Higher Education Press

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Frontiers of Architectural Research

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SOUTHEAST UNIVERSITY

RESEARCH ARTICLE

Students' motivation for architecture education in Uganda

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Abstract
Understanding the persistence and success of students has gained increasing attention to unravel the "architectural education black-box." However, the motivation and pre-socialization of incoming students were largely ignored as these factors fell outside the direct control of architecture schools. Motivational factors can affect the educational process given that the values, expectations, and career-related goals of incoming students influence their attitudes to education. This study seeks to uncover the motivational factors of applicants to an architecture program in East Africa and appreciate those factors that lead students into architecture as a career choice. Through qualitative content analysis, the study revealed the motivational factors of applicants, which were classified into four groups: educational, external, personal, and prestige. These factors were comparable with those found in previous studies conducted in Europe and North America, but nevertheless highlight contextual variances unique to the region. The findings raise questions of the role architecture education in engaging incoming students in discourse that aids their understanding of architecture and architectural education.

1. Introduction

As the process that transforms novices into architects, architectural education is a closed system described rather cynically as "a black box" with rather elusive inner workings (Banham, 1996). Architectural education has attracted considerable scrutiny to understand its mechanisms (see Boyer and Mitgang, 1996; Stevens, 1998). Beyond the scope of architectural education, but are nonetheless important, is the preparedness and motivation of students seeking to undertake an architecture program. The decision to apply is a major determinant in how students engage with their education (Moore, 1970). Smith and Naylor (2001) and Cubukcu and Cubukcu (2009) revealed that some students

enter the program wholly unprepared for the rigors of design-based education. This reality can leave students facing "… a level of cognitive challenge that is unlikely to have been experienced during secondary education" (Roberts, 2007, p. 448). Hence, an appreciation of the degree of preparedness of students for the rigors of architectural education becomes an important area of research. Studies undertaken in this area seek to understand what motivates students to enter the profession but also what they perceive architecture to be.

The decision to enter a particular profession is a confluence of occurrences that precede the actual commitment to invest resources (time, energy, and money). These occurrences, described as "pre-socialization" (Weidman et al., 2001) or "anticipatory socialization" (Bragg, 1976), are influenced by the nuances of particular socio-cultural settings and are important in understanding how students engage with their education. These will be the focus of the current study.

2.   Rationale of the research

The motivation for this research was derived from two related aspects. The first aspect is the number of students dropping out of architecture programs in Uganda (completion rates average 60%). The second aspect is the concern for the lack of diversity within architecture programs. In terms of diversity, participation from females is low. Data from one school indicates only one female was admitted for the 2017 intake out of 18 successful applicants. Relatively few students are admitted from outside the main urban centers. For example, Liang (2004) examined admissions to public universities in Uganda between 1996 and 2002 and found that 65% of admissions involved students from 20 elite schools. More than a decade later, this issue remains a concern. The admissions list to one of the public universities showed that one school dominated the intake to professional programs, in one case taking more than 20% of available places. Questions arose as to how applicants gained career information, and their subsequent preparation for the architecture program. To uncover factors that influence students' desire to join architectural education, this study investigates the motivational factors of student-applicants to a school of architecture in East Africa. This was the only school out of 11 in the region that does not exclusively rely on secondary school records for accepting students and incorporates intake interviews and motivational essays into its intake assessment process.

3.   Pre-Socialization and career choice readiness

For many prospective students, the decision to enter architectural school is their first interface with architecture and they hope such process would transform them into architects; many of them possess only a limited appreciation of the profession and even less comprehension of how architectural education prepares them for the profession (Adams et al., 2011). Thus, the applicants' ideas and aspirations could play a significant part in their transition into and through architectural education, which is linked to

Hirschi and Läge's (2007, p. 167) "career choice readiness"; this concept is defined as "the readiness and ability of a person to successfully engage in the career decision-making process and reach a well-founded career decision." Career choice decisions are influential in the confidence and persistence of students as they transit through university education (Sandler, 2000). These career decisions incorporate activities that foreshadow the educational process (namely, career decidedness, career planning, career exploration, and vocational identity), which are "high level" motivational factors that influence the decision to undertake university level education (Hirschi and Läge, 2007). Tinto (1975) presented these activities as "goal commitments" and suggested that students were likely to succeed if they were familiar with their selected careers. Allen and Robbins (2008) indicated that when students' interests matched the program they were enrolled in (a concept which they termed *person-environment fit*), they were more likely to persist with their selected study program (see also Willcoxson and Wynder, 2010). These findings bring to mind the idea of socialization and its role in building expectations in students. A general definition of socialization is 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" (Bragg, 1976, p. 6). Pertinent to this study is anticipatory socialization, which largely incorporates occurrences that transpire prior to entry into a formal socialization situation, in this case, entry into architectural education. These occurrences are the motivational factors that influence the decision to commit to a particular profession

Given the current market-driven educational systems, completion rates and persistence are vital points of discussion; these factors facilitated discussion of architectural education not only on the processes within the program (the proverbial "black box" of architectural education), but also on the transition into architectural education. Smith and Naylor (2001) suggested that transitional difficulties may contribute to drop out rates, influenced by personal attributes of students and their pre-university education. According to Bragg (1976), these difficulties affect academic attainment. For professional programs such as architecture, transitional difficulties can be particularly pronounced, given that activities undertaken within the program are often at odds with the perceptions held by incoming students of what they will be doing; these contradictions manifest as cultural shock in some students (Graham and McKenzie, 1995). This cultural shock and the associated uncertainty are critical in the success (or failure) of individuals as they transition into and through professional education (Riordan and Goodman, 2007).

Closely related to career choice readiness are the values that underlie decisions to enroll in a program. Values form a key element in the transition into university and professional education, wherein students often grapple with multiple extraneous value systems for the first time (Wintre and Yaffe, 2000). These "*value-goal factors*" as perceived by Nelson (1974) relate to students' perceptions of the benefit they could derive from a particular program or career. Duffy and Sedlacek (2007) identified four key values in the context of career choice decisions; *intrinsic*

values are related to the importance of autonomy and interest in an area; *extrinsic values* are linked to making money and having job security; *social values* are associated with an interest in working with people and making contributions to society; and, *prestige values* seek to have a prestigious and respected occupation. Weidman et al. (2001) presented these values as *anticipatory factors* that delineate how novices ascribe status to a preferred career, and how they learn about the various roles within a profession. This awareness could arise through the media, personal observation, or another avenue, linking anticipatory factors to the socio-cultural context, and to the broader goal of acquiring architectural cultural capital. The matching of interest with study programs relates to the concept of cultural capital (Bourdieu, 1986), which is associated with prospective students' perceptions of what architecture entails and what they will gain from the profession. This notion links back to ones' worldview or habitus (Bourdieu, 1990). Scholarios et al. (2003) suggested that knowledge of a profession garnered through pre-university education is crucial in this context. Therefore, we cannot disregard the accumulated knowledge that students carry into higher education, which influence their career choice readiness. Accordingly, an understanding of the motivational factors of applicants to professional programs becomes increasingly important; this finding supports a postulation by Kostof (1986, p. 3) who indicated that "[t]he process of professional initiation starts its course long before its formal unveiling at schools of architecture."

Lewis (1998) showcased the diversity of factors that influence the decision to take on architecture and identified 10 generic incentives held by those pursuing the architecture profession; these factors are money and leisure; social status; fame; immortality; contribution to culture; helping and teaching others; the rewards of creative fulfillment; love of drawing; fulfilling the dictates of personality; and, freedom to do your own thing. Findings from previous studies present an interesting comparison of the evolving motivational factors over time (Boyer and Mitgang, 1996; Nelson, 1974) and the influence of socio-cultural divisions (Boyer and Mitgang, 1996; Navarro-Astor and Caven, 2012) (see Table 1). Creativity and talent were consistently present as key motivators, as were monetary rewards related to architectural practice. Nelson (1974) attributed

influences from parents as a key motivator, whereas Boyer and Mitgang (1996) did not; these contrasting findings may be interpreted as possible evidence of societal changes in the two decades between these studies. Navarro-Astor and Caven (2012) showed that parents were an influential motivator in Spain, an outcome that may be related to the nature of Spanish society and its strong family influences. This finding could be examined in studies in other family situations in light of discoveries by Singaravelu et al. (2005), who suggested that students of African origin in the United States of America faced considerable pressure from parents in their choice of career.

Across sub-Saharan Africa, scant attention has been given to decisions that lead students to select particular programs of study. Mills and Lipman (1994) and le Grange (2016), examined access and equity amid post-apartheid societal changes in South Africa. In Uganda, Olweny and Nshemereirwe (2006), and Olweny (2008) concluded that prior learning experiences could affect student engagement within architecture education; they speculated that high dropout rates were caused by student unfamiliarity with the architecture profession. This notion was supported by Edwards and Quinter (2011), who acknowledged that many potential students do not receive accurate information to guide them in their career choices; this finding suggests that external factors, such as parental influence, significantly affect career choice, particularly for students from rural schools who do not receive any or appropriate career guidance. This observation presents the prospect that motivational factors may be largely extrinsic for many applicants that causes students to take on professions they are inadequately informed about and ill prepared for.

Determining factors that motivate potential students may provide a means to identify how best to assist students in their transition into architecture education. Consequently, the opportunity to evaluate the *in situ* motivational factors of applicants to an architecture school emerged as a valuable opportunity to uncover factors that influence decisions to take on architecture as a career choice in the context of East Africa before students enrolled in the program. This investigation could provide information about the aspirations of students, give an appreciation of broader perceptions of architecture and architecture education, and provide an indication of how these compare to studies in

Table 1 Motivational factors from prior studies.

Nelson (1974)	Boyer and Mitgang (1996)	Navarro-Astor and Caven (2012)
Parents influence		Parents
Other relative influence		Relatives in construction industry
Architect know well		
Architect heard or read about		
Talent	Putting creative abilities to practical use	Basic instinct / Good at drawing
Vocational counselor		
Friends' Influence		
The Income expected	Good salary prospects	Monetary rewards
A Desire to be respected	Prestige of the profession	
	Improving quality of life in communities	
	Improving the built environment	

other parts of the world. Unlike previous studies on students' motivation which interviewed students already enrolled in architecture programs, the approach for the current study was regarded as a means of identifying actual reasons, rather than obtaining retrospective and reflective evaluations of what students recalled as reasons for their decision to apply to architecture school. A key challenge in the nature of responses received is applicants' perception of what they believe the faculty wanted to hear, as opposed to expressing their own opinions. However, similar to the retrospective and reflective approach, analogous questions arise given that students were now "exposed" to aspects of the architecture program.

4. Methodology

The study involved two components: i) review of literature pertaining to students' motivation for university education as reported in the preceding section, and ii) evaluation of intake essays submitted by applicants to a school of architecture in East Africa. This school was the only architecture school in the region that did not depend on high school exit examinations as basis for selecting students. Instead, the selected school employs an array of intake exercises that include an essay, an aptitude test, and an interpretative drawing exercise. Essays were designed to garner information on the applicants' motivation, preparedness for architecture school, and appreciation of architecture as a profession. The exit examination was not the chief basis for admission, but was used to ensure that applicants met the stipulated entry requirements for tertiary education as prescribed by the Uganda National Council for Higher Education. The shift to a diverse selection criteria was prompted by male domination of previous intakes and the prevalence of successful students from a handful of "established" schools (Olweny and Nshemereirwe, 2006).

Intake essays for three admission cycles (2014 to 2016) were considered. A total of 144 essays (52 female and 92 male) represent 52% of applications (275) and 91% of shortlisted applicants (158). Applicants were between 18 and 43 years of age, with a median age of 20 years, most coming directly from high school. As part of the essays, applicants answered a series of questions related to their interest in applying to architecture school. These questions include: *Why do you want to be an architect? Are there any other careers you have considered? How have you prepared for the program?* Two additional questions inquired about applicants' ideas of architecture: *What do you think architecture is? Have you ever talked with an architect or visited an architect's office?* The latter two queries link to views of architecture as a profession and to the sources of career information. Essays were no more than two pages in length, and submitted electronically. The few essays submitted as print copies were either scanned through OCR software to convert the data to text or manually transcribed into a word processing program in preparation for analysis. Data mined from these essays included information on what applicants believe architecture as a profession entailed, why they wanted to engage in architecture, and how their interest was cultivated.

Qualitative content analysis was used to thematically categorize and code the data by using codes generated from the data itself, an approach useful in analyzing crosscutting and recurring issues and ideas as they emerge (Sandelowski, 2000). Content analysis also allows for the incorporation of additional themes as and when needed and offers flexibility within this structured analytical approach. To streamline the analysis and handle the large volume of textual data, this study employed a text analysis mark-up system, TAMS Analyzer™ (Version 4.42). This system enabled the coding of individual essays, which could then be analyzed individually, collectively, or as part of specified data sets. This approach facilitated the investigation of contextual nuances, similarities, and differences. More than 30 individual categories were identified, yielding over 700 codes from the 144 essays. TAMS Analyzer™ made it possible to quickly sift through the data. This approach efficiently categorized and cross-referenced information. For detailed statistical analysis, the output from TAMS Analyzer™ was transferred to SPSS™ for quantitative analysis, thereby facilitating comparison with prior studies. In either case, anonymity of applicants was maintained.

5. Findings

The analysis of the essays showed four broad motivational areas: i) educational, ii) personal, iii) external, and iv) professional prestige. These areas form the basis for discussions in Sub-sections 5.1 and 5.2. For Sub-section 5.3, reviews of applicants' perceptions of architecture and what they considered as alternative careers are presented, recalling the idea of "*self-awareness*" with relation to an "emotional competence framework" as advocated by Goleman (1998).

5.1. Educational and personal factors

For many applicants, architecture as a career choice emanated from their educational attainment at high school and was linked to their choice of high school subjects (see Table 2). The desire to join architecture school was often attributed to the subject sequences taken for the high school exit exam, in this case, the Advanced Level

Table 2   Educational and personal motivational factors.

Group	Motivational factor	Occurrences
Educational		
	I did **technical drawing**	(57) 39.6%
	I did **art**	(29) 20.1%
	HSR Subject choice	(24) 16.7%
	Upgrading	(7) 4.9%
Personal		
	I am creative / To express myself	(48) 33.3%
	Childhood dream	(26) 18.1%
	Improve conditions / Social purpose	(23) 16.0%
	Self Confident	(12) 8.3%

Certificate (A level). Applicants either selected subjects in the belief that these were required for architecture or they decided to apply to architecture school simply because the advertised entry criteria matched subjects they had taken. These subjects included *Mathematics*, *Physics*, *Geography*, and *Economics*. Applicants reported that architecture was the "best fit" for them. "*At [the]Advanced level, I did a combination involving Mathematics, Physics, and Technical Drawing that will help me achieve this dream*" (#119); "*I developed this interest after I chose my combination at A level. I looked at the possible university courses and saw that Architecture was the most appropriate for me*" (#053); "*…for my Advanced level studies where I offered (sic) Mathematics, Economics, and Technical Drawing*" (#127); "*I selected PAM/ICT [Physics, Art and Mathematics/ICT] for A level which I believed it was relevant for architecture*" (#145). These statements suggest that, in some cases, applications were not deliberate choices linked to prior notions of the architecture profession, but more as a confluence of choices made during their education.

A number of applicants were drawn to architecture having taken particular subjects at high school, among which these two predominate: *Geometrical and Building Drawing* and *Art*. These subjects were regularly portrayed as major components of architecture. A significant number of applicants indicated their enrolment in these subjects as the catalyst for their interest in architecture. *Geometrical and Building Drawing*, which is often referred to as "*Technical Drawing*" or "*TD*," was a subject introduced into the high school curriculum to endow students with "practical" skills. Practicality was a major draw to this subject because it differed from "theoretical" subjects, which are often perceived as having no "real world" applicability. The visible output of this subject, namely, orthographic projection, exhibit what many viewed as the key output of architecture and engineering: "*I have always had a considerable interest in architecture ever since studying Technical Drawing both at O level and A level for a period of six years now*" (#012); "*I started to know about architecture the time I joined my secondary (Form one) were we studied Technical Drawing (TD) which opened my mind to architecture*" (#016); "*My fair performance in art at O level and excellent performance in Technical Drawing in both at O level and A level made me gain more interest in pursuing architecture*' (#089). Similar reasons were given by students who had studied art: "*untaking (sic) Fine Art in both my O and A level* (#105); "*Knowing that art is relevant to this particular field, I paid attention to whatever it had to offer*" (#123). The misconception that architects merely engage in drafting was evident through applicants who applied to architecture school to upgrade from diploma qualifications (often a Diploma in Architectural Drafting). These students had been erroneously directed into those programs in a mistaken belief these were professional architecture programs (Olweny, 2015).

In contrast to the aforementioned educational factors, personal factors were more circumspect and intrinsic in nature, relating to what applicants believed they could achieve through architecture. These were linked to applicants' interests and abilities and their "self-awareness" within the context of emotional intelligence, as presented by Goleman (1998). For some applicants, joining architecture school was the culmination of a dream cultivated since childhood: "*It has been my childhood dream to become an architect ever since I watched a documentary on the twin towers attack and collapse in 2001*" (#006); "*My interest developed while I was still young and in primary [school]*" (#133). Another group stated that their interest was driven by a desire to make a difference in society or to improve the state of the environment: "*I want to become an architect to make my community a better place*" (#135); "*I would like to become an architect because I believe it's through architecture that I can make a difference to the environment around me*" (#115). For these applicants, architecture and architectural education were a means to improve a perceived lack of design quality in the built environment. Lack of infrastructure and poorly planned communities across the country were associated with a shortage of architects. Many applicants aimed to resolve these challenges through architecture: "*… I also want to be an architect because of poor planning in the most parts of our country especially in the housing sector …*" (#078).

In terms of individual abilities, many applicants indicated they were creative or wanted to showcase their creativity. Architecture programs were regarded as one of the few programs where students could express such quality: "*I will get opportunities to showcase my creativity and ingenuity*" (#017); "*I believe I'm a creative and imaginative person as I always desire to formulate unique creations*" (#026); "*I picked interest in architecture alongside my natural gift of creativity*" (#079). What was perceived as creative was often unclear. Some applicants equated creativity to the ability to draw or emerged as a result of passing A level *art* or *Geometrical and Building Drawing*: "*I consider myself a creative person because I did imaginative composition in color as one of my papers in art in both O and A level, passing with distinction in both courses, so I consider myself a creative person*" (#004); "*I consider myself a creative person because I have managed to maintain my grades in Technical Drawing …*' (#062). In some instances, creativity was perceived as "being different": "*I consider myself a creative person because I see things in a different perspective from others*" (#059), or based on natural talent or abilities: "*I consider myself to be a creative person. This is validated by theory and research that all left handed people are highly creative …*" (#058). Few applicants fully appreciated how creativity translated into architecture. Nonetheless, their responses provided some interesting insights, through their ideas of what they could do upon completion of the course: "*… I saw an opportunity of changing Ugandans attitude towards engineers/architects …*" (#048); "*… I believe I'm the best and therefore I would wish to pursue the best profession*" (#012); "*Through architecture, I will be able to bring my wild imagination of the environment to life*" (#091).

5.2. External and professional factors

Factors that originated outside applicants' direct control were also significant drivers in their decision to apply to architecture school (see Table 3). An important area of influence came from family and relatives, notably those engaged with construction projects, more so if these were

Table 3 External and professional motivational factors.

Group	Motivational factor	Occurrences
External		
	Inspired by TV program / Movie	(13) 9.0%
	Inspired by an architect	(11) 7.6%
	Parents/Relatives	(10) 6.9%
	Parents / Relative had construction project	(9) 6.3%
Professional prestige		
	Employment prospects/ Self employed	(24) 16.7%
	It is a prestigious career / To be remembered	(27) 18.8%
	Interesting / Fascinating career	(14) 9.7%
	To make money / High paying career	(14) 9.7%

accessible to eager students. This influence is somewhat peculiar to many developing economies, where unfettered access to construction sites gives impressionable students an opportunity to personally witness the constructional aspects of the industry: "*I was fortunate enough to have chance to grow up in a house that was still under construction*" (#029); "*I first became interested in architecture in 2006 when my parents were constructing apartments …*" (#121). However, many projects do not engage the services of a project architect during the construction phase; hence, for many budding architects, interaction with site personnel was often with a site engineer or drafting technician, not with an architect. While some applicants did indicate they met with or talked to an architect, close scrutiny revealed that many did not encounter architects, but met engineers or draftspersons; people who"drew plans." Unsurprisingly, the distinction between professionals was not always clear: "*… my late grandfather was a civil engineer, my two uncles and many of my relatives are civil engineers, so I think architecture is in an in blood thing*" (#081). This lack of clear distinction possibly influenced the students' perceptions of the profession. Inspiration also came from family and friends in allied professions, as noted by one applicant: "*My father, a civil engineer by profession, told me all he could about the perks and lows of being an architect*" (#040).

Only few applicants indicated that they were inspired by architects: "*A female architect broke my heart when she spoke about her profession and what it entailed, how exciting it was and its role in society*" (#058); "*During inspirational talks at school from visiting professionals in different calibers (sic), among them was this female architect whose name I don't remember, her insights in to architecture were fascinating*" (#128). The relatively few architects were clearly unable to fully engage with aspiring architects. Indeed, the 168 registered practitioners in

2014 (a ratio of 1:214,000) was well below the ratio of 1:51,000 in Kenya (Board of Registration of Architects and Quantity Surveyors of Kenya, 2016), let alone the 1:1,880 ratio in the United Kingdom or the 1:806 ratio in Germany (Quirk, 2014).

Relatively few applicants were influenced by architecture students, possibly a reflection of the value and importance placed on validation of decisions from adults, notably parents or teachers. This validation was not always beneficial, as seen in the few cases where the career guidance provided was not always useful; Olweny (2015) noted that some students were, at times, directed into two-year architectural drafting programs rather than the five-year professional degree programs because guidance counselors believed this was a shortcut to becoming an architect. The media was another vital source of information for prospective applicants, most notably through television: "*Documentaries such as Extreme Engineering on Discovery Family have deepened my interest in architecture*" (#111); "*Since then I have always been watching construction programs like Megastructures, Big Bigger Biggest, Extreme Home Makeover, Extreme Engineering, among others*" (#128).

Evident in the choice of professional careers are societal views and expectations, largely related to status or "occupational prestige" (Treiman, 1977). Societal views highlight embedded social hierarchies, power relationships, and perceived labor divisions, and reflect particular cultural biases. In the current study, the appeal of architecture was a reflection of its perceived prestige value, in relation to medicine, law, and engineering, which are well-established professions in the country: "*Architecture is a respected course in my society…*" (#009); "*Once I become a professional architect, I am sure I will earn a lot of respect …*" (#081); "*… when I looked at some architects they were well off, had good money and respected in society*" (#084). A more specific attraction was the promise of employment, particularly self-employment: "*… today there is a lot of unemployment and I would like to do a course that gives me variety of employment opportunities and can be ma (sic) own boss …*" (#009); "*… it puts an end to everyone's nightmare about job seeking …*" (#079); "*I would like to become architecture [sic] because it's marketable in this developing country and [the]sector is on a high demand*" (#083); "*… will make it easy for me to get a job and also be more of a job creator than a seeker*" (#010); "*You don't work for a boss and you are free to choose type of work you do*" (#024); "*It has nothing like retirement age, therefore one can work as long as one is alive or wishes*" #081. These statements suggest what Becker et al. (1961) described as a "long-range perspective," wherein applicants are drawn to a program based on expected opportunities from the profession. Particularly prominent was the desire for good remuneration: "*… I would full fill my financial dream*" (#009); "*… architecture is one of a very high paying field*" (#042); "*… this profession will make me earn good and clean money because it is really marketable*" (#081). (Mis)conceptions of architecture as a lucrative career, which largely stemmed from ideas of what architects do, are explored in the following section.

5.3.   Knowledge of architecture

Essays revealed that many applicants were unaware of the role architects played in the construction industry in general, and in building design specifically. The diversity of factors that influence the decision to undertake architecture suggests that views about the profession and the role of the architect vary widely. This finding is not unusual. Lewis (1998, p. xvi) pointed out that "people choose careers for many reasons, often knowing relatively little about their choice at the outset." Ideas of what constitute architecture were skewed to the visible output of the profession, such that a basic set of orthogonal drawings, namely, "the plan," was perceived to be what architects did. Predictably, several applicants believed this drawing was all architects did: "… *my role would be setting out plans* …" (#109), and "*Architects develop plans for buildings and other structures* …" (#138). The idea that architects merely draw plans is embedded in the definition of "architect" in Uganda as "*omukubi wa pulaani,*" which translates literally to "a drawer of plans." This perception of the architects' role is not unique to Uganda, neither is the idea that architects and engineers are essentially the same, as noted by Potter and Potter (1984, p. 32) in Sudan: "I disapproved of the word *muhendis* being applied to architects as well as engineers, because *muhendiseen* have been and still are aggressively doing the job of architects." No doubt, such perceptions influence the intake into architecture programs.

Juxtaposed with the general views of architecture were dictionary definitions that presented a generic description of architecture as "… the art and science of designing buildings and some cases, non-building structures." For some applicants, this definition was a reason for their choice of A level subjects. Some amusing responses included: "*I think architecture is a fancy term for extensive education in design*" (#002); "… *exercise the power of expression of my imaginations into reality*…" (#121); "… *according to me, architecture is where an architect sits down, thinks, imagines, and visualizes a building*" (#081). These responses highlight how the low penetration of architects affects the perceptions of architecture by prospective students.

6.   Discussion

This study of application essays revealed that decisions to apply to architecture school were on occasions fortuitous and based on pre-conceived ideas of what architects did. The belief that architects merely drew plans served to build expectations in students, but often represented a perceived reality markedly different from what architectural education entailed (Olweny, 2015). This disparity raised the prospect of culture shock for incoming students who anticipated something similar to what they had undertaken in *Geometrical and Building Drawing*. Ironically, the intake criteria of the four schools of architecture in Uganda revealed that none of them considered *Geometrical and Building Drawing* as a required subject for entry, whereas only two schools considered *Art* as a 'desirable' subject. This observation is significant in light of findings by Olweny (2010), whose appraisal of studio work of a sample of architecture students found no correlation between their performance in *Art* or *Geometrical and Building Drawing*, and their success in architectural education. This finding contradicts Adewale and Adhuzen (2014), who suggested that *Art* and *Technical Drawing* would equip students with the necessary skills for architecture, and should therefore be included as part of the selection criteria. What was evident for students who had completed *Geometrical and Building Drawing* was a deep conviction that they were, for all intents and purposes, "architects" because of their ability to "draw plans." For them, the ability to draw was viewed as adequate preparation for architecture and was somewhat linked to historical perceptions of the architecture profession in the region. This finding raises the notion of giftedness (Stevens, 1995), described as the ability to engage in an activity with minimal effort, and is linked to ideas of creativity and artistic abilities. Giftedness in itself is largely linked to status, privilege, and exposure, and less about personal abilities (as highlighted by Pido (2002) in relation to his progress through the educational system in East Africa); giftedness is generally cultivated in wealthier schools, which explains the dominance of students from these schools in higher education. Notions of giftedness carried through to convictions about abilities, with some applicants suggesting that their high grades in *Geometrical and Building Drawing* should allow them to complete the architecture program in two years.

The importance of subject choice was evident, with a polarization of subjects undertaken by students for their A level examinations. These choices were largely restricted to a narrow range of subjects traditionally considered essential for architecture. High school students are only able to select three subjects for their A levels. Thus, their choices are restricted and often based on what the high schools deemed as "relevant subject combinations." For students who consider architecture, subjects they were restricted to include *Mathematics, Physics, Geography, Economics,* as well as *Art* and *Geometrical and Building Drawing*. Students were largely dissuaded from taking liberal arts subjects, such as *Music, Foreign Languages,* and *Literature,* as part of their preparation for university, as they were regarded as inappropriate for "intelligent persons." Clearly, this notion may be a consequence of the "Arts" and "Sciences" divide within the Ugandan education system. Moreover, a derogatory label is bestowed upon the performing arts, with the Faculty of Music Dance and Drama at one university often referring to as *Musilu Dala Dala*, literally translated to mean "For the Totally Stupid" (Tumusiime, 2010).

The enticing view of the architecture profession as commanding high remuneration was significant and tied to a desire for upward mobility, as shown in the demand for self-employment. This view is somewhat linked to the state of Uganda's economy, where high unemployment and underemployment makes job security of prime importance. This result mirrored the findings by Nelson (1974) and Navarro-Astor and Caven (2012) that financial factors were key motivators for students from low socio-economic backgrounds. More overt was the desire to undertake architecture for its high prestige value, a notion that extended to family expectations. In this case, a prestigious professional career was not only a means for parents to set up their

Table 4   Comparison of motivational factors.

Current study	Nelson (1974)	Boyer and Mitgang (1996)	Navarro-Astor and Caven (2012)
I did technical drawing (1)			Good at drawing / Sciences (2)
I am creative / To express myself (2)	Talent (1)	Putting creative abilities to practical use (1)	Technique & Humanities (3)
I did art (3)			
It is a prestigious career / To be remembered (4)	A Desire to be respected (5)	Prestige of the profession (4)	
Childhood dream (5)			Childhood dream / Lifelong goal (4)
		Improving quality of life in communities (2)	
	Parents influence (2)		Parents (1)
	Architect heard / read about (3)		
	Vocational counsellor (4)		
	Architect know well (5)		
		Improving the built environment (3)	
		Good salary prospects (5)	

offspring for the future, but also a way to ensure their own post-retirement wellbeing. This outcome was also found in Spain by Navarro-Astor and Caven (2012) and is a key part of the "traditional" social security system.

Although prevalent as motivators for career decisions, advice from family, particularly parents and guardians were often based on personal biases and self-interest, directing young adults into safe or traditional careers not necessarily suited to their ambitions or aspirations (Burns, 2014). This observation is relevant in light of research suggesting that the transition to university is already challenging and stressful enough for young adults, more so with pressure from parents and guardians to make the "right" decision (Wintre and Yaffe, 2000). Nevertheless, the lower than anticipated reporting of parental influence may relate to the fact that architecture is not well-established in Uganda given that the first architecture school opened only in 1989. The lack of parental influence could also be a reflection of the educational setting of Uganda (wherein most students attend boarding secondary schools) which could restrict parental influence in career decisions.

While exhibiting some contextual differences, the motivational factors presented are consistent with the findings of Nelson (1974), Boyer and Mitgang (1996), Lewis (1998), and Navarro-Astor and Caven (2012). The call to pursue architecture based on the notion of creativity appears to be universal, wherein students seek to enter architecture school because of their "talent" (Nelson, 1974), "putting creative abilities to practical use" (Boyer and Mitgang, 1996) or due to their "technique" (Navarro-Astor and Caven, 2012) (see Table 4). Three of the top five motivational factors were similar to those found by Boyer and Mitgang (1996), and Navarro-Astor and Caven (2012), with only two factors aligning with the findings of Nelson (1974). While this outcome suggests similarities across socio-cultural settings, it may also highlight temporal and societal differences, most notably in the bias toward educational related motivational factors in Uganda. The fortuitous decision to undertake architecture serves to cultivate perceptions and expectations that could negatively affect the students entering architectural education and their subsequent completion rates. Understanding the values and ideas of incoming students acknowledges that a key purpose of architectural education is the formation (or transformation) of values in students (Pultar, 2000).

7.   Conclusion

The findings of this study provide a glimpse into applicants' views and perceptions of architecture, and, to an extent, of the values students carry with them into architecture education. Significant for this study were educational factors that emerged as the most prominent, followed by personal and prestige factors, with external factors as the least influential determinants. Contextual realities were particularly apparent within educational factors, an indication of the pre-socialization influence of boarding secondary schools, which serve to de-emphasize parental influence. This outcome contradicts common perceptions of society in Uganda, often presented as being "traditional" and with significant influence expected from parents and family members. In presenting an *in situ* record of motivational factors, this study provided stated reasons for applications to architecture school but acknowledged that some applicants may have been seeking to impress the admission panel through their essays.

The findings also provide an indication of the broad range of motivational factors within the context of Uganda, which could aid the development of bridging programs or address the issue of beginning design courses that could ease the transition into architecture programs. Many students come

into architectural education with only a rudimentary under-
standing of what the profession entails or what architecture
education itself is geared to achieve. Thus, engaging with
their instructors and their education becomes a challenge.
While this may be a universal challenge for architecture
education, understanding the contextual nature of these
factors is critical in determining how architecture education
can engage with the often dichotomous relationship
between its own goals and those of incoming students. An
appreciation of the socialization of students prior to and
within the educational realm is a critical part of this
undertaking that cannot be excluded from the educational
process under the guise that academic achievement alone is
adequate preparation for architectural education. This
appreciation is critical to address long held misconceptions
of architecture and architectural education that are rarely
discussed or addressed as part of the educational process.
To build a more comprehensive picture of student's motiva-
tion for architectural education, a broader longitudinal
study of incoming architecture students across East Africa
is required; to better understand their motivation for
selecting the program and how these motivations may
influence their performance within the program.

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