KNOCKING AT THE DOOR

How can the lack of awareness of the design professions, so evident in the built environment, be rectified? Nico Botes looks at solutions to this common shortcoming.

By: Nico Botes, Department of Architecture, University of Pretoria

This article highlights the general lack of awareness of the design professions in the built environment – even among prospective students of architecture – and investigates opportunities to address this shortcoming, particularly through job shadowing. This, in turn, presents practitioners with an opportunity for community engagement and, in so doing, helps to demystify the architectural professions.

ADMISSION THROUGH SELECTION

The 44th cohort of first year students, who were admitted through selection, registered in January 2015 at the University of Pretoria's Department of Architecture. The reason that students are selected for admission is because the number of applications exceeds the number of available places. In schools of architecture, the number of available places is usually determined, and limited, by available resources that facilitate teaching and learning in the design studio which, by its nature, is a resource-intensive environment. Other contributing aspects include a history of high attrition rates, especially amongst first-year students, the subsequent financial losses to students and state, and aspirations of the institution to academic excellence (Kemp 1991:1-2).

With only a few exceptions (notably the schools at public universities in Argentina), admission by selection is the global norm used to admit students to such schools. Surveys – primarily by Goldschmidt, Sebba, Oren and Cohen (2001:281-289), and augmented by Salama (2005:5) – suggest that schools of architecture use eight main assessment tools for selection, namely: academic records (by far the most prevalent), psychometric or general scholastic aptitude tests (in second place), portfolios of all sorts (in third place), special architectural aptitude tests, interviews, essays, written statements and letters of recommendation. Generally, a combination of criteria is used – with the average being 2.8 of the eight categories.

SELECTION REFORM

In 2005, the Department began to rethink its selection procedures and broaden the scope of the assessment tools it had been using to admit beginner students to design-profession programmes in the built environment. This was preceded by the first democratically elected government's reform of higher education, and was followed by legislative, structural and managerial changes that had steadily been building over the course of a decade. The outcome saw the UP programmes in architecture, interior architecture and landscape architecture incorporated into one academic unit, which offered a core curriculum in an equifinal, homologous structure with a joint first year and a second tier of postgraduate degrees for purposes of professional registration.

It was anticipated that a revised selection procedure would reflect these changes and that it could serve to limit attrition, especially during the first year of study, while improving throughput and addressing the demographic representivity of the student cohort.

From 1995, applicants' (chiefly secondary school) academic records served as the Department's basis for selection. Ten years later, the general perception was that this Matriculation Score system automatically admitted some students who were possibly not ideally suited to pursue design studies. It stands to reason that school results, in isolation, give a very limited perspective of an applicant's skills and fail to indicate, or predict, design potential or even interest. Similarly, the notion of a formulaic 'ideal applicant' profile was rejected, as this was contrary to the ecosystemic approach and principles of process-driven generative design that the Department subscribes to and for which its graduates are valued. Adhering to the values of multiple possibilities, the objective became to identify all-rounders with broad, enquiring intellectual capacities that could nurture and sustain interest and aptitude. Teymur (2007:103) has probably best précised the desired qualities:

'[…] the most critical for architectural education is curiosity, the willingness to embrace ambiguity, paradox and uncertainty, to develop the balance and the connection between science and art, logic and ›

'UP REQUIRES PROSPECTIVE STUDENTS TO VISIT PRACTITIONERS IN THE THREE ARCHITECTURAL DISCIPLINES TO CONFIRM THEIR CAREER CHOICE, REPORT ON THEIR IMPRESSIONS AND, ULTIMATELY, THE CERTAINTY OF THEIR DECISION TO PURSUE STUDIES IN THEIR CHOSEN FIELD.'

imagination, the 'whole-brain' thinking, and a recognition of the interconnectedness of all things and phenomena…'

A matrix of cumulative considerations was therefore developed from a normative position, informed by the architectural disciplines and specific nature of their presentation at the institution – i.e. one that reflects the fundamentally complex nature of spatial design, but also embraces the Department's ethos of interdisciplinary studio-based learning. The revised selection procedure was first implemented during 2006 for the intake of 2007; after nine years of refinement, the following assessment tools were used – over four rounds of exclusion – for the selection of the cohort for the 2015 academic year:

ROUND 1: ACADEMIC RECORD

1. Applicants must meet the minimum academic requirements in at least three school subjects (Mathematics, Physical Science and a language of instruction), as well as in the Admission Point Score.

ROUND 2: HOME ASSIGNMENTS

2. A biographical questionnaire and a short essay,
3. drawings and other assignments,
4. and an account of at least one practice visit.

ROUND 3: TESTS

5. Special architectural aptitude test, during which performance assessment is emphasised and a broad spectrum of skills are assessed.

ROUND 4: INTERVIEWS

6. Personal interviews as the final, summative means of assessment.

From the above, it should be clear that applicants are engaged across a spectrum of considerations, by various means, in several formats and with different media. This is in keeping with the nature of architectural education, and corresponds with aspects critical to facilitating a student's growth in a studio environment. It is believed that the current selection procedure complements the interdisciplinary tenets entrenched in the Department's teaching approach. Additionally, the process is subjected to ongoing review through discussion, evaluation and surveys.

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PRACTICE VISIT: RATIONALE

There seems to be universal consensus among educators that first-year students generally find the transition from secondary to tertiary education challenging, if not distressing. For beginner students of architecture, this move is further exacerbated by their novice status in the near unfamiliar context of the studio (see, for instance, Peterson 1971:56; Ochsner 2000:195; Roberts 2006:169; Tozan, Kiessel & Abbasoglu 2008:1). The divide is undoubtedly more pronounced in our developing context and one must agree with Saidi and Nazier (2011:185), who state that learners from poor communities are often severely limited in their preparedness to undertake studies in disciplines such as architecture. Coupled with a lack of resources, there is also a general lack of awareness of the architectural professions and thus a dire need for professional and educational bodies to address this shortcoming (CBE 2009:13-14, reiterated by Janse van Rensburg 2014:59). It is thus not surprising, when considering the legacy of apartheid and its continuing impact coupled with profound poverty and high levels of unemployment, that our design professions are more often than not viewed as elitist and therefore remain largely unfamiliar territory to many.

Moreover, learners are regrettably often misguided when choosing which subjects they wish to pursue for their National Senior Certificate. Engineering Graphics and Design, generally thought to be the most appropriate choice for studying architecture after leaving school, only develops a very narrow band of skills. Despite the fact that this subject's potential therefore remains largely unrealised, it is certainly perceived as a 'bread and butter' subject (i.e. one that can help the learner earn a living later in life) and, in addition, it is one where good results may be obtained with relative ease when compared to other subjects. On the other hand, the general perception of History is, unfortunately, quite the opposite; this is despite the possibility that a foundation in History is likely to be far more beneficial to the prospective architect, especially when it is taken in combination with Mathematics and a Science subject. Sadly, many schools have discontinued History due to a lack of interest from learners.

One must concur with Nelson (1974:83) who, more than 40 years ago, argued that few school vocational councillors understood the many facets involved in the practice of architecture and that they usually proved incapable of offering a great deal of assistance to the learner. He also noted that one of the best ways for a prospective student to learn about the profession was through part-time work or an internship, albeit that the latter seems rather old-fashioned in the 21st century.

Prospective students who apply for admission to UP's Department of Architecture are still required to apply for one of the three undergraduate fields, or at least rank them in order of preference, as the student intake per programme is limited. Thus, when redesigning the protocol for selection, a means was sought that could assist applicants to explore architecture, landscape architecture and interior architecture first hand and, in so doing, allow them to make informed decisions as to their choice and ranking of preferences for admission.

Alexander and Dlamini (2012:830) argue that the neglect of career assessment and counselling is a contributing factor to the high dropout and failure rates at institutions for higher education, especially for those students from marginalised backgrounds. A lack of information surely contributes to difficulties in making career decisions. To this end, it was observed that those students who had prior exposure to practitioners through school job shadowing, seemed surer of their

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decision and more committed to their studies. Not surprisingly, career satisfaction is regarded as a core measure of life satisfaction or, in borrowing from Professor Roger Fisher, one should aspire to a 'good fit' – in this instance between an individual and his/her chosen career path (and therefore his/her field of study).

PRACTICE VISIT: ASSIGNMENT

The aforesaid factors serve to inform the need for workplace experience as an organised component of selection for undergraduate admission. The practice visit, loosely based on the job-shadowing programmes that most Independent Examinations Board schools follow, offers applicants the opportunity to explore the nature and operation of their chosen profession first-hand or, in career development speak, as active clients. ›

1 *A long-term investment in introducing disadvantaged learners to architecture, various day-long architecture familiarisation workshops have been held at the University of Pretoria – in conjunction with the Pretoria Institute for Architecture – since 1990. Recently, the same format has been successfully offered elsewhere, such as by the KwaZulu-Natal Institute for Architecture in 2013, under the banner 'Be an architect for a day'. Now an integral part of UP's outreach agenda, these workshops help to inform learners about the design professions and designed built environment in general, for the betterment of society at large.*

UP requires prospective students to visit practitioners in the three architectural disciplines to confirm their career choice, then report on their impressions and, ultimately, the certainty of their decision to pursue studies in their chosen field. Although the number of practices that should be visited is not prescribed, it is strongly advised that prospective students investigate a variety of practices – for instance large as well as small – as the scope of work undertaken differs from firm to firm. Applicants are encouraged to share their primary impressions of the workplace and make drawings of at least one of a practice's projects, as a way of formulating an opinion of their work and to explain their own reading and spatial understanding thereof. At the same time, this approach allows for self-expression and the discovery of disciplines by the applicant, while exposing the idiosyncratic differences between the three design programmes in the built environment.

'ALTHOUGH WORKPLACE EXPERIENCE HAS NOT (YET) BEEN RECOGNISED AS AN ADDITION TO THE EIGHT ESTABLISHED ASSESSMENT TOOLS USED WORLDWIDE FOR SELECTION BY SCHOOLS OF ARCHITECTURE, EXPERIENCE HAS SHOWN IT TO BE AN ESSENTIAL COST-OF-PRODUCTION COMPONENT FOR ADMITTING BEGINNER STUDENTS.'

The practice visit is seen as a task completed by applicants for their own benefit, rather than for the benefit or approval of the selectors. Follow-up questions are posed by the selection panel – especially during interviews – and their points of discussion are triggered where aspects of interest by the applicant, or concerns of the selectors, have been flagged.

PRACTICE VISIT: REVIEW

For many applicants, this is their first (and, in many cases, only) opportunity to investigate their career prospects in person. It is therefore vital that they get broad exposure, including coming face to face with the realities of professional practice. Surveys administered by the convenor of selection indicate that between 2011 and 2014, more than 86% of first-year respondents thought that the assignment had some (29.7%) or a lot of (56.8%) value in confirming their career choice (Department of Architecture 2014:5). It is especially through the respondents' comments that one gains an understanding of these statistics. The following thematic analysis, taken from answers in the annual first-year questionnaire on selection, explains students' experiences during their practice visits and their observations of the realities of professional practice:

'Visiting practising professionals gives a very accurate and real-world understanding of the profession and actual day-to-day activities. You learn about the positives and negatives of the career very easily…' (Respondent 40, 2014)

'What the practice visit did, more than anything, was to give visual experience and understanding to research I [had undertaken] about the profession.' (Respondent 64, 2012)

'The reality of the profession is often not as glamorous as one imagines. Still wanting to pursue the career after realising this, is a positive sign that it is the right profession for you.' (Respondent 50, 2012)

'I understood the profession beforehand, as my mother is an architect. The visit was, however, positive as the practice I visited focused on other types of projects [to those I was familiar with] and more often worked in groups [than I thought would be the case]. It allowed me to see different approaches to the same profession; diversity.' (Respondent 36, 2012)

It is also clear that the practice visit served to motivate some of the applicants:

'I was exposed to a [great deal] of interesting aspects that made me more excited to embark on this journey than [was] originally [the case] with my limited knowledge. It contributed a [great deal] to my decision-making towards my career choice.' (Respondent 42, 2014)

'The practice visit confirmed my choice, because I saw exactly what architects do and [that] they still enjoy it. It was informative and motivating. I can't see myself enjoying any other field of study as much as I do this one. I feel like we learn so much more than just one thing.' (Respondent 19, 2013)

'It also served, as intended, in developing an understanding of the roles of different professionals who function in the built environment; specifically the nuances between the architectural disciplines:

'I had only [ever] heard of landscape architecture and did not really know what it was [all] about. People had told me that landscape architects were just glorified gardeners. However, after the [practice] visit, I realised this was [untrue]. If not for the visit, I would not be here.' (Respondent 47, 2014)

'I knew that architecture was about combining science and aesthetics, but I was not fully aware of [exactly] what the job entailed. I was [fortunately] exposed to interior architecture (which I had not known anything about), and hence [chose it as my] study choice.' (Respondent 7, 2012)

I knew that architects designed structure[s], but at first I couldn't find a clear distinction between an architect and a civil engineer. But after the practice visit, I learned that a civil engineer – or [any] engineer – solves a problem, but that an architect gives meaning in solving a problem. Thus, visiting a practice does help you understand what you're planning to do for probably the rest of your life.' (Respondent 73, 2012)

Many practitioners and their practices have responded positively to the challenge. Mathews and Associates Architects, Boogertman + Partners, GREENinc Landscape Architects, Newtown Landscape Architects and now, also, the Paragon Group organise their own open days where they host groups of prospective students. Mathews and Associates' annual open days include a visit to other practices and a building site; attendees also participate in a short design project that is critiqued. The Pretoria office of Boogertman + Partners, a large multidisciplinary office, has developed ›

a programme to specifically allow visitors contact with professionals from all of the practice's departments. These practitioners all deserve our gratitude for the service they render to the professions and the community at large.

Some applicants have also been critical of practices and themselves. These opinions reflect their perceptions and some of the challenges they have identified:

'The practices are not very helpful when it comes to job shadowing and they often do not reply [to requests for a visit]. I [still] do think it is important to visit [though], as it gives you a feel for the environment [you will work in].' (Respondent 11, 2013)

'I was only there for a short while, so I didn't take in much.' (Respondent 31, 2013)

'The benefits of the visit greatly depended on the willingness and participation of the [involved] professionals.' (Respondent 38, 2012)

'One visit is not enough to gain an adequate understanding.' (Respondent 42, 2012)

Initially, it was feared that the practice visit might expose applicants – too early – to very subjective opinions. Prejudices against the interior and landscape programmes are indeed expressed (probably by a small number of ill-informed architects who cling to a certain preconceived self-assuredness), while some applicants have reported that they were met by total insolence, and a few others were discouraged by practitioners who declared theirs a hopeless profession. Fortunately, this seemed to be the exception rather than the rule; in many instances the resilient and more motivated applicants were able to take these experiences in their stride and look elsewhere for information. By the same token, a small number of prospective students withdrew their applications after the practice visit, with some indicating that they felt uncomfortable or now thought it would be inappropriate for them to pursue studies in the field.

Two events complementing the practice visit – learner workshops and the professions session – have recently been added to the Departmental schedule. The former focuses on fostering a broad, introductory awareness of the design professions in the built environment, while the latter tries to review and clarify the role of each profession to applicants.

LEARNER WORKSHOPS

In the early 1990s, architect Shelagh Nation initiated and, in conjunction with the Pretoria Architectural Society – reconstituted in 1995 as the Pretoria Institute for Architecture (PIA) – and the UP Department of Architecture, conducted day-long architecture familiarisation workshops with learners from disadvantaged communities; especially those from Mamelodi and Atteridgeville (Artefacts 2015). Similar workshops – again in conjunction with the PIA – were presented in 2001, by a former colleague Dr Finzi Saidi and senior students (University of Pretoria 2001:18), to high-school learners from Ga-Rankuwa and Eersterust.

A seminar was subsequently presented to the Mathematics and Physical Science teachers from more than 15 schools in the greater Tshwane region, with the aim being to introduce them to career possibilities in the built environment. Beyond the Department's emphasis on the design professions, it also addressed opportunities in planning, construction economics and project management.

SCHOOLS REMAIN UNLIKELY TO INTRODUCE CHILDREN TO SUCH FIELDS AS ARCHITECTURE. FILLING THIS EDUCATIONAL GAP, ARCHITECTURAL WORKSHOPS WITH CHILDREN CAN HELP PREPARE THE GROUND FOR A MORE EFFECTIVE INVOLVEMENT OF INFORMED COMMUNITY PARTICIPANTS IN [THE] FUTURE.

The format has since been successfully offered elsewhere – notably by the KwaZulu-Natal Institute for Architecture under the banner 'Be an architect for a day' (see Harber 2013:183) – but it was not formally undertaken by the Department until Professor Karel Bakker initiated its reintroduction in 2012.

A community-based project, integrated into all undergraduate academic programmes offered by the UP Faculty of Engineering, Built Environment and Information Technology (EBIT), became the vehicle to facilitate these events. Under guidance of colleague Buhle Mathole (and with keen assistance from lecturers, practitioners and students), the first workshop was held on 13 April 2013 and learners from Soweto, Hammanskraal, Atteridgeville, Tembisa, Rustenburg and Ivory Park have continued to be accommodated at such workshops. As was the case with Ms Nation's initial workshops, the first priority remains to inform learners about the design professions in the built environment, as:

'[…] schools remain unlikely to introduce children to such fields as architecture. Filling this educational gap, architectural workshops with children can help prepare the ground for a more effective involvement of informed community participants in [the] future.' (Marschall 1998:117)

It is highly rewarding to observe the enthusiasm and energy with which learners tackle the design task and respond to input from the facilitators. Considered to be long-term investments, these sessions have now been formally (re)introduced to the Department's roster and play a vital role in UP's community outreach agenda.

PROFESSIONS SESSION

Another item was added to the selection calendar in 2014: a morning session where practitioners in the three disciplines present their work to a captive audience of ›

applicants (and their families). The logistics of such an arrangement requires that the session be presented on the same day that the majority of applicants sit their third round of testing for selection. The intention is fourfold: where possible not to replace, but rather to augment and clarify the required practice visit(s); to accommodate those prospective students who do not have easy access to practices in the three fields; to ensure that reliable information on all three fields reaches as many applicants as possible; and to share this information with contenders' parents and siblings, who are often not adequately informed so as to constructively support the applicants. This has proved an effective strategy.

'My parents got to understand that landscape architecture is not just gardening.' (Respondent 39, 2015)

'It was great for my parents [to] also get some insight [into] what I'll be doing one day. It set me at ease.' (Respondent 9, 2015)

Practitioners were invited to share their normative position in design, to visually present and explicate projects they had worked on, and to share experiences and opinions on their respective careers. From the attendance and feedback, it seems that applicants' frame of reference and awareness has been significantly broadened, hence contributing to the demystification of what Banham (1990) labelled the 'secret profession of architecture'.

CONCLUSION

When measured against the standard indicators, it is clear that some success has been achieved in UP's selection reforms over the past nine years. Considering that the principal reason why schools of architecture admit students through selection is that more prospective students apply than can be accommodated – and bearing in mind that the majority of these applicants are probably not adequately informed as to their intended field of study or, indeed, the associated professional outcomes – UP has no choice but to persist in explicitly informing and supporting all of those interested in pursuing careers in this field.

Although workplace experience has not (yet) been recognised as an addition to the eight established assessment tools used worldwide for selection by schools of architecture, experience has shown it to be an essential cost-of-production component for admitting beginner students – and one with specific application in a post-colonial and developmental context such as South Africa's. ■

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