Obsolete? Relevance of the Architect's Role and the Changing Nature of the Architectural Profession

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Abstract: This paper uses an exploratory approach and literature analysis as strategies of inquiry to report on the general state of the architectural profession in selected developed and developing countries. Through review of published articles on the architectural profession, architects' roles and their workplaces/practices, a research strategy is developed, starting with a comparative analysis in the evaluation of the profession in regard to past, present and future relevance. A similar comparative analysis is used in investigating strategies employed in maintaining the position of the architect, where four key strategies adapted from the literature are discussed with respect to both developing and developed countries.

The findings reveal growing concerns towards the relevance of the architect's role and the profession in general, both in developed and developing nations. The study further discusses strategies recommended from the literature to be put under consideration to ensure the sustained relevance of the profession.

Keywords: Architectural profession, communication, architectural education, architectural design process, architects role, user involvement, innovation, knowledge management

Introduction:

Cuff (1991) argues that over the past century, the architectural profession to a great extent marginalized itself by maintaining an elitist social distinction and through creating 'silent boundaries', such as during the '*avant-garde*' movement, where the architect's social obligation towards users was considered secondary.

Consequently, architecture (at levels of both professional practice and ideology) continues to undergo a narrowed professional jurisdiction resulting from weakened authority over contractors and clients, as well as due to increased jurisdictional competition in the construction industry from other occupations such as client representatives, developers, construction and project managers. (Faoro & Merrill, 1990; Pinnington & Morris, 2002)

The inception of the architectural profession dates back to the 19th century, arising out of demand to satisfy requirements of the industrial age such as specialised buildings like industries, train stations and housing. Increased complexity in construction consequently created need for regulation, at a time where builders had low literacy levels thereby turning architects into disseminators of information and a crucial link between clients and contractors (Saint, 1983; Gutman, 1988). While the architectural profession and the contribution of architects in the AEC industry have remained relevant over the centuries and will continue to do so, it has to a given extent faced disruption, with significant encroachment from disciplines such as engineering and construction management (RIBA, 2007). In a number of western industrialised countries, the role of the architect appears to be eroding as evidenced by the diminishing volume of construction in which architects have direct input, with a possible explanation being a mismatch between society's expectation from architects and they are actually willing and able to offer (Faoro and Merrill, 1990; Wagner, 2004).

This structure of this study is exploratory, using an interpretative approach in which both primary and secondary sources of literature are critically analysed and classified to ascertain whether (and to what

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extent), the architect's role as the orchestrator around whom the building process once centred, and whose responsibilities entailed creating the building's design and producing construction documents still holds, and the extent to which it is being threatened by related disciplines. This paper comprises a literature review section covering the past and current state of the architectural profession while the second section presents strategies and recommendations for the profession's continued relevance. The final section comprises a discussion and limitations of the study.

2 Literature review

A number of debates amongst scholars have indicated how the roles and influences of architects, and the architectural profession have eroded with time, with the key challenge that the profession has had to continually navigate being an ideological shift of emphasis from creativity (the profession's primary legitimizing principle) towards more complex business models and competence development programmes in a bid to streamline workflows (Pinnington & Morris, 2002; Spencer, 2014; Styhre, 2009). According to Winch and Schneider (1993), the reluctance of architectural practices to adopt a diversified threefold structure in which they can efficiently and concurrently operate as a professional organization, a service organization and a creative organization can be attributed to one of the primary reasons for their hindered growth. The concentration on singular roles, such as on creative aspects like the aesthetics of design continues to put the profession in a weakened position, despite the rewards associated with design such as social status, specialized technical skills or cultural benefits (Gutman, 1988).

Furthermore, the weakened position also results from architectural practices preferring design excellence through creating distinctive original projects at the expense of the economic rewards associated with coherent strategic organization. Pinnington & Morris (2002) refer to this adoption of managerial and bureaucratic ideals as *managerialism* and includes strategies like more formalized reporting and control mechanisms devised in response to an eroding client base, heightened client power and intensified jurisdictional competition (Reed, 1996; Blau, 1984). Reduced economic gain to architectural practices has been documented in different contexts and periods, such as in the United Kingdom in the 1990s (RIBA, 1992; RIBA, 1993)

As indicated earlier, the jurisdictional competition faced by the profession can be attributed to its lack of autonomy, unlike professional fields like legal and medical services. While professions are considered occupations characterised by specialised knowledge attained through an extensive education and a practicing licence, and should consequently guarantee autonomy, the architectural profession does not enjoy such autonomy from external control. Autonomy is further associated with control of knowledge and unlike the medical field, where complexity means challenges to the medical profession mostly come from within the profession, architecture is considered a permeable profession (or having a permeable periphery) where its abstract knowledge is challenged both from within and without (Fisher, 1994). Permeability arises from architecture sharing jurisdictions with quasi-professions like property developers (home builders), real estate agents and construction managers, with each of these profession taking a toll on its autonomy. This lack of autonomy is captured by Brain in his 1991work

The autonomy of the architect is hemmed in on all sides: The client controls the budget; building technology is controlled by builders, engineers, and the industries that produce materials and equipment ... and it is particularly sensitive to economic conditions.... Architecture operates on terrain that can be easily contested. Its legitimating principles are stubbornly cultural rather than convincingly scientific, and issues of style are particularly salient Brain (1991, 263-265)

Blau (1984) highlights how the various stakeholders involved in the construction of buildings all have strong opinions about how buildings ought to function and look, and are often never in agreement. In addition, architects are excluded from the making of their artefacts, whereby despite their role as designers, they rarely 'make' buildings, a role executed by contractors. Frimpong's study (2016) notes increasingly negative perceptions and attitudes amongst clients towards professional services such as architecture while the Royal Institute of British Architects [RIBA] in its study (2011) found a disconnect between architects and clients with regard to their perceptions of each other in architect-client relationships, with the revelation that a big number of clients felt dissatisfied with architects' management of building projects, arrogance, imposing nature and focus on their personal ideologies rather than client needs. The influence of technologies such as BIM in reshaping the conventional design process from its clearly specified five stages (preparation, design, preconstruction, construction and usage) could also have had an impact on the architects relevance with the creation of new key positions in the construction industry (RIBA, 2007).

Fisher (1994) illustrates the situation by referring to architectural design practice as a subtractive process in which the architect once had control over the entire 'ball of wax', from which pieces were peeled

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off for other consultants but has since turned into an additive process in which the architect's role is simply another of the many small bits assembled together by the numerous construction coordinators.

The architectural profession also suffers from proper lack of direction, in the sense that unlike engineering disciplines which draw on a scientific body of knowledge, architecture is regarded by architects themselves as an artistic and creative field, in which case creativity remains an ambiguous term. (Williams & Askland, 2010). Creativity, according to Blau (1987), is built on the romanticized concept of individual talent and genius rather than on the architect's ability to objectively demonstrate value in the projects they design, as well as on the fact that architecture is an inherently collaborative endeavour. Architecture schools are singled out as culprits for educating students with the notion that each graduate architect will be tasked with individually designing an entire project. (Seidel et al, 2006; Gray, 2014). This mismatch in direction and ideals has further held back the practice of architecture.

To further highlight how the internal structural conflict between school and practice holds back the architectural profession, a National Institute for Architectural Education report presented its findings (NIAE, 1999, 6)

There is serious dissatisfaction in architecture over the widening gap between theoretical and practical knowledge and the conflicting objectives of academic preparation and professional practice. Practitioners complain that recently graduated architects are not well prepared to function in today's office environment, with new intern architects lacking skills and the necessary sensibility to the real world environment of professional practice. Similarly, educators complain that architectural offices are so immersed in the pragmatics of practice to grasp the connection between architecture and cultural evolution.

Several studies have attempted to capture the extent of the threat to the relevance of the architectural profession in the global context (both in developed and developing countries), and are discussed in this section. Faoro and Merrill's study (1990) conducted with 35 leading American architects over a two year period revealed that the architect's leadership role was getting replaced with other non-architect personnel such as construction managers and contractors, with a number of architectural practices either on the brink of failure or filing for bankruptcy (p.183). Their review of architects' contract documents also revealed an undesirable transition of architects from an overseer of the construction process, to an observer and to an extent having no role to play in the construction process.

Similar research from Seidel et al (2006) revealed a similar trait with respect to four developed countries of United Kingdom, Australia, New Zealand and the United States, where the 1614 respondents acknowledged the fact that an architect's work, even when functionally and aesthetically unique, can no longer be regarded as irreplaceable creations.
In the developing world, Young-Pugh (2005) notes deficiencies in the South african local market for architectural services results in mobility of both graduate and practicing architects to overseas markets, especially to Commonwealth countries.

In their study focusing on client needs and expectations, Dansoh and Frimpong (2006) revealed a reluctance by clients in Ghana to commission clients for housing projects where the law does not mandate as such, resulting in the exclusion of architects from a big number of private housing projects. While majority of clients acknowledged the importance of architectural services, they felt no obligation to source a professional licensed architect due to concerns such as reduced autonomy and the over reliance by architects on complicated paperwork and documentation to justify high consulting fees

Bristol (1992) investigated architectural professionals and paraprofessionals in four Chinese cities (Shanghai, Nanjing, Beijing and Hong Kong), three Indonesian cities (Denpasar, Pengastulan, and Jakarta), Philippines (Manila), Thailand (Bangkok) and Mexico city over a two year period with an intention of finding the level of professional participation in design work, with results highlighting the need for self-built housing especially for low income earners that eliminates the need for architectural services. This section can therefore deduce that the architect's role and the profession, both in developing and developed countries are facing marginalization and are under threat for various reasons including competition from non-architect consultants, changing client perceptions and competition with peers for already declining work

3 Strategies to keep the profession relevant
Having discussed the various threats the profession is undergoing, a number of strategies are proposed from literature on how architects can continue to re-negotiate the ever changing boundaries (of what is, and what is not) that define the profession thereby helping to maintain their relevance and continuity.

3.1 Innovation
Innovation from an AEC perspective is defined by Toole (1998) as the application of technology that is

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new to an organization that improves design and construction through decreasing installed cost and increasing installed performance. Given the challenges the architectural profession has faced over the last decades, que0stions arise whether architects are innovating enough with regard to executing new knowledge, learning, materials, skills and technologies to achieve client satisfaction and remain competitive

Innovation of architectural practices in developing countries was investigated for countries including Malaysia (Lai et al, 2016) where interviews with 151 Malaysian architects revealed that local architects valued innovation-leaning practices such as originality in expression, continued learning, teamwork and freedom of expression in their architectural practices so as to remain competitive. Additionally, a study executed in Turkey by Erbil et al (2013) revealed partners of 13 leading Turkish architectural practices expressed the need for innovation in their work, in addition to acknowledging the significant role that clients (especially those with higher technical competence) play in encouraging innovation by their willingness to share risks.

In the developed world, innovation based research include Renier and Volker's study (2008) investigated drivers of innovation in four Dutch architectural practices and found that all firms considered themselves innovators since they initiated development of new unique solutions to different problems and that the main driver for innovation was strong ambitions shared by both architects and clients to push to new boundaries. Innovation was further investigated as part of Nobre and Faria's study (2017) investigating the extent of marketing efforts amongst Portuguese architectural service firms. From the 24 in-depth semi-structured with both architects and clients, it was revealed that majority of studied firms implemented innovative practices through both marketing as well as offering customised and diversified services to get around the economic downturn in the Portuguese economy, to navigate the challenge of little awareness amongst the general public of the importance of architectural services as well as against the strong competition from peer firms. Similarly, a study conducted by Rivard (2000) revealed majority of Canadian AEC firms as early as the late 1990s had or were in the process of adopting innovative practices especially with regard to Information Technology (IT), computerisation of design information workflows and adoption of integrated project deliveries, also referred to as 'integrated practice', which refers to contract structures where there is integration of traditional design phases of design, build and maintain (Jansen & Sijpersma, 2007). In such integrated deliveries, both the design and the realization of projects is covered under a single contract.

3.2   Communication and user involvement

A number of studies suggest the ability to effectively guide and communicate decisions to clients, as well as collaborative participation between clients and architects at all phases of the increasingly complex architectural design process as part of the most fundamental skills required of architects. (Norouzi et al, 2015), (Bogers et al, 2008), (Weytjens et al, 2009) and (Emmitt et al, 2009). Efficient communication should involve transactional models where information is simultaneously sent and received, starting when a client defines their needs to an architect through idea generation up to presentation of the design solution (Norouzi et al, 2015)
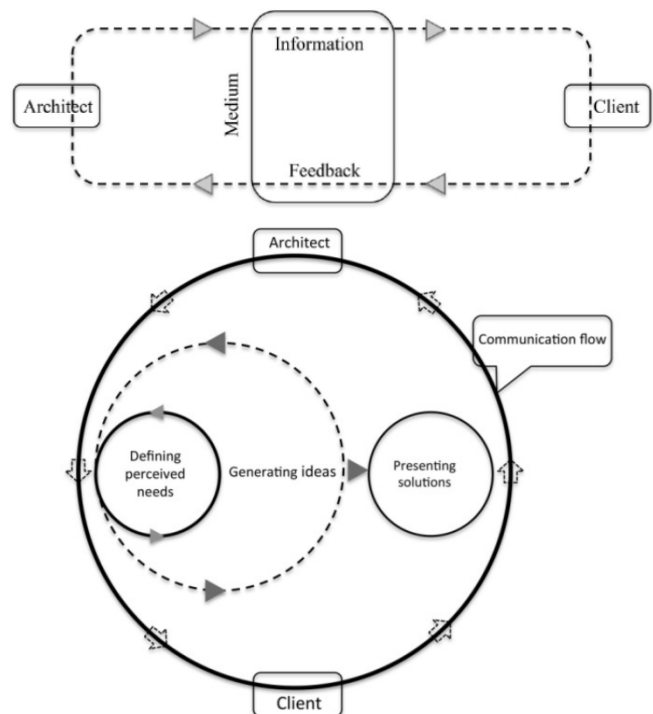
Figures 1 and 2: Simplified and detailed communication models between architects and clients (Source: Norouzi et al, 2015; Graell-Colas, 2009)

Communication and user involvement should not be limited to the mid and later design stages but as well to the briefing process in the pre-design phases (before production of drawings), when clients are defining the program of needs, budgets, and aspirations. (Bogers et al, 2008). Communication strategies should be devised for briefing problems such as architects' concerns that briefing documents are at times inadequate and limit creativity, as well as clients' impressions that their briefs are poorly interpreted and ignored by architects (Brown, 2001; Bogers et al, 2008). A study investigating 18 Dutch architects' roles in briefing and perceptions towards

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briefing documents was conducted by Bogers et al, (2008) which revealed majority of architects found design briefs to be vital documents without which design commencement would be impossible. Dissatisfaction was however noted by architects regarding the state of briefing documents with issues such as containing generic information already known, incomplete or too detailed, lack a precise document structure/format, and usually have inconsistencies and contradictions (Bogers et al, 2008, p.111). Majority of the architects preferred to complete all briefing information before the design process began (to limit new requirements and changes in the middle of design/construction) over the opinion of briefing as a continuous process that interacts with the design process.

Improved ways of communication (using advances in technology) were also investigated in developed countries, with Weytjens et al (2009) studying use of design support tools, (DSTs) by 319 Belgian architects for collaborating and communicating ideas to clients in the architectural design process. Having classified DSTs into 6 categories (communication tools, knowledge-based tools, evaluation & analysis tools, presentation tools, modelling tools and structuring tools), results showed architects mainly used 2D CAD software, sketches and photos (over 70%) followed by books, journals, databases like Neufert-Architects Data and other standards/regulations literature while few architects used simulation, evaluation tools, case based reasoning and post occupancy evaluations (Weytjens et al, 2009, p.293)
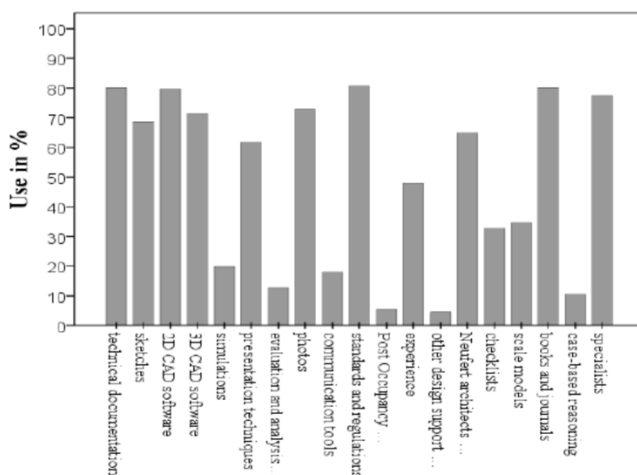

Figure 3: Use of DSTs by Belgian architects. (Source: Weytjens et al, 2009)

3.3 Knowledge Management (KM)

Knowledge is defined by Davenport et al (1998) as a combination of information, experience, context, interpretation and reflection that is applicable in everyday decision making process. The complex nature of the architectural design process and the

construction industry in general, whereby each project is unique calls for continuous accumulation of knowledge since one project's knowledge may not be applicable in another project. The construction industry therefore requires systematic procedures for managing the enormous amount of embedded information/knowledge, to the extent that the architectural and construction consultancies that adopt adequate management systems eventually secure improved productivity and a competitive advantage through improved employee workflows and decreased project durations. (Kayacetin and Tanyer, 2009).
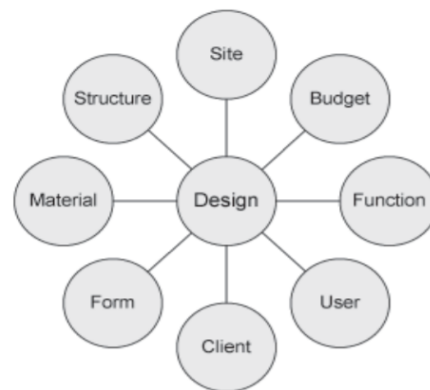

Figure 4: Various kinds of knowledge/information in the architectural design process that require systematic management (Source: Kayacetin & Tanyer, 2009)

In developing countries, Kayacetin and Tanyer's research investigated knowledge management methods (such as sharing, storing and deployment), benefits and barriers of knowledge management in 15 architectural practices in Çankaya District Ankara-Turkey. The study revealed sampled Turkish architects mainly used the internet, clients, seminars and peers as the main sources of knowledge, preferred to share this knowledge through electronic means (email) and social communication (say through training new staff on office standards) while also preferring to store it in digital archives and servers over paper archives. Barriers to knowledge were identified as the unique nature of each project and the lack of standardized methodologies for managing knowledge specific for the architectural industry while benefits included increased productivity in offices, enhanced employee satisfaction and efficiency, decreased wasted design efforts/work errors even without actual translation into profit (Kayacetin and Tanyer, 2009)

In addition, Lasode and Ogunsola's (2018) study involving 104 architects in Ibadan city, Nigeria revealed strength of social interactions/relationships amongst partners and staff in architectural practices was correlated with knowledge sharing efforts. It

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was also observed that respondents' satisfaction resulting from sharing knowledge with other team members increased the actual frequency of knowledge sharing efforts in offices and in comparison to Kayacetin and Tanyer's study (2009) in Ankara, Nigerian architects similarly demonstrated a high level of ICT usage was relied on for managing, storing, retrieval and sharing knowledge. In developed countries, Kamara et al (2002) investigated trends and practices in the management of industry knowledge/information (i.e. statutory regulations and procedures, technical information like materials, specification and technologies, suppliers and subcontractor information as well as client information) in 15 architecture and engineering practices in the United Kingdom. The study focused on among other things organizational drivers of project knowledge that included improving efficiency, minimizing waste through mitigating duplication of design efforts and repetition of design errors. The processes identified in Knowledge Management included use of ICT tools in managing and sharing knowledge, knowledge accumulation and transfer of professionals to new jurisdictions as the main avenue to transfer knowledge to new places, capturing lessons learnt during projects and turning them into best practice procedures for the future,

Emmitt et al (2009) also investigated knowledge management efforts in a British architectural practice through an action-research methodology beginning with problem identification, implementation of a new action plan followed by a monitoring and evaluation period. The new proposed recommendations were able to improve the practice's capacity with regard to managing

knowledge and design effort by the end of the 6 month implementation period. With regard to knowledge management, there are efforts being made by architectural practices both in developed and developing to strengthen the architect's position as leader of the construction process.

3.4 Architectural training & education as a strategy

Earlier sections of this paper captured the conflict and disconnect between architectural education and practice. However, architectural schools, with the right reforms present a viable potential tool for helping sustain the profession. (Gray, 2014). Several studies since Cuff's study (1991) have sought to demystify the preconceived presumptions that architectural education fundamentally differs from 'standard' (non-design based) education models and disciplines (Seidel et al, 2016; Williams & Askland, 2010; Blau, 1987).

Based on challenges faced by the profession, attention equally turns towards the adequacy of architectural education in equipping graduates with the quantity and quality of training/skills to remain relevant. In a study conducted with 1614 respondents in four developed countries (US, UK, Australia and New Zealand), Seidel et al (2006) highlighted practitioners in all four countries felt their education gave them competence in the skills of urban design/planning, structural design, schematic design and building technology. However, Australian/New Zealand architects expressed less confidence in their training in brief preparation, American architects felt more confident about the urban planning skills and least confident about codes and specification, British architects felt better equipped with interior design skills.
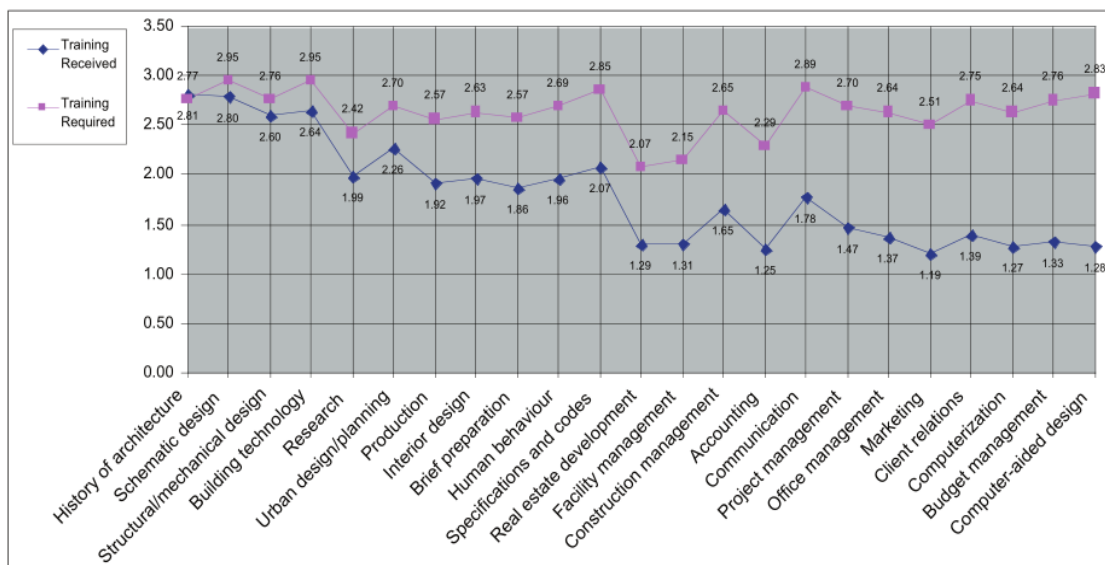

Figure 5: Mean scores of training received vs training required. (Source: Seidel et al, 2006)

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Throughout all countries, there was deficiency in business, management and computer related matters. The key observation revealed how knowledge needs of architects are greater when compared to the level of training received, with the architects believing they were 'under-served by the education' (Seidel et al, 2016, p.202)

In other cases of developed countries, research conducted by Svetoft (edited in Emmitt et al, 2009) at Sweden's three top architecture schools, (KTH-University of Stockholm, Chalmers & Lund University) it was revealed how none amongst the three schools emphasized a pedagogical role of user involvement and communication skills in the design process.

Gaps were reported between third year students' theoretical and practical skills, implying that professional based curriculum was deficient in their study programmes.

There are similar findings from developing countries such as in South Africa where Young-Pugh (2005) reveals how educational focus of South African architecture schools has undergone transformations over the last twenty five years, with priorities "turning to engagement with ethical, contextual, social, and environmental issues rather than idiosyncratic formal and spatial expression" (2005, p.36) so as to deal with South Africa's escalating problems as well as equip students with an awareness of the fragility of the local and global environment.

Similarly, Dua and Chahal's study (2004) on architectural education in India found attempts at standardization of curriculum by universities and the council of architecture were only limited to defining contact hours in design studios and defining student-teacher ratios, a scenario they liken to creating bye-laws for control and regulation of housing construction, irrespective of whether the laws ensure a good quality of architecture. Indian architectural education also faces a dilemma with educational institutions becoming answerable to the Council of Architecture rather than to their university authorities. This section is also able to highlight how despite efforts of schools of architecture in producing all rounded graduates,

4   Discussion and conclusion

The premise of this paper was to discuss the past, present and future of the architectural profession. From the literature, there is an indication of confirmation that the autonomy of architects is under threat and this can be attributed to competition faced by architects due to the evolving nature of the construction process and consequently the architectural design process. These evolutions consequently result in changes in available technology and in client perceptions. Other factors include availability of quasi-professionals capable of delivering architectural services and consequently weakening its professional jurisdiction, the profession's inability to adopt managerial practices for optimum performance as well as the structural deficiencies that exist between architectural education and practice

Three major strategies (innovation, communication and user involvement, knowledge management and streamlined education) are presented from literature as guidelines that architects can adopt (or adjust their practices towards) so as to maintain their relevance. This is discussed in the context of both developing and developed countries. Some limitations of this paper relate to its scope, whereby while there is an attempt to address both developed and developed countries, representativeness is not achieved since case studies are limited to those available in the literature. Hence the study suffers from a limited scope that falls short of a global/exhaustive picture of architectural practices around the world.

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