG8_5 (T-1:45:31) - Ah, for studio I don't think I would do anything differently. What I would just like, if it would be possible to just give more resources available to the students. Maybe a better stocked computer lab, or printing facilities nearby, just, even furniture to sit on in studio [Laughter]

FG8_6 (T-1:46:04) - For my case, I'll, I'll, I'll start with um, the, the way presentations, that is the final presentations are done. I, I guess that um, the way the sixth years do it, at least they are given some time to at least present their project and explain some things about it. That is prior to now these guys making a decision. Also I believe that is how all the projects should be done, that is for all years. At least, um, when we are done

all the final pin-up, and you are maybe told to come in for something like five minutes you, to say and if they really feel that there is something to say, because ... Possibly their perspective doesn't capture what you really wanted to say, and uh, we have to appreciate like as in. As much as our lecturers might be having that experience, maybe your perspective is from the future, and their perspective is from the past. Then the second thing I'd do, I'd try as much as possible not to, to influence my students to think like me, you know. The, the way I used to design, the, the way I used to do things. Now, ah, because you find it is a tendency. You, you are more justified as a tutor to, to tell your students to do what you do because you think, um, because you are sure, I don't, I don't think you think, because you are sure it is the one which works and it is the correct thing. But then I'll try to open up possibilities and be much flexible to, to understand as in, these guys are not in the same generation as I, so definitely the way they look at things is different and I should be able to appreciate that, ah, times change. So when they engage, the engage you yourself, we should be open, we should be open and listen to them. Then the facilities off course. You, you have to, to make, as much as ah we might say this place is quiet and stuff, ah, looking at it technically, there are some things which are lacking. So, so, you'll want to make it well staffed, bringing in technologies. You keep the school, ah, in the same line that the developing technologies. Maybe the machines to make models, the appreciation of materials which are coming up and. You make even a centre whereby these guys can be informed on what exactly is happening out there in the market. As much as you would want them to go out and to look everything for themselves. But as a, as, as a tutor also you should appreciate like ah, they don't just do what you teaching them. There are other things they do, so they have to, to bring out these things, make schedules and try to balance everything. And if what you are teaching them is in depth, then definitely you, you have to make it easy for them to learn.

MO - (T-1:48:59) Ok, thank you, FG8_7.

FG8_7 (T-1:49:01) - um, ah, personally, I would just encourage them to take risks, and ah, ah, help them bring out their wildest imaginations to life. As long as, ah, it's functional (sic), I think it's ok.

MO - (T-1:49:21) Ok, FG8_8.

FG8_8 (T-1:49:24) - um, ah, yea, ah, one thing, um, there, there are a lot of other things that affect you even outside of studio. Ah, getting stuck with problems, ah, some of the bureau ... , old bureaucratic systems that need to be streamlined, and ah systems that need, not that they are not transparent, but they should be obvious for everyone, so that it's easier to, to, to go about your business in every other facet of, of, you know your experience here, from the library, to other things here. There, there, there little things that disturb you. You know that should be completely open obviously, steps clearly articulated eh, so that they're, they're, they're, they're know to every one. Things like; when do you get materials? At what times are they given to you? Especially when they are coming from the ... So you're, you're in the know, and you know what your rights are. Things like that, which is slightly different, ah, I think. Then they're other things like maybe making available ... one or two persons in every year who is, who can be easily approached by students. You see, you see your friends struggling with issues, and sometimes you have no. As a, as a fellow student, you end up, um, um, counselling them or, or, giving them advice, and you. Sometimes you feel like even as you are part of the system, there should be a mechanism for that. It's there but, why, why aren't, why aren't some people not using it? That's another thing that should be looked at. So, those two that haven't, the other things that have already been mentioned.

MO - (T-1:51:19) Thanks FG8_8, ah, FG8_9.

FG8_9 (T-1:51:22) - Ah, one is ah, that concept of vertical studios where people from different years come together to do and do projects. And ah, I would also advocate that we travel compulsorily, every year to, to places outside Kenya. ... If it was done, architecture becomes enjoyable, you're not really stuck in one place. You only get to travel in fourth year, eh, to, to Mombasa and the coast. Anyway, then, um, I'll also

introduce projects which are not really ah, build-able, but which trigger the imagination. Like say for example, lets all imagine that you were there in be beginning with God, and you were creating things, ah from, from the beginning, or maybe virtual architecture, because I believe that architecture is not only buildings and, ah, structures, it's many other things which we don't get to explore because we are set in this mindset of ah, build-ability, yea.

MO - (T-1:52:40) Ok, thank you. FG8_10.

FG8_9 (T-1:52:46) - I think all ... [Inaudible].

MO - (T-1:52:49) Beg your pardon?

FG8_9 (T-1:52:50) - They've said all.

MO - (T-1:52:51) They've, they've, got it all? It's good to come last, you can do that. FG8_10?

FG8_10 (T-1:52:59) - first, I want to tell her, once, it depends on the Year Master. I was told there's once they did a project where, was it Osama's, or Saddam's house. We were told to design something that's like in the desert and it has to be underground, but yet it has to be functional with lighting and ventilation. Um, what I think would be done differently, is ... having practical projects. Like you bring out a project in studio where you know it's an actual, (clearing throat) sorry, an actual site and probably there's even a competition that's going on ahead. Where you encourage people to do, to design, to do designs that can be built. ... because often I've heard, people who go on to finish, not just this school, but other schools also in Kenya, where they complain, that once you get into the market, what you were taught in school is very ... little, or even irrelevant. ... So I think that would be one of the things, and I think when you start doing practical projects that can be built, you'll have, what FG8_1 was saying, less of competition, and more of competition where you're all competing yes but you're helping each other. You're cooperating in the competition so it becomes ... easier and you learn more. And about cash, probably you could have provisions, like what medicine students have. I know they get is it sixty thousand per year for them to be able to practice, to buy their overalls. I think architecture is a very expensive course, and some people fail to perform because you don't have the resources. You love to do it, but you don't have the resources like to buy materials for your models, for your printing, or you need a printer. So I think such government aids, or department aids for the school would help a lot.

MO - (T-1:54:55) FG8_12

FG8_12 (T-1:54:57) - Basically I have two things that I would. I would advocate for ... the school to ... to change. One of them is the, ... the approach, the, the student approach of the, of the entire department. I think we should try to ... we should try to ... to be very close to each other, ah, so that we, ... we can actually exchange ideas. It might be there, but it's not really ... working out as eh, the way it should. You find it very hard to find some other, sixth years, you rarely see them actually. So, that's one thing that I would advocate, to create team building in the, ... in the entire department of architecture. Then secondly, eh, it's about, eh, competitions. Eh, I'd also encourage that, that one should be more frequent, so that we can also exchange ideas in terms of eh, ... the competitions.

MO - (T-1:56:09) Thanks FG8_12, and FG8_13.

FG8_13 (T-1:56:11) - Ah, the only thing I'm missing in first year is furniture, good furniture like he said, and equipment. Because some people usually go and do their own work outside, and then they just appear, you don't know how they, what happened. Just furniture and equipment and if they can provide like she said, materials, cause they are expensive, buying all this stuff.

MO - (T-1:56:37) Um, ... just in terms of furniture, you're asked to do a lot of work by hand, do Are there drawing boards provided, or you have to provide your own?

FG8_1 (T-1:56:51) - The institution is supposed to provide ...

MO - (T-1:56:53) They're not, they're not enough?

FG8_1 (T-1:56:55) - Yea, they're not enough (Background - They're there, but they are not enough)

MO - (T-1:56:58) Or, or they are broken, which is usually the case, because somebody has been cutting on them. [Laughter] Ok um, we're almost finished, as I said, as I mentioned before, as the conversation goes on, we go over, slightly more than expected. Just some general questions, are you encouraged to architectural design competitions? International ones?

(T-1:57:20) Many - Yes.

MO - (T-1:57:20) Yes. Ok, easy enough. Ah, do you have a students association? Yes? Whats it called?

FG8_2 (T-1:56:55) - ASA (Architectural Students Association).

**Appendix 11: Transcripts of Focus Group Discussions
(Academics)**

Focus Group Discussion - IX (Academics)

MO - (T-04:41) What do you consider the role of architects in Uganda today and into the future, and how do you see architecture education fulfilling this role, or does it not do that?

FG9_1 (T-05:20) - I think in my view, I'm going to kind of paint an ideal picture, what is the role of architecture education. Just looking at education per-se from a wider perspective, is that it should be equipping people with skills and knowledge that they are, they can use to engage in society, to add value to society. And so if I were to look at architecture education in that perspective, I would think that it should be giving a training to individuals so that they can go into society and fill in the gaps, yea, and be of value to society. Where are the the challenges in the society now, where are the needs of society, where does society what to improve. And the training should be geared to that direction in a nutshell. And the contribution I think of the current education system, is in my opinion has not performed very well. I think that the students are trained and they go about it, and they kind of figure it out, and somehow it hits them, 'oh, I could actually help somewhere'. I don't think architecture student are taught, are given a sense of, should I call it engagement, when they come out of school, and that is the shortfall I think. They are given the skills, I think there is a good job in that aspect, but the sense of engagement, going out there and saying, 'oh, so what can I do?' It's more of a sense of, entitlement - 'what can society give me when I get out of school', it's more of, 'I want a car, I want this, society owes me something', and not 'oh, I am out here, what can I do for society'. (FG9_4 - Bragging rights).

[Pregnant Pause] MO - Clarification that it is a dialogue, and the participants could jump in at any time to clarify anything.

FG9_3 (T-09:04) - I would say that, ah, today the role of the architect is to more or less to design and supervise, ah, different types of buildings, ahh, that meet the different needs of the different groups of people in society. Yea, ahh, and in the future, it will have to respond the challenges, and ahh, advancement in society and technology and development, ah, and meet the needs of the different diverse groups in Uganda, cause Uganda is changing, ahh: You find populations are growing; people are migrating into the country; the internet is, ahh, bringing bringing technology closer, and really things have to change, and in future the architects will have to be able to handle that change and continue meeting the needs of the diverse people. Ahh ... The question of how architecture education is contributing to that? I would say that, it is trying, but it probably needs to do much more. It needs to do much more, in some cases, very many people are not reached by architects. If you look at most architects in Uganda tend to be concentrated in the city, and you find in the rural areas, ah, the rural people are not really benefiting from architectural education. One could argue that the way they construct, and have constructed for years is adequate, but really, ahh, if you look at the floods taking place, and the landslides, I think architects could do more to reach out the different groups be either in the villages or the cities.

FG9_7 (T-10:42) - If I may jump in. I think, I hope my point can connect the two previous speakers. I think that architectural education really should be a continuing process. Where you have, if I may equip it, ... I mean, equate it to primary one, primary two, primary three Whereby the basic education is equivalent to primary one, where you get the basic skills, and those skills are very necessary. But I think where we have a short come, is in what you call continuing education. When architects have come out of school, they think, 'oh I'm inadequate, therefore, ah, the basic education did not do a good job'. I think it cannot be expected that the initial education should turn, for example, young architects, into people who are able to think of, ah .. [Pause] there are certain higher areas that as a matter of course just develop, it's a part of growing up. And I think what education doesn't cater for is the architect who has graduated. That ... Usually either they say they say 'I am now an architect' full-stop, and then they, as you said begin to 'draw' but there is a personal growth that follows, which should be

engaged with the academic system and I think that is where the misunderstanding I feel of continuous professional development, or continuous edu, ... which really should be continuous education, comes from at both the academic level, where you have academicians, professors, who are very scientific thinkers, and structured, but also in terms of personal development, that people can write books, they can grow, and they can debate these ideas within an academic system. Not necessarily becoming professors, but growing themselves and beginning to specialise through self discovery, and through self education, and through sharing with people who have those specialisations in the academic field. So it's a two way thing that is ...

FG9_2 (T-13:53) - I'm looking at the role of an architect beyond designing and supervising buildings. The world today has got a lot of opportunities for everybody, and when you look at the civil service, there are areas where they need policy makers, and an architect is one of those people who are required to help making policies in that area. So, the feeling, the thinking that an architect is just a designer, and you end up supervising construction is old fashioned. We need to specialise in those areas, say making policies. Physical Planners also need architects to advise them in that area. So the education system should endeavour to widen the perspective of architectural studies to accommodate those other areas.

FG9_3 (T-15:11) - Most of the students that I teach, or I have taught, have ended up in the same areas. Most of them think that when they graduate, they will go and all work in the few architecture firms in the city, and maybe there might be something lacking that we do not expose them to all that they can do to add to what FG9_2 is saying. Whether they should go into construction or into government, where they are preparing policies and other things.

FG9_6 (T-15:50) - I think the architect in Uganda has a very unique challenge or responsibility, in that I find it two fold: one as an educator; and the other as public relation person. And the reason for that is that for one, in Uganda, most of the public, or it would seem does not understand who the architect is, and does not understand what an architect does. Case in point is when we refer to the architect constantly as an Engineer or as an Architecture; or when we consider the architects fees too high. And so I feel that then the architect must change the strategy in which they will conduct themselves. And so, in response and leading up to the question here, the only way I think architecture education can do that is helping students becoming adaptive, rather than trying to prescribe a way in which architecture should proceed. And the challenge is we don't have enough instructors, or diversities, or disciplines in those who are instructing, so maybe that is where the challenge falls in. My training in Savannah, maybe also because of my own initiative partly, but was such that it was an art school and artists are compelled to or sort of forced to put forward that which they do to survive. That's been the history of artists who are known to be poor and starving, but in Savannah, I saw something quite unique and strategic, which I didn't necessarily get out of the classroom or studio. That was the way in which the university pitched itself, the university went out to the community, the university reclaimed the decaying buildings, cause Savanna was a cotton exchange port during the turn of the century, you know the twentieth century, so in the school reclaiming those buildings, and using them as studio spaces, or using them as administration buildings, I saw something else. And the way in which courses were open ended, students could undertake electives across, and it was encouraged to take electives across the disciplines which included film, which included computer art, which included, I mean, it was right across, historic preservation, and so on and so forth. So my interest in conservation and preservation actually stemmed out of being in the same school of building arts with this fellows, I never had a specific course that taught me that, but because I was in the climate for five years, that sort of seeped into me, and so ... [Cut off FG9_7]

FG9_7 (T-18:45) - [Talk Over] And also, if I may jump in, there's nothing that says that you must stay in that box called conservation, and that's the very essence of the basic primary one education, where you teach a person not to do something, but to be able to

explode where ever, and find their niche, and even be able to be able to break out of that niche at will.

FG9_6 (T-19:15) - And that leads me to my second response to the solution for architecture education in Uganda especially, needs to be interdisciplinary of sorts. Because unless we get down to the ground, unless we tackle community related events, or activities, unless students are placed in the community to solve, problem solve, not in the studio, you can return to the studio to problem solve, but you need to be on the ground dealing with: making sure the community has access to health care; whether it's getting food. These are the real issues in Uganda you know ...

FG9_7 (T-19:48) - And even projects like making tables out of unthought of things, or doing unthought projects, ...

FG9_6 (T-19:55) - Yes, then they will know who the architect is, then they will know what the architect does.

FG9_1 (T-20:04) - In fact the last part of her response feeds into what I wanted to say. First of all you have asked what is the role of architects in Uganda today. I look at that in actual sense, what are architects doing? Of course architects are actually designing and supervising buildings. And that is mainly for the affluent sector, the well to do segments of a very poor economy, so we are serving very few people. But I think that an architect should be a shaper of the built environment, and when I talk of Built Environment, it's not only buildings for the rich. It should, our impact should be felt even in the poor communities, by the masses. I can not, I can say it may have to an extent been encouraged by the education, but not entirely, because, most of us are products of the same education system, but we do not necessarily look at things the same way. I had an experience in school, where I was interested in urbanism, and I wanted to do something in urbanism. And we had a whole year devoted to urbanism, but the response I got from my educators, was that I should not be tackling such an area. At that time of course I felt I was, there was something I felt I was so much interested in, it's part of the curriculum. Maybe the problem was the scale at which I was trying to tackle it, but definitely not that it wasn't for architects. So in that way I think to some extent, the education environment probably does not, could kill exploration by students, cause I insisted on doing what I wanted to do, but it had many other consequences: in terms of time; in terms of, you know, so many consequences. So in a way the education environment, can actually, it can suppress a persons exploration. But be that as it may, I cannot entirely say it is, it's the education system, because I managed to, I was able to move through, the way I see things, and I still see things like that up to now.

FG9_7 (T-23:34) - I think the education system has a lot to do with it. Especially for example at [Named University], it being set in ...

FG9_7 (T-24:27) - There are several problems with the education system. I can perhaps talk of two. One is that this grade one is, is not set within a bigger context in the education system. You have these grade one students, and there's only grade one, so they do not know what else there is beyond grade one. Whereas ...

FG9_4 (T-24:55) - When you say grade one, what are we talking about?

FG9_7 (T-24:59) - The five years ... Whereas you have many, I think there are other examples we can find around the world, where you have a lot of things going on around this grade one, this basic education. You have people coming in to debate other ideas, you have other people in a kind of another education system, surrounding this basic one, doing all sorts of things. Such that even while, these students are doing, learning the basic skills, which every architect I think must have, basic thinking skills and basic drawing skills. Because every architect must draw, must think in a certain way. They have all these other things going on, such that they know that this is not the end, this is not it, they are stimulated even they are fed by these people. The second thing I think is that, the education system, and I think that this is especially true for [Named University], it is set within a rigid system. Such that even when they want to do anything at all outside this system, they are told, the semester, the point grades, the marking scheme.

Whereas for architecture, I think the criteria and the parameters are all flexible, and they are completely different from university systems. I think architecture perhaps needs to be independent bodies of sorts, architecture school.

FG9_5 (T-27:02) - I think just to take you back. I think it's very important for us to understand, and be clear what the role is. The role defines our success in our education. If the role so to speak is that an architect, should be trained, finish, get a job, be able to buy a car, build a house, and be somebody in society, then it could be a success. Yea, but if it is what was shared, that the architect works in the broader perspective, engages, helps people find, yea, then that should be our mark, that should be our gauge of performance. So I think we need to be clear about that first, and just, if we were to use that kind of goal, that if we are doing our part, if it is a success, then the architects that we are training are going into society and working in communities, and making a difference, you know meeting that need of the people. Then we need to find out what it is in the system that is not making them think like that. I like to think that one of the biggest, the missing ingredients is a sense of ethics, let me use the word social intelligence, social intelligence, knowing that when I'm in school, and this definitely cuts across all the education, it's not just about going out there and being the best, I don't know what, or doing this, but I have a role to play in the society. That I am a pawn in this game and I need to function of the whole chess game is to be a success, is to move forward, yea, and that's social intelligence. I'd like to think that that is a very big missing ingredient. FG9_7 talked about the rigidity of the system, it's a system that has been placed there to move through, just move, make the steps and get out. It is not a system that gives them pass, cause I am a product of that system, to look around you, and say how do I get out of this classroom, become a player there, how am I getting out there to play? And that takes a person with social intelligence, a person who knows his environment, who understands not working in a selfish circle. Thinking that it's only him, so I think social intelligence is missing.

FG9_4 (T-29:55) - I would like to think of this problem from the actual root. You know when we say a rigid system, we can blame a particular institution, but then I'd like to think of it as a system that is kind of traced back to the grade one I understand, grade one as on P1. The system that we have gone through is being perpetrated at university level. So people come in there when they are already used to thinking in little boxes, and getting them out of these boxes is very hard. So I feel that if we are thinking of the training of architects, first of all we have to kind of go backwards, we have to come up with a strategy of influencing education at lower levels so that people are more flexible at higher levels. Influencing, I don't know how we can do it, but we need to be able to influence, because people come into school of architecture, you know their minds are set to think in a certain direction, and they can't see anything else. You know, and once in a while you come across a classroom where some of the students have been successfully liberated from those small little boxes, but some finish, and graduate, and legally they have passed, ok ...

FG9_7 (T-31:26) - Can you tell us how they get liberated from your experience, or how you tell that somebody is liberated?

FG9_4 (T-31:35) - It depends, some people are very easily influenced by mentors, and if you happen upon a fantastic mentor as you study, you can be freed, you know. And some are liberated by an experience, and I remember during the time we were in the school of architecture, in first year we took a trip with a Visiting Lecturer and that is one of the things that actually liberated some of our class from thinking in a certain way. For some people it was mild liberation, (*Background - Mild Liberation?*) [*Laughter*] meaning that you get liberated but you are scared to explore, and then for some people it was a real eye opener and then they are like, I can do anything, and go beyond what is before me right now. So we have to think of that. And then I feel as if architects, if they are playing their role in society as defined by the school, by the school of arch., what an architect is supposed to be, there are some who are playing that role. But then, is that the only thing, that role, is it, as we've said we have to be free, if we restrict the role to what we have learnt at school then we have defeated the whole purpose of architecture.

Which is not, it cannot be put in a box. It cannot be, you can't say this role it starts here, and ends here, and that's it. So we have to redefine the role of architecture, to answer JT's question, the role of architects has to be redefined to expand, because architecture is diverse ... [Talking Over]

FG9_7 (T-33:24) - Where does this, who does this, and where does this ... [Talking Over]

FG9_5 (T-33:28) - Is that what Uganda needs?

FG9_4 (T-33:30) - YES!

MO - (T-33:30) Well this is some of the exploration, but I mean, I'm just going to point out something, FG9_2 and FG9_6 mentioned education, so we'll get back to this, because it has come back again, while FG9_4 is talking, so we will have to get back to this idea of the architects role in educating the public, cause it comes back in a big loop.

FG9_4 (T-33:59) - There is another thing I wanted to raise about the emphasis of skills at school, and the emphasis is on design, on structural whatever, perceptions, and building technology. But then there are certain skills that, when you come out into the field, and you are trying to practice, even if you are practicing under a registered architect, and you are trying to carry out your duties, there are certain skills that are very important that we don't emphasize or even learn in those little boxes from primary school until you get to university and even you finish the course. So legally you passed, but when it comes to things like ethics and integrity, what FG9_2 is talking about, we are sorely lacking. So when you are faced with a decision that requires someone with values and a standard, because many people find themselves in a situation maybe someone is offering you something to overlook certain things on a project, and people can't decide, because something has not been put into them. When it comes to entrepreneurship and handling money, architects are very, very few architect who know how to handle resources, even to work together, because that affects partnerships, and people coming together to handle specific projects. The issue of money, if you have not learnt how to deal with money, to deal with success, to work with other people as a team, a real team, not the teams in 4th year (at [Named University]) where you work on a specific project, then you wash your hands of the whole thing when you are done, but the real life teams where you work for 35 year, 50 years together, and you can handle money, and you can handle people and there is no crisis.

FG9_7 (T-35:48) - Is that a one way for the architects? Because I think a lot of it has to do with society?

FG9_4 (T-33:58) - It also happens with the Lawyers, but we are saying if we are going to educate architects, and we want them to be a certain way, then there are certain skill we have to impart on them. The management of people, handling people, on a site or in an office, architects, many of them don't know how to handle people, just to manage people, just to deal with people, human relations, not human resource, but human relations. What FG9_5 was saying about Social Intelligence, service to society, and not just society as in the general public, but even your society of architects. How can you, no one comes out to say, what am I going to do for my fellow architect. How can we improve our society of architect, you know, the way we do things as a body, that solidarity is lacking. Then that flexibility, of not restricting the skills. When you have any opportunity to do something else, like FG9_2 mentioned, there are so many opportunities, there was a time when FG9_2 passed around so many adverts for very good jobs, you know in government, and other places, and they are well paying, you know, and then people were complaining that they have no work, and not even one person applied ... they have no work, they have no jobs, but they could not apply, and yet they are qualified, they are asking for architects, they even reduced so that maybe they can get graduate architects, you don't have to have five years of experience. But because of thinking in a certain direction, 'I have to have a little office in my little cocoon and draw my plans', basically someone sees there is an offer, and they reject it. And so

engineers got the jobs, Quantity Surveyors took the jobs and the architects are still walking the streets.

FG9_1 (T-37:57) - I wanted to, I defined architecture, architects, their role as shaping the built environment. And how is the built environment shaped? It's at so many levels which many of us have talked about: Policy; there is the actual designing and constructing; there is planning; there is, even taking lead in some of these areas. We have, we are working in society where everything is still young, and we have so much knowledge that I do not see why architects shouldn't be the ones running construction firms, and showing how construction should be done. I do not see why architects are not doing development, real estate, I do not, ... Now this again comes back to the rigidity of the system that we work in. If you look at our, for instance the codes of ethics, for our society, instead of sticking to principles of honesty, and what, they tell you, if you are an architect, you cannot, you cannot have interest in a construction firm, you cannot have interest in a building product, you cannot ... So what is the purpose of all this knowledge that you get in school.

FG9_7 (T-39:19) - I think that the society is old fashioned.

FG9_3 (T-39:27) - The issue of architect, I mean the code of ethics says a few things, but I think it is we the educators who are suppose to expose the students. I keep telling my students, in one of the classes I teach, that all of them want to work in offices, but I told them that there are no architects in construction, one tried, two who I know who were in [Named University] tried it, and came out of it. Now while the code of ethics says that, well, it doesn't necessarily say that architects should not be involved in construction, I think at the same time, it's important to realise that they can go into construction, but if they go into construction, they probably have to leave the traditional role of the architects. So we the educators need to make them see this, and I've been trying to to it of late, in the last two years, whenever I teach this class, I try to open their eyes. Now, I think FG9_7 and somebody else talked about this issue of the system. I would like to make this a little clearer. Most schools of architecture fall within a university, and the university is very bureaucratic. We have had a lot of challenges in [Named University], where we try to tell them that we want to get involved in the admission process and the like, and they can't hear of that. They want to do their thing, looking at the grades, calculating the points, so a lot of the people who come actually do not realise what they are coming into, yea, until they are in, then they start struggling. But I think it's also important to mention, I need to touch on what FG9_4 has said, the system per-se, the education system in Uganda has challenges, not just architecture, but everywhere else that we have to address. You talked and asked about instructors and the education process, I just wanted to touch on that. I think the instructors really need to be exposed and they have to be open minded as they teach the students. I think those are two things that are very very important, the exposure and the open mindedness. And when we talked about the education process, ahh, I personally think, that the process needs to be more practical. On my own I understood much much more when I was a student, we had an American instructor, a full-bright scholar who came for a short time, maybe about a year, but during that year, I learnt so much, because he was a very practical man, it wasn't just theoretical knowledge, going out you delve into things, he shows you things ... so we have, I think the whole issue of having a class that is more practical is very important, a class that brings in outsiders, be they architects or other professions, to come and talk about what they are doing, so that a student is able to relate the theory to practice. And you might relate it, but you may also abstract it is a way, and come up with your own interpretation, but it opens your mind up. Ahh, it probably makes the students more broad minded, it exposes them better. I also think that education should not just stop at what the instructors do. We have to train the students to be able to train them, to teach them, to educate themselves. I keep telling them when I was a student, I used to work in an architectural firm, and I learnt a lot from one draftsman. And this man was, ... He taught me a lot, I was, I knew, I knew I was in university, he was a technician but we used to listen to him why he is doing this, whatever, and I learnt a lot. I tell people they should learn from the masons on site, and things like that. An unfortunately

I heard of one of my former students, who would go to an office and, she was probably in second or third year, and she wanted to be a small little queen. She's the one at [Named University], while these guys went to a technical school, so they can't teach her anything. And I think we have to train our students to be more broad minded, more accepting, more willing to listen to whoever it is, cause you can learn something from anybody.

FG9_2 (T-45:43) - I think the architects have got to learn how to empower themselves. For example there is political power. If we don't have any architect who has got political power, then we cannot penetrate some areas. We are not authoritative, but if we had a Prime-Minister who is an architect, then he can even influence the syllabus at [Named University], he can do it, using that political power. So we need to develop role models, who will influence the young architects to see, I can also become a Prime Minister, I can be a Member of Parliament. So we should think about empowering ...

FG9_7 (T-46:27) - And maybe also tapping into talents, because that's also the beauty, the nature of our profession. There are people of all different calibre's, maybe you are strong at something, or you have a certain personality tendency. So I think all these people are keys to areas in society, and I think, I don't know how, maybe somebody can brain ... brainstorm on that, how these keys then begin to open and enter, how education allows them to open and enter.

FG9_1 (T-47:18) - I have another twist to FG9_2's submission. I do not think that architects must necessarily be actually in those positions. But the key is actually understanding how these systems work, social intelligence, FG9_5 was talking about. You must be able to understand how society functions to be able to have the right lobbying strategies. You can lobby even if you are not at the top. So how to actually put yourself in a positions where you can be hear, where you will be listened to, I think is something which Architects have good presentation skills, but I don't know why we seem to leave them at school, and you jump into the field, and ...

FG9_4 (T-48:19) - You can't even pitch for a job ... *[laughter]*

FG9_1 (T-48:23) - Yea, you know. I think that is where the problem is. It's not that I must be a Prime Minister, but the question is, how can I make sure the Prime Minister does things for me.

FG9_5 (T-48:51) - I just want clarity on this issue, do you want architects to be able to go out there and be able to do something, diverse, I kind of feel we are talking about employment. I mean, we need to be clear that it is beyond that.

MO - (T-49:11) Well my take of it, what I understand, is that this debate seems to be saying that the architecture education has been producing people to look for jobs, but what seems to be going on that is no longer the case, that the education system hasn't enabled people to diversify. So maybe it needs to do that ...

FG9_5 (T-49:32) - So that they can get jobs ...

MO - (T-49:34) So that they can make a difference ...

FG9_4 (T-49:35) - So that they can do different things ...

MO - (T-49:38) So that you can think differently ...

FG9_5 (T-49:11) - You want the education system to, I mean you want them to just be able to absorb, the society to just absorb them?

MO - (T-49:48) Now maybe, the way FG9_6 put it was more succinctly. Saying that, because she was immersed in a setting that had different things going on, her tangent, or her trajectory went in a particular direction. Same thing I guess, I'm not supposed to be talking anyway, my trajectory was the same thing, the reason I ended up where I am is because I had these different opportunities, so I went in that direction. But maybe the reason we have everybody going in one path here is that is not there. Is that the case?

FG9_7 (T-50:28) - Maybe also the university is not as influential as it ought to be. Because the role of a university is yes to educate, but it also has the role of influencing society's thinking.

FG9_6 (T-50:48) - I think the challenge stemmed from what FG9_4 said P1, grade one, that is when the problem started, but I want to break out of that, and say it even started way before that, it started in the family, it started in society. Such that the person, if you look back 30 years, my parents generation, I don't think it was that they received a more unique education than we did, although they will argue that, and we will also tend to argue that, that the nature of schooling was better then. But I would like to say that there was a way in which family or culture allowed the person to be who they wanted to be, not that the school was perfect. I think there has been some kind of decay, and architects need to grasp that, to adapt to that need, that people need to be freed up, sort of I mean our laws, whether it is our ethics, or our bye-laws should not restrict us, they are made for us, so why is it now that we seem as if we are in a straight jacket we can't move? So in essence, the architect needs to see that education can become what it wants for us. So if I am in an education environment, training me to be an architect, I should allow it to nurture that individual to be the architect in society. If the individual does want to cross over to be a politician as we've seen next door, our fellow Kenyans, there are three architects in government positions, in the United States architects are playing a more political role, but they have evolved, I think they have been through the same periods or phases that we are struggling to break out of now. Whether the architect wants to go into construction, as is being put forward, that can happen, but also the architect can continue to be the architect. And I think, we need to help society understand that by rising up or stepping up and realising we are not constrained, we ourselves are actually straight jacketing ourselves.

FG9_3 (T-52:56) - Can I just ask a question, FG9_6 and yourself talked about your education, and you say that you were exposed to a lot of things before you selected your tangents, and ...

MO - (T-52:56) What happened, and one of the questions I have here is about the nature of architecture education. My undergraduate education was, followed a very, I guess you can call it a liberal arts model, where only 50% of what we did was specified. The rest you could do it from anywhere in the university. And so you end up working with people doing physics, maths, geography, economics, psychology, whatever. So the cross fertilisation determined, sort of brought a lot of things in and then mixed it all up. And at the end it sort of came out much richer because of that, it was a different model from FG9_6's. Now the US system, the Canadian system which I went to afterwards was even more liberal because there, to make up your degree, you had to pick from different faculties, different units, you had to do it otherwise you didn't graduate. So and then, it was only later on that you went into a very specialise programme. And you find a lot of people start selecting what they speciality is, so mine ended up being energy, why, because I spent a lot of time dealing with geography and psychology, and ended up dealing with housing, using housing, and then end up in energy, cause there is a link there. So thats what happens.

FG9_3 (T-54:40) - My understanding is you sort of had a foundation year?

FG9_6 (T-54:46) - It's partly there, but it's partly not. I'll give an example of a student who was in my year. Because you find that you may have the platform for diversity offerings, the diverse offerings that people can sort of peruse. But then there is also a limitation in that the institution may be limited in scope. A case in point, was one young man, I think he was Indonesian or Indian by race, but he was also in our year, and we had the typical grade one, the five year system, and he kept on wanting to portray his solutions in comic form. But it was, he found himself restricted, because the educators thought, this is not the way architecture education should go. And constantly, when he pinned up, we were looking at comics, and it was informative, but he was solving the problem, but he was doing it his way.

FG9_7 (T-55:41) - Which was quite a different school, my school was also very diverse, and what they had was all these many different units in one year. You could have ten units in any one year, which were really way different ways of approaching. So a person like that, if they were in a unit that had no ... The units didn't have bounds, tight bounds as such, but they had some definition: say it could be more organic; it could be literal. So the students were given an opportunity to select which unit they were going to go through. So they might end up with an architect who is more, and actually there was an architect who was that kind of person in the first year. So the student got an opportunity to select who their tutors were going to be right from the start.

FG9_6 (T-56:51) - What happens when there is no such a mentor?

FG9_7 (T-56:55) - In ten units! There's bound to be somebody, especially when the bounds are not that tight. It means that you can select something that you can work within.

FG9_3 (T-57:09) - Can I just ask FG9_6 one question, so I can just understand this system? Can you tell us if there is anybody who did not go into architecture, who was in your class, who turned and went somewhere else, just to help some of us.

FG9_6 (T-57:21) - Well it's hard for me to know, because I didn't follow up everybody where they have gone on. But it would seem to me that they may have gone on to different areas. But they are still applying their skills. That is the interesting thing, the architecture education actually equips people to be quite relevant in society.

FG9_3 (T-57:39) - So they graduate with an architecture degree, but then do something else.

FG9_7 (T-57:43) - Which is what I was talking about the primary one, and I do have an example in my school. Someone who went off and became a jewellery designer, and another person who went off and became a Hollywood set person, film ... these people who design frames.

MO - (T-58:06) I have one who went off to become a diplomat!

FG9_6 (T-58:13) - One of my instructors is designing formula one race tracks around the world, making serious money too.

FG9_5 (T-58:28) - I think that every education has got a contextual thing about it, and I just want to think of the context of our environment and what we are now, and where we are. I hope that, I hope that many of the students we are training are going to be a part of the society in which we live in, which is, should I speak, Uganda, or East Africa now. The needs, the current needs, you know that pyramid, how you cannot think of something before you solve the basic problems ...

FG9_7 (T-59:07) - FG9_5, that is not what we are trying to say ...

FG9_5 (T-59:17) - What I'm asking is, ... (pause) this architectural education. [pause] Is diversity in (pause) ... is it the solution to the needs which are where we are now?

MO - (T-59:32) Or maybe I should ask you another question, is education, any education actually educating or training people for now or for the future?

FG9_7 (T-59:40) - ... or for anything ...

FG9_5 (T-59:42) - What the real, what's the root purpose of education, what is it, what ideally should it be. It has to give somebody an opportunity to go into society, Is something. ...

FG9_2 (T-59:55) - Education should be training people to understand the past, the present and even predict what the future can be. That is why we study the history of architecture. So that we know how we have been moving, cause at the beginning, we had actually artists who were not interacting with engineers, then we reached a stage when we had to use steel in our designs, then we started to study some engineering

solutions. Now we are moving forward, we should expect people to go on changing as innovations come in. So you cannot train someone, to be static ...

FG9_7 (T-1:00:40) - ... to be something full-stop!

FG9_2 (T-1:00:43) - ... we should be able to move on.

FG9_3 (T-1:00:47) - Point blank. The biggest challenge of a developing country is poverty, ... one of the big challenges.

FG9_7 (T-1:00:58) - But, funny thing is, the people who deal with poverty issues in Africa come from Europe. So why is that? They have not been, they have not been TAUGHT - FOR - THE ENVIRONMENT - FOR - UGANDA - OR - KENYA OR, they have been taught in Europe. I may suggest that the key top their being people who come and is because they have been taught more freely, their minds are not boxed up to the CONTEXT of Europe.

FG9_5 (T-1:01:44) - They are not the best solutions ...

FG9_1 (T-1:01:46) - They may not be but ...

FG9_7 (T-1:01:48) - Why aren't we doing it?

MO - (T-1:01:55) Frank Ghery was not taught to use titanium, but he does, so what happened?

FG9_3 (T-1:02:05) - I think the key thing is what has been touched on, I think FG9_4 raised it first. The issue of our culture and our education at an early level, it puts us in a straight jacket. We believe that the teacher is always right, we believe we shouldn't ask questions, we should not, we should not explore, we just wait for the answer and that sort of thing. Maybe what architecture education needs to do is to free people from the straight jacket. The question we should be looking at is how can it do that? Maybe we need a course that, for the students ...

FG9_7 (T-1:02:37) - ... for the Educators

FG9_3 (T-1:02:39) - ... both educators and students as we teach them to make them, to learn how to freely express themselves, learn how to think outside the box, learn how to go out and look for information, you know. Such that, as you say Frank Ghery, he probably had to search, how can I solve this problem, and he came up with a solution. So the key thing is how can we educate the students to learn how to research.

FG9_6 (T-1:03:03) - I think it is opening the boundaries, I find that at the risk of saying open things up, for some people may mean then make architecture education same across the board. I have a problem with that. I think the [Named University] structure has benefits for some individuals, and I believe, what [Named University] is trying to do also has its benefits for some individuals. And I think that cross pollination or fertilisation should be allowed to occur, whether it is free movement between education levels or structures, because you find that people want to, to grow, but growth means exploration, and diversities. If FG9_1 had, had an opening, maybe he could have crossed over to another realm, but at that time, [Named University] or [Named University] would not allow him to cross to where

FG9_7 (T-1:03:54) - ... or there was no other realm to cross to, just [Named University] ...

FG9_6 (T-1:03:59) - ... but the schools can breed their unique brand of architecture, I think. They should be allowed to do that. I don't think we should have a definitive uniform that architecture education should be this way. I think that would also be swinging the pendulum onto the other extreme rather than answering whats needed.

MO - (T-1:04:23) Let me get back to what FG9_5 has been talking about, context. This is something that has come out of South Africa, quite strongly since 1994. This whole idea of what is it to be African, there's now talk of an African curriculum, African philosophy. How do you see this working in our context? I mean, what is Africa architecture anyway? Are we suppose to educate people only

about the context, or we have to acknowledge that although we are living in this context, we are dealing with the future, we are also competing with the thousands of other graduates of architecture schools around the world. How do you deal with that?

FG9_1 (T-1:05:19) - Just to add on to that, the economy is no longer isolated these days as well. So the question of local context is (pause) being rubbed away other every day. We are now talking of East Africa, but I mean globalisation is a reality, and even if you thought you were going to tune yourself to the Uganda context, you will probably be swallowed up by professionals from outside working within ...

FG9_7 (T-1:05:56) - or you will become an, Unique, ..., That Architect who does ... , or who thinks Which is quite ok, but it becomes ...

FG9_1 (T-1:06:07) - ... but you must have the flexibility, you should be able to serve needs at any level.

FG9_2 (T-1:06:18) - The question is, is the history of Ugandan architecture documented? Is it well documented? Cause I think we should have that resource.

FG9_5 (T-1:06:41) - I think it's FG9_1 who said, many of the architects produce their work in the cities and towns, and we are serving what percentage did you said, something like 10%, or 1% of Ugandans, which is an actual lie. And you know, every time you travel out of the city and go into the villages, and you see the, what I call the real Uganda, it's absurd. And I think when I talk of contextualisation, I am not saying I'm going to compete with the Formula One designer, no, but ... I can do Formula One, ... What I am saying, what relevance am I to these guys of my village. I mean what relevance are the people we are training, are we just recycling the same kind of thing and it is going to go on like this, or does Africa, because education ideally is a solution to a developing country. Education should empower an individual to add value to his society, it should, it should not make him just go out there and do something, or he was born to do jewellery, or thats his niche,

FG9_7 (T-1:08:03) - No that's not what we are saying ... [*Speaking Over*]

FG9_5 (T-1:08:06) - I, I think there needs to be a sense of, it's like your saying, you can create a first class engineer, brilliant engineer, smart, innovative, but he is useless if he cannot engage, if he cannot engage, if he cannot go out there and think of how to give these peasants a way to get drinking water, he is useless ...

FG9_2 (T-1:08:30) - I was at Elgon Hotel, in Mbale, and I saw a grass thatched shed, and ok it was made with timber and grass and so on. But when we asked about who designed that thing, I was told it was somebody from South Africa. They go all the way to get South Africans, to come and do that, I did not believe it. I do not know whether that is true, and so that is why I am asking, are we doing some research in some of this African architecture, so that we can move forward.

FG9_3 (T-1:09:12) - I want to say, for me, I look at context in a very different way, I appreciate we have to take out context into consideration, our cultures, the way we build and things like that. I think an architect should appreciate their context, and the reason is, ahhh, your context more or less looks at things like the setting you are in, so you are able to know what people need, and you are able to design for them. But I think that when we look at context we have to ensure that we do not fall into a context trap, what I would call a context trap. Where we are not exposed enough to be able to do things. Anyway I think an architect should appreciate your context, but you should be able to progress when the time comes and go and do things elsewhere. So while I appreciate this whole context thing, I think we just have to make our students get trapped into thinking that all the time context FG9_3 important. It is important, but we've got to ensure that they are broadminded and exposed enough that when they are faced with a situation elsewhere, they are still able to come up with a good solution.

FG9_6 (T-1:10:26) - And I think to add to that, I feel we have a very unique role, or gifting, or talent, in that we are to elevate peoples ... , elevate people out of their condition, we

are not to remain at poverty level, and I think architects have that unique role in that we create that magic. Throughout history, when you read about it from the temples. People were aspiring to create such structures, when you look at the pyramids. In that context and that time! That was outrageous! That was ridiculous! That was so meaningless, if I may use that word. So I think we shall continue to create that which seems meaningless in the now, but I think that is what motivates people and brings them out of their base condition or their degraded condition, I that cannot be taken away.

MO - (T-1:11:21) Well it's actually an interesting one, it came up in relation to the hundreds and thousand of dukas we see on the side of the road, which originally came in 100 years ago with the railway, and has been around ever since. How did that happen, well because it was different. Unfortunately the difference has now become the norm [Background - Permanent: Standard]. So who is going to come up with the next different duka?

FG9_1 (T-1:11:54) - Maybe just to add to the question of lifting people out of poverty. Umm, the undertaking, somebody having lets say a home, or a building is usually one of their biggest investments in life. So if an architect is responsible enough to put those resources to their most optimal use, and create savings, you know, create savings for that client, I think they are doing a very big, a very big role. And, in, ... thats why I think that architecture is such a very very wide field, it goes into the, if you like at the economics of a person trying to have a building at the impact of your decisions on their wellbeing, on their life, it is immense.

FG9_5 (T-1:13:15) - Can I chip in there, there are two points that you've made that really ... Why is it, yea, that our training, as you say the temples and what, why is it that very few, I am not part of this group of people, in our society, who have been trained, who are aspiring, yea, ... I tell you what, the mindset, the attitude, of your graduate student, across the board, is survival. No body wants to aspire, no body wants to, to greatness, so to speak, like Le Corbusier, or the greats we know, the greats in every field, yea. I think that the training, there is an ingredient that supersedes knowing your capabilities, and going out and what, there's a certain something, it's an attitude, it's a trait ..., I don't know, it's experience, it has to be intentional, that when this fellow comes out, that's why I think social intelligence is very key. But if your not aspiring, if you don't come out to, I tell you, your basic needs, and I, that is why I talked about the context. Why is it It that architects are like a beehive in Kampala city? Why? It comes down to, no body is willing to take the road less travelled, which is when we go out there and make this slab different, let me go out there do, and start a new way of jewellery, because there is an ingredient that we need to pick and plant. I tell you that all this work that we do, can't just be, that is missing, it can't just be wasted effort, and we'll just be, taking through the motions, and architecture is not just a motion, it's not, it's such a diverse, as you as we've talked. That ingredient needs to be intentionally taught.

FG9_7 (T-1:15:21) - Let me ask you a question. Where you taught ... You were not taught that ingredient, I presume. ... [Laughter] Now that you have it, [More laughter] this should help I think move us forward. Are you a great?

FG9_5 (T-1:15:46) - Assumably, if I have it, I, if I mean't, ... I am not, but, ... The question should be am doing, am I pursuing greatness?

FG9_7 (T-1:15:59) - Are you pursuing greatness?

FG9_5 (T-1:16:01) - I am not.

FG9_7 (T-1:16:16) - You're not? Why not?

FG9_5 (T-1:16:05) - I would love to

FG9_7 (T-1:16:06) - You are aware of it?

FG9_5 (T-1:16:08) - But I am aware of what greatness is.

FG9_7 (T-1:16:10) - So why are you not?

FG9_5 (T-1:16:13) - Mmm, well it's, that would be a personal choice, cause ...

FG9_7 (T-1:16:21) - So you choose not to ...

FG9_5 (T-1:16:23) - Yea, and also, I think the environment, .expectations, you know

FG9_7 (T-1:16:13) - Thats exactly what I am coming at.

FG9_4 (T-1:16:13) - You are expected not to be great? [Laughter]

FG9_3 (T-1:16:43) - We actually have to think about our society. Now we should remember where we are, we are in Uganda. Here our parents educate us, we are expected to graduate with a degree, get a job, get married, build a house and die. [Laughter] ... and that is the story ... and so the issue of greatness, going to a slum, how will you build a house? So in a way, I don't know how we are going to do it, it is really a challenge. But one thing I can say, that I have talked with young students, and some of them are concerned with the future, of architecture. They are doing architecture, but you know they are worried about survival, about whatever. Then, they don't, they are not motivated, they can't see, aaah, they're too many grey clouds, at the end of the tunnel, yea, so they are a little bit worried and in a way, they have to be motivated, otherwise there is that whole issue of survival really. Society expectations, worries from parents and the like, and then looking out into the fried, and the n the challenges architecture is facing in the region in general, Uganda Kenya, Tanzania, yea, where systems are not really working and the like, and people are taking all sorts of shortcuts, they're worried.

FG9_7 (T-1:18:01) - How do we get systems working?

FG9_4 (T-1:18:21) - I have a question for FG9_5. What I am asking you is, is what you are saying about greatness or, about social responsibility? Like being responsible for just more than yourself, selfless social responsibility. Thats what you are talking about?

FG9_5 (T-1:18:36) - They are two things, those are two things, but they kind of ride in the same direction.

FG9_4 (T-1:18:40) - Well if you are very sacrificial are you are selfless, and you do this social work, and you don't care of your car and your house. You will eventually become a great.

FG9_5 (T-1:18:53) - Yes ...

FG9_4 (T-1:18:54) - Yes! So which one do you want to pass?

FG9_5 (T-1:18:59) - You see, it's a risk, I don't think the any Louis Khan, or Hassan Fathy, those guys who took a, you know, their lives aside and and said, I am going to do something for these poor people. They started, and it was a risk, and they became relevant, and, I don't think thy were thinking in a selfish way.

FG9_7 (T-1:19:19) - Did they say, do they really, if you look at history, did they say, I am going to do, [Lots of background talking]... they started with the greats, I mean the great clients.

FG9_4 (T-1:20:23) - I tell you what, I think that if we teach our students to follow convictions beyond personal gain, let me give an example of Miriam Makeba, a woman who all her life just wanted to sing, even when she was dying, she was still singing. As a young lady working through the streets, in Paris and all that, she would go to this place, pass by here and say I want to sing in there, and walk in and sing, thats all she did. And she harnessed her talent, she was dying and she sang and sang. I'm not saying being a great is doing a build ... That is not it, I don't think so, in that aspect of glorified, self glorified image of a person. I think it's defined as [service] a person who is relevant at the time, a person who met societies need at the time, a person who created a new wave of thinking. I mean, if we look at our society now, I think that, what's his name, Microsoft, Bill Gates, whose vision is to have a laptop on everybody's laps before he dies, he is getting there. (FG9_4-but) Well the money does follow you. (FG9_7-No) I think the money follows you eventually. If you follow greatness, the money, I think we need to give our students, a new mindset, because a student in class is not going to

think innovation, skills and what, if he is clouded, or contaminated with the thought of earning money. You know innovation, the great architectural thoughts, and all these things, that have, trends that have come, I don't think have been inspired by money. Have been inspired by people who are convicted by an idea (FG9_6-Passion)(FG9_7 - Jesse, Jesse you are right) Right now our society (FG9_4-Passion) is struggling with poverty, we are struggling with institutions. We need to train them to come in.

MO - (T-1:22:36) Ok, I am going to now ask this question, cause we, I hear a lot of this, this word 'training' keeps coming up. What is the difference between education and training? It is a very pertinent one. There's talk that sometimes the terminology we use also affects outcomes. So, are we aware of the difference between education and training. And there's a wonderful example of this, actually somebody used this, they said: If your child comes home and said, hey dad, I'm going to a sex education class, but if they come and say I'm going to a sex training class, what are you going to do. (laughter) You see the problem. Ok, now, it is an interesting one because it comes up, and if you have gone through the online survey it is actually an interesting thing. Unfortunately the reality for architecture is we have both, we have to train, and we have to educate. The question is how do the two sleep together.

FG9_4 (T-1:24:04) - Ok there are different models. There is the model of every vocation, after being educated, 70% of the year, during your longest vacation, you get 30% of training. From second year, you do it third year, you do it fourth year, then you finally enter the field, and get trained for some time before you eventually qualify for registration. Then there is the model that [Named University] does of you study, get educated, First year, second year, third year, then you get trained, then you get educated a bit more, and then you get trained for two years, and then you are ready for registration.

FG9_1 (T-1:24:55) - I don't look at it that way ...

FG9_7 (T-1:24:56) - ... I, I, I beg to differ ...

FG9_1 (T-1:24:57) - ... In both contexts, there is both education and training ...

FG9_4 (T-1:25:01) - Yea, they re both their, and they are sleeping together ... (Laughter)

FG9_7 (T-1:25:08) - Training is ongoing ... training is ongoing, and education is ongoing ... parallel.

MO - (T-1:25:16) Could you clarify, could you elaborate on that?

FG9_7 (T-1:25:20) - The very, even studio is training (FG9_4 - really) yes, education is more subtle, is more, (FG9_4 - Theory) no not necessarily. It's something that happens I think slowly, but also I think it boards on sit down I talk to you, lecture kind of thing. And I think architecture has all of those things ...

FG9_1 (T-1:26:12) - The difference to me between education and training, of course training like we have said ... , but education is to me is how those interactions develop you. How you begin to see things, see opportunities, but not necessarily the skill you have, you have acquired, but then the way it builds you for both, the way it enables you to move on is to me what the education component of it is.

FG9_3 (T-1:27:01) - I think, the way I was looking at it. Training, makes people, I mean it tells people the way things are done it is rather rigid, and education, to me you give people knowledge, more or less empower them to be able to think outside the box. And basically as you go further make them learned people who have the ability to think through situations. If you look at our technicians we have from our technical institutes, they can design, they an even, well I mean, they can draft, they could design, but if you actually look at what they design, there's an element of, ahhh, what should I call it, ahhh, they're not really exploring whatever ...

FG9_7 (T-1:27:47) - It does't come from the soaked in stuff ...

FG9_2 (T-1:27:49) - ... Training is mainly to do with skills, while education is the knowledge. I may know what a good nail in an iron sheet is, but I get the skill of putting it right

FG9_7 (T-1:28:06) - And I think knowledge also has different levels ...

FG9_4 (T-1:28:11) - I beg to differ. I think context is very important. There is a context in which you can get trained, and there is a context in which you can get educated, because if I look at the lawyers, for example, when they are, when they are getting educated, they are in class, ok, and then when they want to get trained, in the way of practicing law, they actually create the environment of a firm, a real firm, with partners, and cases, real life cases, and then they even create a court, they have a judge, and you stand before the judge, you present, it's so real, that most court training, they create the actual context, or they go into the context, and do the training of carrying out these responsibilities, because the context is very important cause it gives you a more realistic kind of setting for what you have to do. If you compare the portfolio classes, you know even when you are presenting to your lecturers, you have the portfolio presentation. It is not the same as it is in the firms, in the architecture firms. It is very different. It's totally different.

FG9_7 (T-1:29:40) - It is not, but do you think, do you think that the training in studios, and the, training of presentation, then becomes, is almost irrelevant in dealing with other clients, verbal, or communication ...

FG9_6 (T-1:30:02) - I think you hit it on the head, I think that is why we are having problems. We may not be solving societies problems because of that.

FG9_4 (T-1:30:10) - What I am saying, what I see with those presentations, the two things they do for you, is they give you some level of confidence in presenting your case, or defending your work. Some level of confidence in defending what you have done. Ok, but it is not applicable to the field, because rarely are you asked to defend your work, most times you give the client something, and they say oh, ok, and they take it ...

FG9_7 (T-1:30:39) - It's because the client doesn't want to know

FG9_6 (T-1:30:44) - He doesn't know how to know what he wants.

FG9_4 (T-1:30:44) - Basically we should be in a position to teach people what to expect of us, so that when we show it to them they are able to judge, to gauge what you've presented. Do you get it.

MO - (T-1:31:11) And this is again one of the issues, or the problems, I don't know if it's a problem, maybe it is, maybe it is the reason architecture is what it is. The legal professions is very rigid, it is very strict, it doesn't change. While architect can't be like that. If we do what the lawyers do, architecture would essentially become drafting, Because you can't specify to somebody that all columns must be 300, how? If I am doing a 20 storey building, it can't be, and in terms of the law that is actually what happens, and so it becomes very problematic for us, and actually for. This has been one of the things during my research is that, they did try and use law, they did try and use medicine, they went horribly wrong, because they are dealing with different issues. Now the nurses have also come into the picture, cause they are trying to follow similar, to explore what is nursing education. And they also got themselves in this bad mix, how on earth do we move forward, when we have to do A, B, C, D. How do we educate people in this field. Cause they have also just moved into university setting, so they are experienced the exactly the same problems we are. So the question is, what do we do? Where do we move, how do we exploit all these different approaches.

FG9_1 (T-1:32:40) - To me FG9_4's presentation, your submission ok. I get the feeling that what you are trying to say, is that maybe the kind of presentations we have don't ignite the spark of the social intelligence he was talking about. The point is that you should understand your client, your presentation should be for the particular client. The presentation in school is an academic presentation, you are talking to people at a certain

level. When you are in the field, you should be able to, now that is the education we are talking about, you should be able to adjust to the level of the person you are dealing with, to make them be able to understand what you are doing.

FG9_7 (T-1:33:44) - Even if it means compromise?

FG9_1 (T-1:33:47) - I don't think it necessarily means compromise.

FG9_7 (T-1:33:52) - Explain that

FG9_1 (T-1:33:56) - I would, either language, technique, those are the things I am talking about, but not, not the quality of work.

FG9_7 (T-1:34:06) - And negotiation?

FG9_1 (T-1:34:10) - I, negotiation, depends on what your ...

FG9_4 (T-1:34:12) - In terms of what, fees?

FG9_7 (T-1:34:15) - Not fees, negotiating a position, I don't know.

FG9_1 (T-1:34:23) - In some cases you will definitely negotiate a position, now that is where the questions of ethics come in, you know. But when you are serving a client, the client has demands, has a budget, has what. And, if you are not ethical, to try and fit within these demands, you may compromise certain things. But if you have good communication and negotiation skills, you will be able to either let the client, what do they call it, ... cutting the cloth according to his ... yes, so those are the skills that we should have.

MO - (T-1:35:18) Now may I ask you a question, cause this is what FG9_1's mentioned, and I think it's come up before, it came up again earlier about clients. How studio courses are taught by themselves, I mean, we are talking about reality. If FG9_4 says there is a problem in the studio, what actually is that problem. It came up earlier, in that, when you are presenting FG9_1 says it is an academic situation. Why is it an academic situation? Are we just going through the motions and saying, oh yea it is an academics who cares, when I go into the real world I can do something different. So is that a problem, do we need to change it?

FG9_1 (T-1:35:58) - I think it's a problem, I think that some of these studio courses, should tackle real situations, and real clients, and present to real clients. You will have some studio presentations which are probably very academic, and you will have some which are interfacing with the real consumer, and then you will be able to see the difference in terms of their responses in terms of expectations, in terms of letting Mark see what I am saying as a student, is probably much easier. Ok the levels are not the same.

FG9_7 (T-1:37:04) - The reason I bring up the client thing again and again. Is I'll give an example. One time I was in a situation, and this person says to me, a client takes you to a space, very restricted, and they have money, they say, I want a dormitory, and it's got to be this that and the other, and the students have got to sleep on four deckers. And the thing I am saying, that is more the rule than the exception, now you're saying the training, should be with clients, yes it should, but I think it has got to be debated. What is the value of having the real client, i.e. "reality" that is reality, "this is Uganda", as they say. Now, you have this is Uganda, which shouldn't be Uganda, in the studio setting to teach the students to be Uganda.

FG9_4 (T-1:38:46) - No to teach the students to deal with the real Uganda. Because the whole point of training, not educating. Educating tells you what it is supposed to be, and then the training. (FG9_7-Really) Education tells you you are supposed to have a double decker ok, the real life says someone wants a quadruple decker. So the training is, how do I explain to this client that they are going to endanger their students if they do that, and then eventually persuade him, to have a double decker and a proper fitting building on the site.

FG9_1 (T-1:39:30) - So that is why I am saying, you should be able to educate your client

MO - (T-1:39:34) - Although we have an ethics issue also showing up now

FG9_4 (T-1:39:36) - You are training to deal with people like that.

FG9_3 (T-1:39:39) - Can I say something. Earlier on, I said that architecture education should be practical. And what FG9_4 talked about what Lawyers do, that moot thing, I have heard about it. They more or less put them in a court case scenario, and they are able to see how things are done. Now when I talk about architecture education being practical, I am looking at subjects like building technology, but I'm also looking at subject like professional practice, where people know what clients are like and things like that, and FG9_1 talked about something that I have actually written here, that along the way, may be every year, each year should be able to liaise with clients more, there should be at least one studio assignment where it's more or less real life. Where you liaise with a client more, and you are looking at a real life case, however with an academic approach (FG9_7 - Exactly) You can't take these complete, the way somebody says. So we at least made sure there was something like that. So they meet the client, the client says what they want, they listen to the way the fellow is doing, from the time you meet the client, to the time you finish, of course bearing in mind that there are different time frames for academic semesters vis-à-vis, what the client may require, yea. But I, then I also think that as you are dealing with this particular class, we need to link the studios more to the other subjects, building technology and then, when I talk about the practical aspect, take them on site to see some of these things, and understanding how they are done. That technical aspect I feel, both at understanding technical issues, and practice issues, is something that we really need to work on.

FG9_7 (T-1:41:19) - Now you talked about the, them having the academic approach within the, ... you bring in the client, but you have the academic ... How does that work?

FG9_4 (T-1:41:43) - Perfectly

FG9_7 (T-1:41:44) - No I'm not saying whether it is perfect or not. But, how does it work, the decker, the quadruple decker and the academic dimension.

FG9_3 (T-1:41:56) - No academics is really about the project being done within the particular, the semester timeframe, and it's realistic, yea, and it will meet the objectives that you have set for your year, yea, thats what I am talking about.

FG9_5 (T-1:42:14) -I just wanna go back to the debate on training and education, I think it was not really exhausted and it is pertinent to this. I think that really training, and in all broad sense of the word, can be any of these things. I can be trained to present, I can be trained to do this, it is a feeding of a skill, a feeling of knowledge, that I'm aware that concrete has these properties it's training. But education is a broader aspect of it, and I think it brings in the aspect of, ... well, I would like to think of it as empowering somebody, yea. I mean why it is that you meet somebody on the street, he will drive past you, and you ask yourself, is he educated, you will not ask, is he trained.

FG9_7 (T-1:43:03) - No [*Laughter*]

FG9_5 (T-1:43:43) - Or you'll meet somebody and you'll, it will hit you, this person, I mean, I think I have met professors who are not educated, frankly, frankly. I think, I think they are stuck somewhere living in their minds, but when you try, you know Is he empowered, is he, for instance, I think FG9_7, that example you gave is very pertinent to empowerment. You did not complete the story, to tell us what your response was, I think you were empowered to tell him, hey, that is wrong, I can't do this for you, but I can't find somebody else, and that is empowerment. Empowerment to say that, I have an office, I run it this and this is how ...

FG9_7 (T-1:44:01) - I walked out on the project, I didn't do it.

FG9_5 (T-1:44:04) - You were educated ... [*Laughter*] FG9_1, what I was trying to say, what I am trying to say ...

FG9_1 (T-1:44:08) - No but the other thing is that is that that encounter also educated you, you know. There is something you learnt from it.

FG9_5 (T-1:44:14) - I think, FG9_1 yes, education is a process, that goes on, but I think it is a sort of a dimension of, it's added to training, that in there you've got, it's like, you know you have X,Y,Z, and it comes off somewhere in the middle. In there you've got social intelligence, **(MO - A fourth dimension)** yea, you've got social intelligence, I mean, you know I am on time. Somebody who is educated, you know if they are going to meet a client, they are going to be on time, not because they are the best architect, cause they can draw, they can design, you know they are great, it's because it is because of the education they have had. And that's why we say that it does not even end in schools, but maybe we want to bring our, you know, they say that Uganda has got a big percentage, the biggest, one of the biggest ok, we've got a very huge absentee parenthood thing going on. That people grow up, and they, they are not taught these things. Maybe we want to bring our parents, these people in, you know, into the system, how do they get, how do they play into the education system, how do they play. How does society itself play a roll into the education system? That is now education. Training I can be trained anything. I can be trained to come on time, I can be trained to speak, but education is a bit, ...

FG9_3 (T-1:45:41) - You can train a dog ...

FG9_5 (T-1:45:43) - ... to do anything, but you can't educate it ...

MO - (T-1:45:47) Ok, I think we are pretty much out of time, so maybe we can just go around and sort of everyone gives they last comments, cause we could be here for ever, I know, we are all passionate about what we do obviously.

FG9_6 (T-1:46:37) - Maybe I will go then, just to come back to that quadruple decker scenario there, and something FG9_5 just remarked, in one of the things he said when he felt that maybe you rejected the project. And he said, I think, he said, maybe find somebody else. I think the client should not be able to find somebody else. Because ethically, from an ethical standpoint, it is wrong, period. And so if that, if we understand that there is something wrong, then it comes back to the whole point that something is wrong culturally, or something is wrong societally speaking. Then architecture needs to also look at dealing with the societal decay, otherwise we shall be hampered, we shall continue to be, (pause) ... retarded in the process as architects, as architectural educators. And we need to perceive that. I think, for us, for this time, there is a decay in place, we need to recognise that. Then we can then devise the solutions, or the methodologies that will help us get out of that, you know, helping our clients realise that it is wrong to design such a thing, helping our students to understand that when they deal with clients, that the client doesn't understand, taking them out of the classroom, taking them out of studio and bringing them in touch with the clients at the ground. I found one of my experiences through several studios in the past two years is that whenever we would meet the clients, whenever we would discuss projects with the clients, the students language hampered the client, the client did not understand the language because it was academic. So our students need to speak to the client, so that the client understands the language they are speaking that is the only way the answers will be solved. Another dynamic I have observed in mentoring interns or when we are doing projects in the office, is when we meet the client, the client cannot read our plans or our elevations, that is greek, they do not understand it. So then our methodology has to change then. How do we speak the language the client understands, whether it's through imagery, whether it's through physical tangible three dimensional things, we need to be able to cross those barriers, by looking, what is the problem, then solving them, which is the training of architects in a nutshell.

FG9_7 (T-1:49:10) - I think, I think education needs to expand both, both tangibly in terms of staff or resource persons, and in terms of its reaches, its reach.

FG9_3 (T-1:49:48) - I think, I think there are challenges that are facing like architecture education, architecture education in Uganda, and architecture education needs to be

rethought and worked on, such that we can come up with architects who are relevant to society and are able to meet peoples needs, while at the same time of course thinking about the context in which they work. Ah of course they should be able to work else where. I personally think that they should be one practical it should practical, it should link, it should involve a client, a real live client, at least a couple of projects should involve a real live client, or a real live case. Of course as I said, while taking into consideration this issue I talked about making sure it's academic. And outsiders should be brought in, who may not necessarily be academics, yea, just to talk to the students, because they need exposure. And the two things, the two other things that are needed are: that we need to address the issues of the background, the society from which we come, which puts students in a straight jacket in Uganda in general; and we try and figure out how we can free them of this straight jacket so that they can think in a different way, and are able to, as I said earlier on research, and things like that. And at the same time we have to look at the universities in which these schools of architecture are and we try and see if there is a way to free them from the constraints that they are facing, cause they are facing constraints, as I mentioned, things in admissions, and staffing, and all sorts of things. You might find a school of architecture knows they have a problem, but trying to get the big man up there to say it's ok is a nightmare. So we might have to find partners who we can work with, maybe work closer with the schools of architecture out there or in Uganda, or with the Architects Registration Board, the National Council for Higher Education, just to try and see how change can be brought about, because you know there is discussing all this, but the question is, how will we bring about this change, how will we break free, that is something that has to be really though through.

FG9_2 (T-1:52:10) - Yea I think we are saying that architecture, architectural studies should broaden the boundaries of operations of our architects so that they don't think about the kind of architecture they have seen, they should go beyond and venture and do policy making, urban planing, and all those fields, so that a student doesn't think about practicing the way current architects practice, so that they can fit in an ever changing world.

FG9_7 (T-1:52:58) - Maybe one thing that we didn't speak about, oh, where is he, MO, MO is here, cause I really what him to hear this. I think also we need to make people who join academics, fully academicians, and by that I don't mean that they never practice, but they become fully academicians. Committed academicians who research, who rotate around, and by research, I don't mean people who do like this (mimicking reading a book) but, who rotate around, think about education, and think about the things they ... teach. Let me repeat is ... There is something which we haven't touched that I need to. ... I think we need to find, if our education system is to improve, we need to find, a way to make, to help the people who chose to enter academics as a profession, to help them become academicians proper. Because at the moment they are not. And that doesn't mean they don't ever practice, but they become committed to the business of producing knowledge, of exploring knowledge, of turning it over, of debating it, you know.

MO - (T-1:54:59) I guess now we are talking about ARB requirements, registration requirements, which are problematic in this country by the way.

FG9_1 (T-1:55:08) - I have actually, what I was going to say, is what you have just said. One, I think in the, in the school setting, the training of architects, there should be the two groups. The core should be those academicians you are talking about, and then that other ingredient of other people, coming in to, to give this reality check. So that the students are able to balance, and see, you know how they fit in the field. Because I feel that many people have this shock, get out of school, and every client doesn't seem to understand me, you know, and you think they are the problem, but actually you are the one who has failed to understand where you are working. And, what else was I going to say. The architects should also have education skills. (FG9_7 - The architects?) Yes, the architect, should also have education skills, because we are working in an environment where like we have all said people don't know you, hey don't know what you do, they

don't know, ... so when ever you,. You're interacting with the other side they should learn, they should come to appreciate what, what your role is. And by the next time they have another job, they, you know, they know better what to expect, and then ... Their goals will also then start to grow.

FG9_5 (T-1:57:08) - Just three things, because we are well out of time. For me, I think, give them a sense of engagement, that is to educate them, empower them, take them out. Two, I strongly believe social intelligence, ethics, that I think is pivotal. And lastly, I think every institution, school, should understand the uniqueness of architecture education, and deal with it in its unique way.

FG9_3 (T-1:57:39) - I wanted to just add something to what FG9_7 said, sorry, about people being academicians. She says that it doesn't mean that they should not practice, which I acknowledge. But I think it's important to bring out the fact that there may be some people in academia who are not committed. They are there because it can give them bread, but not, you know. So one has to differentiate between some of those people who are there in academia, it's just purely a salary.

FG9_7 (T-1:58:08) - At the moment ...

FG9_5 (T-1:58:13) - It also would be great to involve, people who are strictly, who are out there practicing.

FG9_7 (T-1:58:17) - Although not every body ...

FG9_3 (T-1:58:21) - Although I should point out that for example, the CAA acknowledges that academicians who are involved in practice actually contribute greatly to architecture education.

Focus Group Discussion - X (Academics)

MO - (T-01:39) And we are just interested in perceptions of architecture and architecture education, how it is taught, how do students perceive it, what are the challenges, what are the opportunities and then we go from there. So it is an open discussion, nothing ... hard I guess. So I am looking at people who are doing design, people who are doing the, what we call support courses, things like that.

MO - (T-02:14) So maybe we can start, we can introduce ourselves so that I can actually have an idea of the accents.

FG10_1 (T-02:36) - My name is FG10_1. I'm Assistant Lecturer here in [Named University], School of Architecture and Design, Department of Architecture.

FG10_2 (T-02:52) - Hi I'm Richard, I'm also an Assistant Lecture, here in the Department of Architecture. I've been here for at least five years. I did my Masters here in ... here at [Named University] and majored in Conservation / Urban Design. But my area of specialisation focussed more on the protection of old buildings in urban historic environments the case of Dar-es-salaam, Tanzania.

MO - (T-03:30) You are one of the few. We do not have any of those in Uganda

FG10_2 (T-3:34) - The old buildings?

MO - (T-03:35) Ahhh, Conservationists, (FG10_2) Oh, ... We don't have any ... we'll get to that as part of the discussion ... Now I've just spoken with students ... one of the prime questions that comes up in both the student and staff discussions has to do with the nature of architecture education in the particular university. So I am interested in your, your opinions. I gather you both studies here ... (Yea ... Yes ...) ... for your undergrad. Maybe you can give me a brief background of your appreciation of what the programme itself is trying to do.

FG10_2 (T-04:15) - Ah, ... I think if you go back into time, ... I mean I graduated in 2006. The training was quite intensive. The lecturer student relationship was quite good. There was, there was more strictness back then as opposed to now. So maybe I think it's a question of culture and upbringing. Maybe the kids today are different from those of previous years. And so there isn't any more motivation or responsibility. But as far as training and how it prepared us, or the appreciation that you talked about, I would say the strictness gave us more, more confidence, ... [pause] ... but if you go back into time, in my class we were about 30, we graduated I think 29. We started 37 and only 29 graduated. Yea they are a good number ... Ah, but now things have changed. Now you're talking of 150 in a class, so it's even harder to monitor the students to make sure that, they are well cooked, yea, they are well ready for, for the real world. So I think that is where the challenge is now. ... But, in general the previous years training was quite intensive ... [Fade out]

FG10_1 (T-06:06) - The programme was well arranged to prepare students to face the real world as opposed to now.

MO - (T-06:14) So what happened? Why this massive increase in student numbers?

FG10_2 (T-06:18) - Well I think that's a question of politics ... [Snickering] ... that is what runs the third world ...

FG10_2 (T-06:26) - Actually the even ourselves, we are not happy with this increased number of students, but you know that there is pressure from those decision makers. So they are forcing ... that we need this number. If you give them the reasons, this this, ... they say 'No, we don't want this, we want this number' ... so thats how it is, so there is great difference between we, as in, I mean teachers or lectures with those decision makers. There is different decision making, (FG10_2 - Very different decision making) ... that is why this number. And, we have fought a lot, because they wanted to increase that number, but we said no, we need to maintain this, especially in architecture

MO - (T-07:19) So how do you cope with such large numbers?

FG10_1 (T-07:20) - It is really very difficult, because one class of architecture, it has to have, ... we have divided them into three groups. So each groups has two studio teachers. But in those subjects ... theory, theory subjects, they have be taught together, the class of 150 students. So imaging to teach the class of 150 students, how difficult it is.

FG10_2 (T-07:51) - It's now 2 against 50, when back in the days when there were only 30 of us, I think we had at least 3 lecturers. (FG10_1 - yea yea 3 ...)

FG10_1 (T-08:03) - ...Because even my class, ... even my class, ... even my class, eh, I completed in 2008, we were ... by the time we started we were about 35, but we have completed only 29 ... [pause] ... so because we were very few, there was very close relationship between students and lecturers. So it was easy for lectures to identify that today a certain student didn't attend ... studio. But right now it becomes very ... difficult.

MO - (T-09:08) So this, the relationship between students and instructors, how is that playing into the student morale. The instructors are obviously stressed, but how about the students, how are they coping?

FG10_2 (T-09:26) - That's, that's even more, ... I mean, it is getting worse by the year. ... You are talking about instructor and student ratio?

MO - (T-09:43) Yea. Because it has an impact on learning and teaching

FG10_2 (T-09:51) - Yea it has, and ... the biggest problem is, now ... See studio is supposed to be assessed using presentations, ... presentation - comments. But because of the numbers, in my class for instance, now we have to break presentations into two days so that every student gets comments, and so that every student gets comments from other students, so that they learn. But in other years which is even worse, sometimes they have to mark studio projects instead of hearing the presentations.

MO - (T-10:28) So the students don't get any real feedback?

FG10_2 (T-10:32) - You don't get any real feedback, and you don't even get trained to be able to explain your work, because you just submit your studio project, and ... I mean architecture is never supposed to be like that. It's like training a lawyer, you can't tell a lawyer to present his work in written text, he has to present a case. I think that's the biggest challenge that we have.

MO - (T-11:00) Now another thing that also came up with large class sizes particularly, is the fact that a lot of students - because of the selection process - a lot of students come in who don't know much about architecture and may not even want to be here. How does that impact on the dynamics of the studio?

FG10_1 (T-10:18) - Yea, you know even in Tanzania right now, we have this we call Tanzania Commission of Universities. Formerly students we were making the application direct to the universities, separate to universities. But, right now they are supposed to make their application to this, central system which is TCU, Tanzania Commission of Universities. So sometimes, and selection is done by, those guys. What is brought here, it is just the number of student, these are architecture, these are this and these are this. So sometimes you find that there are some, to my experience, short experience, there are some students in fact brought into the field of architecture, but actually they were not knowing what is architecture is. It was by chance I can say, you know ... they were even interested in architecture. So when they are brought here, it become very challenging for them. It is just like forcing someone to study some thing which is, not interesting to him or her. So sometime they come, they need to change the course ...

FG10_2 (T-12:36) - Yea, you were talking about the effect of that on the dynamics of the students. It actually has a great impact, because ... We have ... student architect politicians. They are students that don't really put all of their heart into their work. They

don't really strive to do anything, they just talk. And maybe it's not because they don't have any love for architecture, they were not meant to be here. I think that's one of the effects we get. And some few years back, there was actually a student who, who by accident was passing going on to other years, but he did not want himself to be passing. He wanted to fail so he could go and apply for some other course [Laughing]. And he actually came and saw the Head of Department and complained, ... "Why? I'm supposed to be, be failing, I don't want to study arch ..." So ... I think that's the question of the TCU, Tanzania Commission of Universities ...

MO - (T-13:51) When did that start by the way?

FG10_1 (T-13:53) - Ah, it was just less than, less than I think three years. That's when they took over the whole application and enrolment procedures.

MO - (T-10:18) Well Uganda has the same issue, a lot, the government universities go through a centralised process, and you just get allocated whatever based on whatever marks you have. So they have a similar issue as well. Now since you both studied here, ... the issue of ... transition from student or practitioner into academics, how is that handled?

FG10_2 (T-14:44) - I would say ... [pause] ... it is probably left in the hands of whoever gets that chance. There is no special training whatsoever. There are posts, or opportunities are provided by other universities, training opportunities for ... generally teachers, or whoever trains students, but they are not always available. I mean there are many people who are getting recruited, so sometimes you get a chance to get trained, sometimes you don't. So at times you just get into a classroom straight from school ...

MO - (T-15:31) So what would you base your teaching in on that case?

FG10_2 (T-15:37) - I think ... [pause] ... inspiration ... [pause] ... or experience, but it's normally very hard. We normally get assistance when you start teaching, you normally get maybe a Lecturer, or Assistant Lecturer who will be with you, guiding you ...

FG10_3 (T-16:04) - ... It's based on the learning I guess. When you are teaching, If you took a class, as a student you took a class, and then, you, now you have switched roles, you are the lecturer, what is the teaching based on? Is it just the notes you were, as a student, or is there an outside input eh?

FG10_2 (T-16:29) - That's why I said, maybe inspiration. I mean when I started teaching, I taught out of inspiration. I was inspired by one of my lecturers, and actually I teach out of his expertise ... (FG10_3 - Ahh) ...

MO - (T-16:47) It's an interesting question. The reason I ask it, is because when you ask most people, they find that their teaching actually is based on what they learned themselves. Rather than formal structure about how to create lectures, and how to instruct students, So it's always interesting to find out how it started, where people gain their information from to teach. That is why I am interested in that. You studied in the United States, where about?

FG10_3 (T-17:19) - Ahh, both Washington and Minneapolis ...

MO - (T-17:22) You went to the coldest part of the United States!

FG10_3 (T-17:26) - It is a Family tradition, so I did not have a choice pretty much. But for Architecture I did it in Washington DC.

MO - (T-17:35) Then you did your Masters in Minneapolis?

FG10_3 (T-17:37) - No undergraduate. I did it in Fine Arts, and that was in Minneapolis. Yea, I graduated, after one year, I went back for Masters, that's when I did Architecture.

MO - (T-17:52) So your transition back into Tanzania. When did you come year?

FG10_3 (T-17:58) - Two years ago.

MO - (T-18:00) So, ok so you have experience of a different system. The North American system is very different actually ...

FG10_3 (T-18:07) - Much different ...

MO - (T-18:08) Ah, yea, how would you say it has been for you in the last two year?

FG10_3 (T-18:15) - The experience here? ... Its been a bit of a challenge, a bit of cultural shock, a bit of academic shock, a bit of ... yea it's a bit, bits and pieces. I can't say its been bad, I can't say its been good, it's been a challenge. ... So, as you say its been different, the formalised, ... I feel it's almost more formal and more inclusive, the ... my training. Like my, ... I didn't do undergraduate in architecture, it was the Masters programme. And the masters programme itself was three and a half, four year programme. It was not a two year or one year programme which is a speciality. So the three and a half, four year programme, I did it in four years, four years, five years, four years. From semester one you are taught urban planning, landscape and interior design. Those are kind of, whether, thy are elective or part of the studio, you are training throughout. So by the time you finish the degree, it is a professional degree, you can even register right away. ... So when I came here, I did go into practice I didn't come as a teacher right away. I went to practice, and that's where the cultural shock started there. So it's not just in an academic environment, but the way the practice goes it's, you know ... if you take architecture it's theory and practice. Yea, so for academicians, we think it's a little bit theoretical and you are taught to day dream, to be inspired, you know, don't think about the dollar signs etc ... and the practice it's, you know, it's practice, you know, you are dealing with, you know, the contractor and the money sign up front. That's the way it was there, thats what I expected it to be here. The system in place, I found it a little bit even though the paper work is formal, this is what is going to happen, this is this, the requirement, this is this ... but what is happening under the table is completely different from what is on the table. And there is no, lets say, ... official ... there is no follow up ... magendo (FG10_2 - legality) ... legality, the legal is [laughing] ... the legal system in place is not supportive to the practice. Therefore it is not supportive to the professionals, you know. So it was challenging when I have to argue with other architects, or contractors. This is the way it should be ... and some of them have a lot of experience so they know what I am talking about, but unwilling to do it the right way ... exactly! This is the way we do it in Africa, this is the way we do it in Tanzania! So the paper work says one thing, and then the activities happening differently. So I worked for six months, almost six months in a company, architecture company and I resigned, cause I don't want to deal with the BS and I like the flexibility of being in academics. But when I came here, I expected the structure to be A - B - C - D, and I found although it says again in the book, in practice it's not again formalised. You have inappropriate support, for us I don't know if it's the budget or what. But as a teacher, I have to find my own table, my own table, my own chair, let alone a computer, [laughter] let alone books to teach with. So that again lack of a system that, ... you know, supportive system, or monitoring system is not there, and when I am given a, ... this is the syllabus, this is the class you are going to be teaching, but there's no standardised way of teaching this class, so you have to formalise, you have to research, you have to figure out how you are going to teach it, this is what they have to learn, and then you read what they have to learn ... I wasn't taught this way, what is this? (laughing) ... So its left a lot for interpretation, even those general guidelines that are there, leaves a lot for interpretation. So whereas in my school, the people, what you learned on the first year, when you are on the second year, the new person going into the first year, even if it is not the same teacher, what they are taught is the same thing, you know ... So there is consistency, in that practice, there is a guideline that every body has to adhere, all the teachers have to adhere to. This is what you are teaching and these are the general notes and these are the books you are using. That is formalised in the school system. I didn't see that here. You open the syllabus, this is what supposed to teach, these are the books, that are like 50 years old [snickering in the background] on the list there, that are on the market, or not there. And then you look, ok are there previous note? Not really, go find your self. So I have to go buy a book read that particular subject you are

supposed to be teaching and then teach the best way you can and hopefully it does meet that written requirement.

MO - (T-24:31) Now that you have talked about practice, what is the, ... how is the relationship between practice in architecture, engineering, interior architecture and academia. What's that relationship like?

FG10_3 (T-24:47) - Oh, symbiotic, yea. I don't think they have to work (laughing), ... we rely on our students, but in practice they go ahead and ... think the way they do business here ... ?

MO - (T-25:01) Does practice have much to do with what happens in the school, or they are completely separate?

FG10_3 (T-25:09) - No I think we are, we are not theory based, it should be in school, ... it's not theory, in total, it's practice based. I think we teach them directly, and I don't know about you guys ...

FG10_2 (T-25:22) - We teach them directly, but ... I think the biggest problem is what they see happening in the field is not exactly what we teach them. Because what we teach them is very formal. (FG10_3 - Yes) We give them training that exposes them to procedures that follow the rule of law. But what happens in the real world is not like that. There are plenty of fouls, ... lots of legality, so maybe. (Covered in bling bling), yea so ...

FG10_1 (T-26:01) - I can give you, for instance you give the student freedom to design whatever he or she feels. That means to show his or her creativities, here in schools. But you know when you go to streets, things are different, there is a limit, maybe he or she can think about costs, or client can say that ok, even though this is nice, but I don't want it this way. So you find that there is a limitation when you go to the streets. But here you teach him everything. You tell him to be free, but when you go to streets there are some limitation. Even though it is not completely, sometimes you find someone who say, ok show me your creativities ...

MO - (T-26:54) The very rare clients [Laughter]

FG10_3 (T-27:02) - Students are not analytical, they are not analytical, and I think that is lacking in our, (FG10_2 - yea)... because you teach them the entire semester, if they were good with their, being analytical, they would have taken the concept and then being (FG10_2 - yea) able to apply it directly. Because you teach them the entire semester, you give them, you know the last week you give them a project that hopefully it will reflect what they've learnt, but they don't know how to get that, you know ... don't get the principle and apply them in the design. Anything else that is blink blink, you know shiny, you know ...

MO - (T-27:36) How, how do you deal with this. This issue of analysis and synthesis keeps coming up everywhere I go. That students are not analysing, their not synthesising information, they really just describing what is there. Now we are in a profession where that doesn't fly, because we are building things that are going to be there for twenty, thirty, forty, a hundred years. So how, how does a school of architecture deal with this issue ... which, when I was talking to people in Uganda apparently it's getting worse, and is not going to get any better unless something is done. How do you cope with that?

FG10_2 (T-28:15) - We normally, we normally try a lot to make sure that whenever they have the sheets for site analysis, there should always be a connection. Because you don't just go to site and start analysing, and jump straight to a floor plan. You have to do plenty of analysis, critical analysis actually before you go straight into the design and I think this is where we always have problems. Students normally lack a proper link ...

FG10_3 (T-28:48) - They don't see the connection between what they are analysing and what they are designing. ... You send them to do a ... they may come back with a very beautiful analysis, but whatever, you know, the existing conditions, or whatever the

subject they want to research and analyse, and when it comes to design, they kind of forgot they did that analyse for a reason. They missed the link.

FG10_2 (T-29:11) - But I think it's all because of maybe CAD. Because they normally, ... what they always want to have is 3Ds, 3Ds, that's what they always want to have. And so, ... the ground work that that matters most is normally neglected [*Knocking on table for emphasis*]. The critical analysis, site analysis, functional zoning, all those ideas are normally missed.

FG10_3 (T-29:40) - They're misusing the tool as a designer instead of a process tool (FG10_2 - exactly) as it should be ... they think a computer is a design, but more than that, our student are trained to memorise, cram, memorise, from class one, you know, grade one, memorise, memorise, memorise. They may know the answer, but how its pertaining to the idea, you know, to what they are trying to do. They've memorised, it's 20 x 20, but what is that ok physically, ok because of human dimensions, how to tie that to, you know, the big picture, it's not there. So memorise, again, you teach them to analyse. They do automatically, they know this, this, this, this thing. Now you give them, I want based on what you find here, apply, get the concept, get an abstract. In two words, take that idea and have it inspiration. They don't get it, what you are talking about, you know. Take a leaf, take a leaf, design a building based on a leaf, you know, ... [*loudly*] they will paint that building green, and tell you this is based on a leaf!

FG10_4 (T-30:56) - But I think as lecturers maybe we, we are normally mistaken when the only thing that we want is the final product. And, this is wrong because for an Architect, I think what matters most is the ideas and the process (FG10_3 - Yes, we need to focus more on the process). That is what matters most.

MO - (T-31:17) So the system is essentially getting us into this quagmire, where you have such big classes no time, and you have to focus on the final product ...

FG10_1 (T-31:25) - For instance for us, right now, we are starting to change, we are emphasise on this process, instead of focussing on the final product.

FG10_3 (T-31:34) - Yea, in fact you know we were told as lecturers when we are, ... all the final presentations, if everything is done in CAD, that is a fail automatic, especially if it's a fifth year student. If everything is done in CAD it's a fail, we don't, we should not even even sit, continue with that presentation.

MO - (T-31:55) Ok, how, how exactly is computing dealt with through the programme. I am deliberately saying computing rather than CAD, how is that dealt with in terms of the programme. ... (FG10_3 - How is ...) How is computing dealt with (FG10_4 - Computer use, Computer Applications) ... I am not saying CAD, computer use in general.

FG10_3 (T-32:17) - In general I think in semester one in first year ...

FG10_2 (T-32:23) - I think in the Industrial Training of, ... first year Industrial Training is when they start learning how to use computers (FG10_3 - Really?). And even in the theory subjects, all the assignments are normally done (they hand write on the first year first semester?) yea I think ... (FG10_3 - Me I only teach third and fourth year, so and fifth year) they normally do ...

FG10_4 (T-32:48) - Well, my finding is students love to produce materials by computers because it enables them to forge, so [*laughter*] (FG10_3 - yes: FG10_2- plagiarise, plagiarism; FG10_3 - copy-paste, copy-paste ...). That's it, so in this case, in my classes I discourage completely the use of computers just to make sure that the students have read and, I mean ... the process (FG10_2 - even if they copy, but they ...) ... even if they copy, the process of writing will make sure they read something, see, ok ... and, much as computers are very good, they make life easier for people, I mean, they do things faster, ok, but computers must not be ... I mean, if we could get honest students who will learn about word processing, use the computers for word processing only, ok, that would be marvellous, ok. And then if we go the session of using the internet, doing things from online, yes, that would be a subject in itself, ok that would also be very

good. But we must separate these two things, you see, if it is, I compare using computers to flying modern aircraft, ok. If you do not know the basic skills of flying, ok, and we just put you in a fly-by-wire aircraft or we give you, I don't know a car that already knows its route, and you just press a button, I am here and I want to go here, then there you are, and then you call your self a driver, I doubt, see ...

MO - (T-35:15) - So the GPS problem where every one can say plot me a route from A to B, and you just follow it. Apparently someone drove off a bridge as a result, because the GPS told them. (Laughter) Ok so that's general computing, but how about ... It is called Computer Aided Design, but so far I have not heard anyone talk about Computer Design, but they talk about Computer Aided Drafting, which are two very different things. So how are those two dealt with, or if they are not, why not? If they are, how are they dealt with?

FG10_3 (T-35:58) - I don't think we do have Computer Aided Design, our students ... (FG10_2 - I thought it was the other way around) ... yea, they do ... not, not properly really. They do ... [Pause] ... When I talk of Computer Aided Design, I'm talking of, I'm thinking of Frank Ghery, where, you know, it's part of really, (Me - Integrated with the building and you can ... It could not have happened without the computer) exactly, that's what I am thinking, but the way our student are doing it, I don't think they are doing that. [Laughing] (FG10_2 - No it's not that).

FG10_4 (T-36:39) - So it's Computer Aided Drafting ...

FG10_3 (T-36:41) - Yea, but they misinterpret even that [Laughing] ... it's just a mess ...

FG10_2 (T-36:46) - Even Frank Ghery ... has all of his building in his sub conscious, that is what an architect is supposed to be like.

FG10_4 (T-36:58) - Now if I can rephrase that question. You see, Frank Ghery comes from a culture where a computer was a domestic tool since he was a young man, or something like that, ok. Well, our students see computers for the first time, here at the university, [Laughter] you see. And outside the academic life, they don't even meet computers in ordinary day life outside universities, ok. So the way we relate to computers is completely different from the way our colleagues in industrialised countries relate to them, you see. For those people, computers are like domestic animals, ok. Now if you tell a Masai chap here about cows and goats, ok, they will know a lot about the information, about how to handle them, ok, and the way they can use them in life. So, it is not their fault, I mean, whatever the students are doing, they are trying their best. The staff themselves, the academic staff, ok, are also not as conversant with computers as our colleagues abroad. Much as, for that, see even in the developed countries, the senior generation of academic, university academic staff and so on, they are also not very good in using computers, ok. But the youngsters have had the computers for reasonably long time and they can easily work with them. In addition to the absence of computers in general life, in our life here, it's also the absence of the, where with all the what ... say, we don't have power, we don't have internet connectivity, we don't have this and that. So the way we relate to computers is different. Computers for us are still something exotic, one. Two, in the, ... on the market now, our customers are not yet that demanding, see. We have a gap of customer sophistication, ok. So, this guy talked about 3D's, ok. Because our unsophisticated customers love to see coloured images and all these, you know, things that can move around, I mean, computer effects are sometimes more attractive than the design itself, ok. So, there is also, I can say, the influence of the outside market on the trend. Some of our undergraduate students, as soon as they can just draw a line or two on the computers, ok, they are already on the market looking for jobs.

FG10_2 (T-40:40) - I remember, ... I remember when we, when CAD was first introduced here, I was, ... I think I was in my, ... I was in my fourth year. Mistakes were never noticed when students had nice 3Ds. (FG10_4 - That's it!) It's as though the lectures go to the 3Ds and think, 'good'. They would never see the mistakes. Now that we are

getting used to it, is when you discard the 3Ds and you start really analysis the whole problem ...

FG10_3 (T-41:13) - Yea, because, this is 3D, this computer, ... the use of computer. They lose, they forget this is a 3D space, you know, this is the world we live in. Here they are, imagine with AutoCAD, zoom - extend - infinite ... [laughter] .. They draw line, instead of actually drawing a wall, you know, and you have infinite space, instead of considering the boundary of that, you know, what are the constraints of space . So they have lost the, ... something in the design, by the use of computer. They are being tricked into thinking the final, which is the opposite. I found it kind of funny because in the US on the first, in the ... professionally, during the first initial, in the initial concept with the client, they are not interested in seeing computer rendering. They want to be romanced, which is the freehand sketches they want, you know. They want, what is the idea, and you are taught, that is the way that you should approach, even if you generate things with the computer, you go over it, what's the idea, especially on the bigger the project, yea. (FG10_4 - That's it ...) ... You go over, and like you are still making the decisions. (FG10_4 - Just flying on the way you know, you have travelled, ok.) ... So when you, when you go to, ... I am talking about the US here, the initial concept, the idea, they are presented they are very sketchy as ideas. You do not show the renderings which too much of a final product. Too much decision already been made. The glass is going be this way, the thickness, the, ... it's too quick, too soon. The client can just walk out, then what's the point. Whereas here, again I guess it's that, you know, people are too, ... they are not too familiar with computers so quickly too excited, and too much of a final product, and at the end of the day when you look at the plan it's constipated. It looks beautiful from outside, but when you start walking through, it's, ... their is nothing there, there are dead end corridors, constipated, it gets really frustrating, yea. You are being romanced with this final product but it's not been designed. ... It is not a space.

MO - (T-44:01) I'll get back to what FG10_4 mentioned about the Masai, and the cows and the goats, and we talk about this issue of history, history of architecture. How do you relate history of architecture to the local context?

FG10_3 (T-44:23) - History of architecture ... [laughing] ... that is kind of a funny question because in our formal training, history of architecture is a very western training, and the way it existed linear, there's dates, there's 2001, 2002, 2003, ... you know, it is a linear progression of the world (FG10_4 - Of the western world) ... exactly, it's the Western World, and it's a linear progression. Whereas in the training here, I don't know how you guys teach architecture history, I have not taught architecture history here, but when I teach art, or architecture, when I discuss with my students, yea that's 2001, or you are talking about 1900 yea you know, what happened in US, but remember, there was India, there was Bangladesh, there was, you know, Africa there was, you know, Egypt, These worlds co-existed, it's just that you guys have chosen to take the linear, and this is western world, and this is the world at large ...

FG10_2 (T-45:35) - I think they study a little bit of almost everything ... (FG10_3 - Do they include the history of, you know, architecture in Tanzania, in Africa?) They do, they actually do. They learn about ancient history of Africa in their first year of studies, but it's mostly focussed on urban, ... yea, the traditional building forms and materials, they actually do ... [Seems defensive]

MO - (T-46:06) So how, what, because ... That I know most schools deal with what they call indigenous shelters. How about contemporary African responses? Is that tackled at all as part of the history?

FG10_2 (T-46:23) - Yes, they actually do [Defensive] They learn that in Year 4, I think in Year 4, contemporary, ... contemporary architecture in Africa (FG10_3 - In Africa on in global?) ... Yes on a global perspective, but focused on Africa, ... (FG10_4 - And Tanzania in particular) ...

FG10_4 (T-46:45) - For me, I can only add one thing there, and not in terms of history, but, you see, the essence of traditional architecture in terms of energy conservation in

buildings. ... Yes ... But quite unfortunately, let me put it like this. People so far haven't, I mean, yea, the modern architectural practice has gone astray, in that they think, that the architects must design and finish their job, then they call in the so called Services Engineers to come and fit air-conditioners or toilets or water supply pipes in the positions the architects have already decided, ok. Much as I have been harping about working together, ok. Sustainable design, needs to consider all the effects of illumination, ventilation, water supply, drainage and all these things, ok, just as the building develops, ok. But this concept hasn't been accepted yet. (FG10_3 - In Tanzania, it's not ..) ok, and some even, you find some of the big professionals just refusing outright ... "No no, go away, let me finish with them, if I call you, we will find if you have ...

MO - (T-48:35) That one is a standard one, I was getting an engineer to do something, and he kept saying send me the drawings, and I said, I want us to start from scratch and to work together, but he said no, I want you to give me finished drawings, and then I'll put my structure in. So it's firmly ingrained in ...

FG10_4 (T-48:53) - So for structure ... and then, this idea of saying a facade, a building facade has a design object in itself, ok, doesn't exist in Tanzania for example (FG10_3 - It's not there) ... ok. ... Somebody, I mean, somebody once brought a conical roof and said I want solar energy on this roof [laughter], ok (FG10_2 - [Laughing] On a conical roof), you see ... I had to explain a lot (FG10_3 - [Laughing] Very patiently) (FG10_2 - You can have it specially ordered, in a conical form and it rotates ...) (FG10_3 - Wait a minute, think about it, it opens up during, and it ...) ... Well ... if we had designed it together, we could consider all those things, but this guy does not give me ... the opportunity to tamper with his design, no. The thing is, you just put the solar panels on the conical roof. So, so, now coming back to traditional architecture, you see, when I teach my students about how our ancestors were thinking, when they decided, for example in Dodoma, that they will have flat earth roofs. And in Kilimanjaro, the people thought that they would have conical grass thatched houses, ok. And the Swahili people here, decided, I mean, they coined a nice word that comes from architecture now into ordinary life. The word is 'BARAZA' ok. Baraza now in ordinary Kiswahili, is just like eh, 'Committee', ok, ... but it came from the way the traditional swahili buildings were being built in those times, in the hot humid climate, people would sit out in the shade of a building, ok. So you have a building, providing a shade somewhere, and they sit just near the building, Now that space around the building, ok was the original, still is the original meaning of the word Baraza, ok. So, now, during the discussions, these people never used to sit inside buildings during the day, they would be outside the building, ok. And we know the climate, the weather, and something, that's how, ... they developed into using the space outside the building, and using the building, ok. And using the building to provide the shade they need.

MO - (T-52:10) Ok, now we will go on from there. We got three different people with three different specialities, which is good, so you can all answer this question. We got an Interior architect, a conservationists and we got an energy specialist here. The integration of your different components into architecture, we are talking about the studio. How do you deal with that? (FG10_3 - The studio?) Yes, because you've got, ... the students described them as theory courses, how are those theory courses brought back into the studio?

FG10_3 (T-52:41) - Well, not enough. At least with my, ... I'm only teaching in Interior Design Studios. And what I, ... I do try to get the, ... whatever they've learnt on the theory to be applicable and those will be required drawing to show they've, you know, ... to get the credits, they need to integrate whatever they did in the theory, especially when it's the technology ... That is just me, but is there a formalised way, there is a studio, mechanical studio, or this, and conservation studio, that I am not. You guys would be the best to do that, but there was no particular requirement that they should follow, just that they are assigned, and the ... sequential on the semesters, but whether they need to be related directly, I don't think there is a requirement per-se at least in my experience

FG10_2 (T-53:48) - On my side, I think my input on studio would be, ... I've taught Year 4 studio for I think three or, two or three years, and in the first semester they do Urban Design. They normally work on a larger urban design project. It can maybe the whole of this university, where they redevelop it. So my ideas are normally, minimal demolition, so that they retain as much as they can. And, that has always been my emphasis. But the biggest challenge I get, is that we do not get permanent studio classes to teach, there is always reshuffling, this year I could be teaching Year 4, next year I could be with Year 1, so sometimes I am in class as a normal studio tutor. So, I would say sometimes I would feel that my contribution is limited because of the year that I teach.

MO - (T-55:10) Integration of Energy in Buildings ... in the studio ...

FG10_4 (T-55:16) - ZERO! Ok, Zero in the sense that, even when I want, ok, even when the students what, sometimes the academic, fellow academic staff can be the obstacle, ok. So in this case, well, ... I have decided to, ... Actually I'm teaching at the [Named University], that is where I find more responsive persons now, ok. But as far as [Named University] School of Architecture is concerned, these people are not interested in sustainable building design.

MO - (T-56:06) the question is how do you overcome all this? How do you overcome it?

FG10_4 (T-56:12) - Well if at least I had the support of fellow academic staff, it would have been a lot better. But now I'm disenchanted, I'm actually thinking of moving away from this school because people are not interested in what I am teaching, or what I know. What I have invested in for a long time ...

FG10_2 (T-56:39) - That would be so unpatriotic of you ...

FG10_4 (T-56:41) - NO! [FG10_2 - Laughter] No, unpatriotic from the other side, I mean, if you you have your milk in your breast, and this baby refusing to suck, and the father of this baby actually preventing you from even holding the baby near your breast ... HA!

MO - (T-57:02) So anyway, lets finish off here. What do you think is the future of architecture education?

FG10_4 (T-57:10) - In my opinion, architecture education is necessary. ... Especially if we want to, to solve the housing problem in these countries, ok. Let not the building be the domain of the rich people only, in a country where more than 80% are poor rural dwellers, ok. And the poor rural dwellers, actually the poor people, rural and urban, ok, do not employ the services of qualified architects. And the qualified architects do not even offer their services to those people. The government does not even help to make sure that the qualified architects cater to the needs of these unfortunate poor people, ok. As a result, you can find that, some qualified architects complaining about lack of jobs if their are no rich people to order big projects, ok. But nobody helps, ok, them to think about, yea you can actually think of big projects to help small people, or poor people. So this is the future, I can say, the future market of ... the architects we train, or we are training, ok. Ok, there is of course the international market, ... always there, ok. Once again, international competitions, big projects and so forth, and we don't see much contribution from our African architects in that arena, partly because of the interference of the, ... politics, international donor communities, international politics and all those other things. You see, the African is always the recipient of aid. You see, you never see any advertisement, whereby somebody will say, 'this big beautiful thing is the result of the aid we have given 10 or 15 years ago', ok. No, it is always, this African is dying if we don't give aid, this Africa is doing this this, ok ... [Laughter] even if, take for example, take the question of music, ok. You have LiveAid, singing to entertain Europeans so that they can contribute money to give to the poor Africans. And nobody thinks there are any musicians in Africa. Nobody thinks, let us invite some musicians from Ethiopia, from Somalia so that we can together play something to help the Horn of Africa, no, see. So in architecture it's the same thing. You get the big western companies, coming with their donor money, ok, and commandeering projects here in Africa, without even inviting anybody from this side to go and design something, introduce new ideas for them, ok.

Unless a student happens to be there on his own, or some African guy, happens to be in the United States or in Europe, on his own, probably he can then participate in an international, say, European based or American based project, ok. So, now in the teaching our architects, therefore, I think we should see, ... see the way we can help teach them first of all to expand into their backyard, there is a lot of architectural work to do here, ok. And at the same time, see how we can go into the broader world, because the African architect being trained here in Tanzania, or in East Africa, is not limited to work only here. So this is my vision of the future.

FG10_2 (T-1:02:16) - I would say that the future of, of architecture training in East Africa, and particularly in Tanzania, is probably in the hands of the practitioners and who ever enforces the law, because whatever it is they are doing here is a reflection of what happening on the streets. We have so many technicians, engineers, people who are not trained as architects, practicing as architects. And, the worst part of it is that, the students who are training as architects here, know that such people are out there, and I think this has a big impact on their training. Why should they waste time reading, surfing the internet so that they become good architects, when they are people out there who are not even trained and they can practice as architects? ... And they make a living. We spent time with Americans, from I think, some 6, 7 years back and we were talking about private projects that they get back home in the US, and some of them didn't. I mean most of them had never worked on a single private project, because of how the environment is ... you will be thrown in jail. The only one who said had worked on a project before, it was a, it was a church, and I think it was charity work or something, so did not get paid for it, and so they would train to become good architects, because they know that is the only way they would come to practice when they graduate. And so I think if the rule of law was strict, students would probably ... attend classes, ... would probably be more serious with the training, so ...