Are Secondary School Exiting Rankings (ATAR) the Best Indication of Success within a Design Based University Education?

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Abstract

Entry from secondary school to Australia's top eight universities; (Group of Eight - www.go8.edu.au) is traditionally based on a student's abilities and academic performance as ranked by secondary school final examinations and assessments. Exiting secondary school students receive an Australian Tertiary Admission Rank (ATAR) and each degree program is correspondingly also ranked to that ATAR. Correlations between a student's ATAR and the degree programs ATAR requirement primarily shape entry to Australian university programs. This paper will discuss initial research findings associated with an alternate admissions scheme. The alternate admission scheme at the University of New South Wales, Sydney Australia (UNSW) provides additional processes to identify abilities and aptitudes for tertiary study beyond the traditional ranking scores (ATAR). This alternate entry scheme was introduced in 2013 in the Faculty of Built Environment and assists students with University entry beyond the traditional ranking system. The scheme itself; supporting literature, its background and the schemes candidates current educational positioning within the degree will shape this paper. The outcomes of this scheme will be examined with a view to understanding how traditional university entrance methods versus alternate entry methods determine or not student progression academically in a design degree in a University context.

Premise

The Bachelor of Interior Architecture (Honours) degree at the University of New South Wales (UNSW) Sydney, Australia is a four-year honours degree program. The degree sits within the Faculty of Built Environment; School of Architecture and Design at UNSW, in 2016 it has 388 students enrolled. Of that 388, 60 are international students on student study visa's and the remainder predominantly enrolled in the degree from secondary schools around the state of New South Wales (NSW) and across Australia. All potential matriculating students that complete their final school examination in the state of New South Wales are processed through an independent organization, the Universities Admission Centre (UAC - www.uac.edu.au). Across Australia such organizations are named differently though in each state the rankings procedures and university entry mechanisms largely remain nationally consistent. The UAC provides each matriculating student with a ranking score (ATAR) based on their final secondary school assessments and examinations. The UAC ranking, the ATAR determines a matriculating student's university entrance opportunities for all public universities across Australia. Each university and their degree programs offered have a corresponding ranking for each degree. The higher the students ATAR the greater the choices of universities and degrees a matriculating student will be offered.

The predominant form of entry to Australian Universities Group of Eight (www.go8.edu.au) is the UAC ranking score or ATAR. In different fields of study, the precision of the ATAR as an indication of a student's potential ability or preparedness for academic abilities varies. The recruitment of tertiary students through a centralized organizational methodology based solely on secondary school examinations and assessments indicates numerous advantages also, effectiveness of the overall process and that the procedure is centered on identified main themes. Those themes being; equity around the entry process is ensured for all potential students and the universities remain autonomous within the student selection procedure. 'Transparency, Uniformity and a streamlined application process across institutions are amongst the benefits of centralized Management of University applications and offers' (Palmer, N. Bexley, E. James, R. 2011 pg2.)

In a report prepared for the Australian Group of Eight Universities three fundamental components of the university student admission processes are cited as challenges for a centralized entry process; those being

‒ 'Ensuring fairness and transparency in student selection.
‒ Identifying the potential for student success in higher education.
‒ Improving equity of participation and equality of educational opportunity'. (Ibid)

The UAC student ranking system is a broad-based ranking tool that does not consider individual aptitudes or capabilities beyond that of final secondary school exiting examinations and assessments. Aptitudes that may be applicable to an individual student's capabilities and that are specific to a field of study or particular universities educational approach are not assessed separately for the majority of degrees. Though for several prestigious and extremely high ranking ATAR degrees; Medicine and Dentistry both have additional entry requirements UMAT https://umat.acer.edu.au a test that is used to assist in addition to the ATAR for entry to Australian Universities for those fields. Though for the majority of degrees across Australia in the Group of Eight universities the UAC ranking is relied on as the principal entrance criterion. The ATAR and other Australian university entry ranking systems are an elemental indicator of academic success in a tertiary education. It should also be noted that the ATAR alone is not the sole register of influence on a student's performance in a tertiary entry context and that the type of school, selective, non-selective, government and nongovernment are determining factors also. The ATAR is based on what could be considered specific tertiary fields of study and unconnected areas of secondary study. Also, unaligned examination structures create issues of 'degree' versus student 'fit' with a university context. The ATAR entry thus allows for individual instances where a student may be ill-suited for a degree structure, context or field of study. This phenomenon is highlighted where students achieve an unexpected elevated ATAR above that of the student's previous expectations. This unexpected ranking provides access to areas of study that had not been previously envisaged or researched or even considered by the student as a potential field of study. Potential tertiary students in this context then have a wide choice of degree selection based on their ATAR rather than on a desired or previously researched and preferred field of study. This becomes a type of accidental degree selection where a student uses an ATAR solely to locate a career path and area of tertiary study.

Dobson and Skuja's (Dobson & Skuja 2005) research highlights specific indicators associated with different fields of tertiary study; university entry rankings are an indicator of performance in engineering, agriculture and science, whilst in technology and the creative arts and humanities the correlation is far less clear and for education and health there is virtually no 'entry ranking to performance correlation' (ibid). Concluding 'One possible interpretation of this pattern is that the value of Enters (ATAR) as a selection tool diminishes as the discipline area moves away from subjects taught to students at secondary school.'(Ibid) Iterative design thinking versus rote learning for exams. Secondary school leavers beginning a new University degree are sure to find the structure and associated learning methods in a university unfamiliar when compared against their educational experiences of secondary school. The transferability of skills acquired at secondary school for each new university student will be dependent on the degrees field and particular university. For some fields, secondary school skills will be more transferable, whilst for other tertiary fields of study secondary school skills will be less transferable and require a greater uptake of new field specific skills.

The learning structures associated with a design degree with no formal examinations and structured around regular assessment practices utilizing an iterative design methodology will be counter to the experiences and learning structures experienced as part of the majority of secondary school educational contexts. This pedagogical difference for many students new to tertiary study formats requires different skills and new study practices that may not have been encountered in their secondary school examinations structures. 'While students who attain very high ranks at the end of schooling tend to do very well at university, not all those who do very well at university did very well at high school. That is, results at secondary school are a poor predictor of who will do very well at university.' (Palmer, Bexley and James, 2011; Birch and Miller, 2006).In 2013 the Bachelor of Interior Architecture (Honours) degree at UNSW launched a trial of a student admission program that attempted to address the disparity between the ATAR only admission process. The trial alternate admissions program introduced a process where individual student aptitude for the degree program and field of study could be measured in tandem against the ATAR.

This scheme aimed to provide a more comprehensive and well-rounded entry process. The 'Alternate Admission Scheme' was designed to identify a student's aptitude for an area of study and align with the degrees pedagogical structures beyond what could be known from a student's ATAR. The scheme includes a broad identification and assessment of wide-ranging attributes and skills gained by the applicant and that have been recognized as signifying ability for study within this Interior Architecture degree.

Alternate Admission Scheme

This alternate entry scheme was the first of its kind within the Faculties sixty-six-year history and represented the beginning of an intellectual shift beyond the previous traditional student admission procedures which were based solely on a student's ATAR. In general, the scheme whilst ultimately supported in 2013 was also viewed by many faculty staff members as disruptive to the long-held status quo of ATAR entry and a prestige associated around a high program ATARs. This view was based around the thinking that this type of university admission scheme appears to offer commentary in oppositional ways to the traditional UAC ranking model and a perceived prestige. Also, that the scheme may draw into question the relevance or validity of the secondary school examinations and assessment areas correlations to the new field of study to be undertaken in a university context. For example, where a student was moving from their secondary school studies into a field of study such as math or science based study the relevance of their secondary school study builds more accurately to the field of study in that university context. Whereas the study of a more specific professional area of study; Architecture or Interior Architecture, a new explicit skill set that has not been part of the student's secondary school studies is required. The Alternate admission scheme was approved in 2013 by the University of New South Wales Academic Board and launched in late 2013 for the academic enrolment year commencing March 2014. The scheme was centrally marketed and managed through the faculty web site interface.

The Alternate Admissions Scheme procedures in its first year involved four stages as follows: -

1. The initial student application process required an introductory cover letter in which the applicant was required to introduce themselves by way of a response to a provided statement about Interior Architecture. The candidate was asked to explain why the candidate believed this Degree and its field 'Interior Architecture' as described in the provided statement was personally applicable as a field of study and future career.
   This component of the application; highlighted several crucial indicators within the student's potential as a candidate; though foremost that the student had considered the area of study as a preferred and understood field. This component also provided information on the candidate's level of ability to construct a written argument in grammatically acceptable terms.
2. A digital portfolio: five a4 pages that convey in an image based manner and in conjunction with the cover letter the candidate's creative practices and made artefacts. The portfolio should depict the applicants' previous creative practice and locate and describe the applicant's possible skills or aptitude for success within the degree. This was to-date mostly creative practice from secondary school study; art based or design and technology based. This component; a very brief summary of the candidates creative outputs conveyed factors that would be contributory to success within this degree. Primarily that the candidate gained gratification from a creative process of enquiry based making. Enquiry and making are a major valued pedagogical construct with this degree. Success within this degree and the field of Interior Architecture centers heavily in these basic areas.
3. Based on successful progression beyond stages one and two (as above) the applicant was invited to a conversation (interview) with two faculty staff members.
4. In 2015 for 2016 entry an additional item was added as it had become evident from the 2013/14 alternate entry procedure that further knowledge about each applicant was required as part of the entry scheme. Hence as part of the conversation/interview component applicants were provided with a simple task that mimicked, in a minor way, a design study exercise in a year one context of the degree. This additional task allowed the applicant to further communicate the applicant's skills or aptitude beyond the digital portfolio. That additional task instruction is as follows. For us to best understand you and you to best understand us there is a requirement for the interview. Before the interview do the following.

Watch one of the following short films.

1. http://www.designboom.com/art/james-franco-daniel-arsham-future-relic-film-10-21-2014/
2. https://www.youtube.com/watch?v=iDHfx9nde14&index=7&list=PLC8A94E037C538D02
3. http://www.dailymotion.com/video/xyovq_the-fall-mel-o-callaghan_creation

Come prepared to the interview to discuss the film you chose; as some examples of what you might tell us.

1. The way it may have impacted on your own thinking and being.
2. What you found successful about the film and why?
3. What you found not successful about the film and why?
4. The use of storytelling and idea development and how this might impact your own creativity.
5. The art direction and cinematography and how this might impact your creativity.

Based on the film and your thinking and research; develop an idea, this can be about anything but must be linked to your thinking around the film. Based on your idea, make something that summarizes that idea. This can be anything (2d or 3d) drawing, model, collage, sewing, pottery, photography, a video, anything really! Use your current skills. It should be a maximum size that can fit in a shoe box and you should spend no more than 3 – hours in its making. This is about smart, creative ideas. This small exercise is about engaging with research, interpreting the film, having an approach based on research, developing an idea and making something that summarizes your thinking and approach. There is no right or wrong answer; but the 4 things (research, approach, idea, making) should all be part of the same string of thought.

We value these 4 items (research, approach, idea, making) greatly and this demonstrates your openness to trying a small project that is very much like a small project within our degree. We understand this might be all new to you and that you are just finished school, please just have a go – having ago and some fun is part of this!

This component of the admissions scheme provided additional information about the candidates willingness to explore alternate ways enquiry and of incubating ideas. The skills and production value of the artifact produced was not itself the identifying aspect of suitability for entry to the degree, but rather the candidates enthusiasm and openness for experimentation based on enquiry. Each candidate was assessed based on the understanding that these candidates were secondary school leavers and that the quality of engagement of the schemes process was of a primary indicator about each candidate and of largely equal contribution to the artifacts produced. Each candidate was provided with equal time for the interview and each candidate interview followed the same prescribed interview process. Each candidate was asked:

I. Why are you interested in studying Interior Architecture?
II. Why the UNSW Interior Architecture Degree?
III. What do you know about the UNSW Interior Architecture Degree?
IV. What research have you done about the UNSW Interior Architecture Degree?

These questions provided a snap shot of the candidate's desire and eagerness to studying this field and degree. In relation to the task as requested each candidate was asked the following questions.

I. What did you think about the task?
II. Have you worked in this way before?
III. Did you enjoy the process? (Research, thinking, analysis, making?)
IV. What research did you do for this project?

These questions provided a snap shot of the candidate's willingness to explore diverse and other ways of thinking and enquiry. These eight questions provided a breadth of understanding about the candidate and allowed the candidate to understand a snap shot of ways they may be asked to engage in learning in this degree.Each candidate was graded on the 5 following questions.

I. Openness to a diversity of thinking: - acceptance of diverse ways of operating.
II. Demonstrated exploration of a narrative: through some process of Investigation/Enquiry.
III. Openness to learning and excitement about discovery through creativity.
IV. Problem solving: - Do they enjoy this type of working i.e. the brief as given?
V. Intuitive fit within the Degree. X factor.

In 2016 for the 2017 entry to the degree 70 candidate applications were received for this scheme. 60 applicants were interviewed with 40 applicants deemed appropriate for study with the degree. Beyond this stage the UAC then managed the alternate entry candidature, melding those candidates result with the ATAR entry students. In 2017 117 new students will commence studies in the degree. That 117 is made up of ATAR only entry, International and Alternate entry students.

Student Mapping alternate entry Students

A sample number of students currently enrolled in the BIA (Honours) academic results have been correlated across the student's time studying in the degree. The particular selection of the sample students was based on three categories from within the Australian Tertiary Admission Ranking (ATAR) for this degree. The degree entry ATAR is currently at 80. To ensure comparative equity of this data 'raw' ATARs have only been used. No bonus points have been included in the group of selected sample students for this research. The raw ATAR selection has reduced the sample student number that was available; using the raw ATAR provides an apple with apples comparison across the data. All student data used is anonymous.

The three ATAR entry categories that have been created for this research are:
- High; ATAR 90-100 six students selected.
- Medium; ATAR 80-90 six students selected.
- Alternate entry; ATAR 70-80 five students selected.

At this point the alternate admissions scheme students enrolled in the degree commenced the degree in 2014 and has now completed the first 2.5 years of the 4-year undergraduate honors degree, 70% of the degrees core subjects have been completed by the sample group of 17 students and further research will be conducted on completion of the students degree. The 17 student sample group represents 22% of their total student cohort enrolment of 77. Each student in the sample groups marks have been collated and mapped across all their courses from year one to their current year three. The four tables below represent 17 students currently enrolled in the UNSW BIA Honours degree and map their academic progress from their secondary school final examinations and assessment to their current stage within the degree. That stage being the first half of their third year of the degree; one and half years remain for the students to complete their degree. The tables represent the three clusters of students as previously described; blue represents the high ATAR students (90-100) Tan represents the mid-range ATAR students (80 -90) and Charcoal represents the alternate entry or low ATAR students (70- 80). Tables 1 and 2 show the students progression in two core areas of study across the degrees first 2 years; Critical perspectives and Interior Techniques. Table 3 shows the students progression in the major core area of study within the degree; Design Practice. Table 4 shows the students weighted average mark or WAM which is an averaged mark across each of the subjects the students have completed.
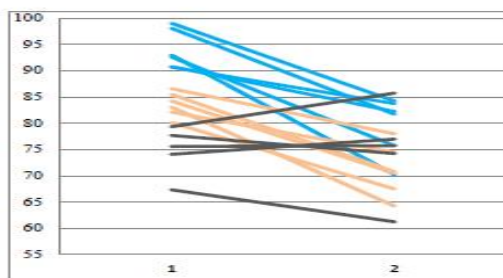

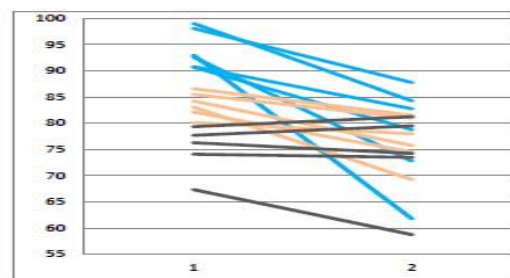Table 1. ATAR > Critical Perspectives

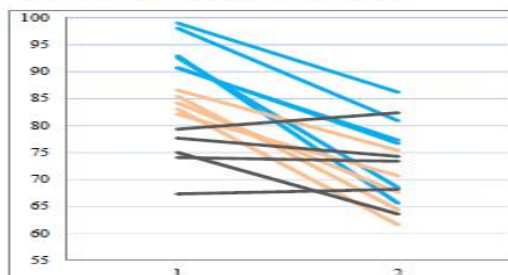Table 2. ATAR > Interior Technics

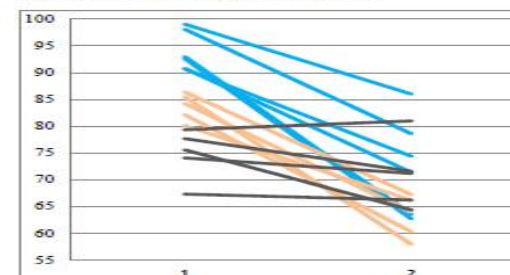

Table 3. ATAR>Design Practice. (WAM)

Table 4| ATAR >Weighted Average Mark

To the left the ATAR's clearly define the ranking positioning in the 3 groupings High, Medium and low.

Tables 1, 2 & 3 vertically represent ATAR positions to the left and the average of each students grades across the first 2 years (4 sessions) of the degree for that course area to the right.

End words

What should be considered in the reading of this data? ATARs; the starting point, which is to the left most starting position of each sample students mapping within the table is a number out of 100. Traditionally the ATAR system can produce ranks as high as 100 (a perfect score). In a university context this scenario, a perfect score, is rarely a grading outcome. This fact determines that the general trend across each sample due to a high starting position, is a descending angle from ATAR (at left) to university grades (at right). The mapping of indicators to note then becomes: -

- The degree of the angle by which each sample descends.
- To what extend the three commencing ATAR categories high (blue), medium (tan) and AE (charcoal) interchange final rankings positions to the final right side position of the table.
- The ascending angles of many of the 'alternate entry' samples.
- The descending angles of high ranking ATAR samples.

Tables 1 through 4; whilst different subject areas highlight 3 fundamental outcomes.

1. That the sample outcomes illustrate an equalizing or rebalancing of academic success across the years of tertiary study. The tables highlight that those sample students commencing tertiary study with a 20-point lower ATAR than the highest sample ATARs have been able to thrive equally within this degree in a university context.
2. That those same sample students have been able to elevate their positioning from the lower commencing positions to above candidates commencing in a higher ATAR position.
3. Sample students commencing in the Mid ATAR zone of 80-90 appear to have generally underperformed against both the High and low ATAR is commencing position students. NB: For the most; Mid ATAR have descended below the low commencing ATAR students. This condition appears most pronounced in table 3 which represents the Design Practice subject. The Design Practice subject area and is the primary subject area of the degree and represents the largest amount of core subject delivery within the degree. This area of study and this initial mapping indicates that the alternate admissions process identifies qualities for success within the primary learning area of the degree.
4. Students commencing in the High ATAR zone of 90 -100 retain a positioning within the upper range of the cohort.

The early indicators from this data illustrate support for the alternative admissions scheme as an identifier of suitable candidates for study in this particular degree. That the alternate admissions scheme provides a clear entry method to compliment the traditional ATAR entry context to this University degree program. From this initial data, it also indicates that the ATAR for the program (80) is whilst the UNSW minimum cut off ATAR not a precise or accurately placed entry level for this degree.

This research begins to unpack an alternate admission scheme into a degree and has identified how one group of lower entry ATAR students have succeeded with an Australian Group of eight University. This scheme highlights that the ATAR is one means for allocating places within a University context though it also highlights the ATAR is not the only means that can identify a candidate' aptitude for success within a university context. This initial study suggests that if universities are to address the changing modes and demographics of societies and if universities are to break socio economic hindrances to universities then admissions to universities can be thought of in a broader holistic manner than a secondary school exiting ranking only. Entry to university study can take many different forms, this is one case where the outcomes have highlighted an alternate possibility that is tailored to be relevant and targeted to a field.

Bibliography

Dobson, I. Skuja, E (2005). Secondary Schooling, Tertiary Entry Ranks and University Performance. The Australian Population Research Institute. People and Place C Vol. 13. Accessed October 2016.

Eccles, J., (2009) Who am I and What Am I going to Do with My Life? Personal and collective Identities as Motivators of Action, Educational Philologist, 44(2), 78-89. Rutledge Taylor and Francis.

James, R., Bexley, E. and Shearer, M. (2009). Improving selection for tertiary education places in Victoria, Melbourne: Centre for the Study of Higher Education, at http://www.voced.edu.au/content/ngv%3A49512 (accessed 27 February 2017).

Naylor, R. and Smith, J. (2002). 'Schooling effects on subsequent university performance: evidence for the UK university population', Warwick Economic Research Papers, No. 657, at www2.warwick.ac.uk/fac/soc/economics/research/workingpapers/publications/twerp657.pdf   (accessed: 03 March 2017).

Organization for Economic Cooperation and Development. (2004) Internationalization of trade in Higher education: Opportunities and Challenges. Paris, OECD.

Palmer, N. Bexley, E. James, R. (2011). Selection and Participation in Higher Education: University Selection in support of student's success and diversity of participation. Centre for Study of Higher Education, page 2. Victoria, Australia.

Task force on Higher Education., (2000). Higher education in developing countries: Peril and Promise. World Bank. Washington, DC

The Australian Consumer Law A guide to provisions (2010) Australian Federal Government. Australia.