Distinguishing universities

paper prepared for the First International Conference on World Class Universities, Shanghai Jiao Tong University, Shanghai. 16-18 June, 2005

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I appreciate this opportunity to share ideas with you on the important topic, how do we know which universities are ‘world class’ and what makes them so.

Introduction

I would like to commend Shanghai Jiao Tong University for initiating this conference. It is rare for a relatively new university on the international scene to make such a large impact in such a short time. The modest publication in 2003 of the first set of world rankings of universities, by the SJT Institute for Higher Education, did make an impact – not simply because its subject matter was inherently controversial, but also because it was a well-constructed offering that passed the first test of prima facie plausibility. I was pleased to be able to assist with its public dissemination in Australia (and wherever else I could do so frankly), not only because ANU was reasonably high up the ladder, but also because the rankings drew attention to matters of importance that have been recently too much overlooked in the development of policies for higher education, including resource allocation, and in public perceptions of the roles and performance of universities.

An important dimension of our discussion here is the interaction of diverse cultural perspectives on the effectiveness and quality of universities. Australia’s distinctive egalitarian culture has many appealing features, and some not so appealing. Among the latter are continuing attitudes of cringe towards establishments in other countries whose heritage exceeds the extent of Australia’s modern period of human settlement, and a tendency to demean elite achievement, in particular elite intellectual achievement. So when an Australian university is ranked among the world’s best, the knee-jerk reaction of the media, to the extent that they’re interested, is either one of disbelief or dismissiveness, while the predictable response of other Australian universities is to criticise the data and the rankings methodology. One Australian university, the year after the first SJT world rankings appeared, devised its own measures by which, unashamedly, it ranked itself equal first among Australian universities.¹

¹ Williams, R. & Van Dyke, N. “The International Standing of Australian Universities”, The University of Melbourne Institute of Applied Economic and Social Research, November 2004
Even to claim ‘world-class status’, is regarded as an act of hubris, ‘showing-off’, ‘bragging’ – with all the connotations of pretence of wanting to be seen to be above and better than the rest. Australia has coined the phrase ‘tall poppy syndrome’ to capture a desire to diminish in stature those who have attained excellence. Hence, I should make clear the difference between being an elite university, on the one hand, that draws from the academically best staff and students in performing among the best universities in its fields of endeavour, and on the other hand, being elitist, claiming special status and seeking special privilege and influence on the basis of social connection rather than capability. Australia’s egalitarian tradition properly spurns elitist pretension but sadly struggles to accept elite achievement in virtually any sphere other than sport. I am proud to lead an elite institution, described by the Australian Minister for Education in 2005, as “Australia’s best university”. But no one who knows me, and the staff of ANU, would think to label us elitist, because we seek to advance talent irrespective of student background and utterly without favour.

My contribution today has two main purposes. First, I want to lend support to the continuing development of the SJT world rankings, because they are internationally academically referenced. As such, they stand in contradistinction, on the one hand, to many of the commercially-produced rankings and ratings that are purportedly designed to “guide student choice”, and on the other hand, to government-sponsored, national comparative indicators that are increasingly being used not merely for so-called ‘accountability reporting’ but also, and more significantly, for distributing funds. It is important that internationally academically referenced rankings are as robust and credible as possible. I see scope for continuing refinement of the SJT measures, in ways I will discuss shortly.

Second, I want to locate rankings and ratings in relation to other indicators of university capability and achievement, acknowledging the limitations to any single set of measures and numbers, and the importance of cross-verification. I will refer to the ANU 2004 Quality Review to illustrate the importance of the convergence of multiple views of performance in evaluating quality.

I. Rankings as controversies

The limitations to university rankings are legion; yet rankings persist and proliferate. The value of rankings depends on how well they are designed to meet the needs of those who want to use them: what measures they include; how the measures are measured; over what period; with what level of accuracy; and how genuinely comparable they are. Rankings can mislead those who look to them as a guide to decision making, whether about where to study or where to make a research investment. They can also be manipulated to some extent by those who produce them – such as arbitrarily altering weightings given to variables from year to year as a means of boosting sales – as well as by those who supply the main source data – such as through changes to student admissions criteria that reflect those used in rankings. And who is know how wide the actual difference is between number 1 and number 5, or between number 49 and number 53, and between the first and second quartile?
Commercial ratings and rankings firms, as well as newspapers that publish university rankings, deliberately set out to simplify what is inherently complex. The publishers argue that they act as go-betweens, sifting and interpreting the morass of unintelligible data on behalf of the public and distilling out the crucial information that students and parents need in order to make an informed enrolment choice. We know little about their use and impact, other than that they sell.

A large US study in 1997 found that 60% of 220,000 first-year American undergraduates claimed that published league tables played no part in their choice of university. However, of the 11% of students who did rate the rankings as an important factor in their choice, the majority were ‘high achievers’, with firm intentions of pursuing postgraduate studies after their first degree. A fundamental law of higher education is that the quality of a university is marked by the youthfulness of its student body. In the case of Australia, the top rated university in each State and Territory is the one that draws more than half of its commencing undergraduate students direct from school. It seems that the brightest of the young, or at least those most highly motivated academically, take note of rankings as indicators of reputation and prestige in deciding their preferences for university enrolment.

One study in 2002 compared changes in student applications with changes in the position of British universities on annual league tables, and found rising applications to those universities in the upper half and most strikingly for institutions at the top, whereas institutions in the lower half experienced a decline in applications. However, that study concluded that the league tables merely reflect student choice rather than influence it: “the best-qualified school leavers, at whom the rankings are aimed, compete most fiercely for entry to those institutions with well-established reputations and traditions [thus helping to] perpetuate the place of the universities in the rankings because of the strong effect of both the quality of entry and class of degree obtained by the graduates.” Some infer from such a conclusion that the success of the highly ranked is only a function of their success in recruiting exceptional student bodies rather than from the additions they make to the capabilities of students. However, we know that students learn from one another as well as from their teachers, and that when the pedagogy encourages interactive learning, the more able the student body the more intense are the student-student interactions, and the more searching are their questions of their teachers. Quality of performance, we understand, requires quality of inputs – students, staff and infrastructure – but excellent performance requires exceptional use of the inputs.

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Another study in 2002 examined the effect of the Canadian Maclean’s rankings on student choice of university in Ontario. That study found that “the Maclean’s rankings appear to have a strong effect on where students choose to apply to (and end up)”. They noted that this effect was “most notable for medical/doctoral universities, followed by comprehensive, and then primarily undergraduate universities”, observing that an “improvement in ranking by just one position can significantly increase the number of applicants.” A recent US study in 2004 confirmed earlier (1999) findings that rankings affect admissions outcomes. In particular, “moving in or out of the first quartile, and hence the first page of the [USNWR college] rankings, had a particularly large impact on admission outcomes.” Being in the top league is important to institutional reputation and to the attraction of the talent and resources that sustain that reputation. As higher education continues to internationalise, it is increasingly important for nations to have some of their universities represented in the top league globally and capable of sustaining their performance at that level.

There are various creative league tables available for students to browse and interact with. Some US sites enable students to select the criteria that are important to them – whether the academic reputation of researchers, the destinations and earnings of graduates, the standard of accommodation, the success of the football or basketball team, or the excitement of the social life – and to rank institutions according to their preferred characteristics. One humorous US website ranks schools on the basis of Squirrel Spotter reports on the size, girth and health of a university’s squirrel population. Another site employs 629 factors that can be weighted equally (‘the Fairness method’) or weighted for wealth of endowment (‘the Classic method’). Each time you hit for a ranking, the position of universities is randomly altered; one second (using the Classic method), MIT beats Harvard, Princeton, Stanford, Caltech, Rice, Yale and Tufts, and the next second Tufts beats them all.

Satire can be a powerful form of criticism, and a useful corrective; not to take apparent differences too seriously, and to ask more probing questions about the significance of differences between scores and the explanations for the differences. Of course, satire can also be used by some to disparage something they may well value but cannot attain. The important point is that the SJT rankings are based on measures of research performance, that reflect how well universities attract and make use of capable staff. The most able students look to such rankings as indicators of a quality learning environment, as well as for the value of the qualification they intend to obtain. And here we confront a challenge.

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http://www.gottshall.com/squirrels/campsq.htm
http://www.rankyourcollege.com
– that of integrating research capabilities with educational offerings. We know there is no automatic transfer of research excellence to teaching excellence. It is possible, and some suggest it is actual, that the worst teaching can take place in the best research institutions. Of course, it is also conceivable that the poorest learning takes place in universities that perform poorly in research. It is possible too, and I am sure it is realisable, for excellent education to be experienced in excellent research-intensive universities. I will return to this challenge.

The SJT rankings draw attention to indicators that rise above the more pedestrian measures by which universities are nationally evaluated, not only by prospective students, but also by governments, whose resourcing decisions are insufficiently differentiating and increasingly referenced to short-term economic utility or impact. It is not that the national and regional contributions of universities are unimportant; to the contrary, they are vital to community development and sustainability. It is critical, too, for universities to be engaged with their communities as a source for their own learning. But the scholarly contributions of universities are also important in themselves. They must not be taken for granted nor treated lightly. The serious impact of a quality university is the influence or effect of the ideas and concepts its people create, the information and knowledge discovered, the methods and techniques generated, the instrumentation designed and built, the skills formed, and the understanding that develops from communication and discussion of new insights. The strongest capabilities for making these impacts reside in research-intensive institutions. The SJT rankings are a pointer for governments and private investors to where they are most likely to obtain the best returns on their investments. In Australia as elsewhere, such a pointer is a helpful counter-balance to a government policy inclination that not only fails to recognise the extra costs associated with elite research performance but punishes success by imposing conditions on competitive winnings that draw down the discretionary resources of the research-intensive university.

II. Multiple perspectives of quality

The publication of the first SJT rankings coincided with a major debate in Australia about higher education policy directions, during which the Education Minister stated publicly that change was needed because Australia was lacking a world class university. With SJT ranking ANU then among the top 50, and anticipating the criticisms about methodological limitations and difficulties of comparability across national systems, we considered it timely to seek to verify the international academic standing of the University by more comprehensive, qualitative and comparative means.

In February 2004, ANU Council commissioned an independent, external, comprehensive review of the quality of ANU performance across all its functions. ANU prepared a Capabilities & Performance Statement as a self-evaluation and input to the Review. An external Review Committee examined the evidence, made its own investigations, and produced a report with recommendations to the ANU Council in September 2004.
The Capabilities & Performance Statement comprised:

- A description of ANU research in terms of international classifications;
- Context statements for each Academic Organisational Unit, with self-assessments made by Deans & Directors;
- A set of comparative performance data of ANU & all other Australian universities;
- Bibliometric analyses of ANU citations by ISI fields compared with Australian and world impacts;
- 285 external peer assessors of over 6000 research works submitted by the 90% of ANU academic staff identified as research active;
- Surveys of domestic and international alumni of the ANU;
- A report of focus group discussions held with students and conducted by an independent survey organisation;
- A report of focus group discussions held with external stakeholders and conducted by an independent survey organisation;
- Results of graduate destination and satisfaction surveys over several years;
- Findings of internal surveys of student perceptions of ANU teaching over several years; and
- A report on progress in responding to the findings of the 2001 Review of ANU administration;

Comparative performance data sets included:

- Expenditure on research & experimental development per academic FTE\textsuperscript{11}
- Shanghai Jiao Tong university rankings (2004)
- Membership of academies (FRS + Australian)
- ARC\textsuperscript{12} Fellowships as % of academic FTE
- ARC Discovery Grants per academic FTE
- ARC Linkage grants per academic FTE
- NHMRC\textsuperscript{13} project grants per academic FTE
- NHMRC program grants per academic FTE
- % of academic staff with higher degrees
- Higher Degree Research students FTE as % of total students FTE
- HDR completions as % of total award completions

With regard to research, which accounts for some 85% of ANU activity (expenditure), a Research Moderation Panel considered the peer assessment ratings and comments, and provided independent advice to the Review Committee. The overall results of the peer review process were that 67.8% of the assessed ANU research was judged to be in the top 25% of world research in the field, with 29.2% of it judged to be in the top 5% of world research.

\textsuperscript{11} Full-Time Equivalent
\textsuperscript{12} Australian Research Council
\textsuperscript{13} National Health & Medical Research Council
Importantly, the Review Committee sought to assure themselves about the integrity of the data provided. The Committee noted a number of well-known “deficiencies in bibliometric assessments”, including:

- variable relevance between different disciplines with different modes of publication;
- the international dominance of citations by topics of interest to North American and European researchers;
- known inaccuracies of institutional identification in the sampling procedures;
- research counts based on institutional affiliation that do not account adequately for recent staff arrivals; and
- the complications of certain expressions of academic endeavour, e.g. policy advising and performance.

The Review Committee also noted “some of the weaknesses that result from peer assessment: in particular, an uneven spread of assessors, and individual differences of interpretation of the criteria between assessors”, as well as “a tendency for assessors to inflate their ratings within a discipline when not making comparative adjudications between disciplines.” Nevertheless they concluded:

> “However, the extensive data set allowed analysis of the convergence of different types of assessment, compensating for possible deficiency in any particular element. With only a few exceptions, the data presented from different sources were statistically well correlated.”

It was important to the credibility of the ANU Quality Review that we engaged international assessors of high repute, that the Review Committee, while itself having a distinguished membership, was rigorous in examining all the available data, and that the data themselves were self-reinforcing.

What does all this have to do with rankings? We rely mainly on subjective judgements of quality, supported by data that appear to relate to quality but cannot measure it directly. I think it is better to have available multiple types of observations, each focusing on a particular set of characteristics and each with some internal coherence, rather than a single composite of measures that range across different aspects of university activities. The 2004 Times Higher university world rankings was an attempt at the latter; but it lacks face validity – it fails the ‘laugh test’. Its problem is that it brings together scores derived from peer impressions with data on research citations per staff member, and with student-staff ratios, and with the proportion of staff who are international, and with the proportion of students who are international. That is, the Times Higher rankings try to cover aspects of research and teaching and international involvement. The latter does not necessarily relate to quality at all; as the authors admit “a university that relies on an influx of ambitious but underqualified immigrants to deliver its lectures could do well on this count.” Similarly, and this is a major reason why a disproportionate number (30%) of Australian institutions rank in the Times Higher top 100, the scale of trade in education

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14 ANU – University with a difference; The Report of the Committee established by the Council of the Australian National University to evaluate the quality of the University’s performance. September 2004.
services can be more about commercial strategy and aggressive marketing than academic quality.

The strength of the SJT approach is that it focuses on research as the key determinant of international academic reputation. I could argue that the inclusion of some measures of the SJT scales are less appropriate than others and might be approached differently or given a lower rating. For instance, Nobel Prizes are a marker of distinguished past performance; they may indicate something about the culture of a university that can attract individuals of such calibre and give them the room to flourish. But the Nobel Prize is typically awarded to those who have made an enduring contribution over a sustained period, often from different institutions. Their inclusion in a contemporary ranking with the same weight as is given to the research performance of current staff risks concreting-in the past. Universities cannot plan to achieve Nobel Prizes as part of their quality enhancement strategy, and they certainly cannot afford to be complacent on the basis of past achievements temporarily associated with them. It is also the case that the SJY research citations measures favour institutions that are strong in the natural sciences. In this regard, it would be worthwhile for us all to work towards a more comprehensive coverage of research output and scholarly impact.

Notwithstanding the scope for continuing refinement of the SJT rankings, I believe they offer an important comparative view of research performance and reputation. Universities can, as we sought to do at ANU, integrate the SJT rankings with other perspectives, including self-assessments, peer assessments, student evaluations, external stakeholder surveys, and other data relevant to their particular mission. The university is the logical integrating point for the multiple perspectives on their capabilities and performance.

Of course governments, students, business investors and philanthropists are also able to access the SJT rankings, but they could be normally expected to want to do so in the context of observations about national reputation, access and impact. It is difficult to see international rankings having much validity beyond those that can be developed in respect of research, so I see the SJT and like rankings becoming the international reference point to which will be attached various national indicators, some of which themselves (such as research quality assessments) will involve international assessments.

Conclusion

What matters most is often the hardest to define, observe and compare and, invariably, the most defiant of measurement. It is not solely the ‘outputs’ or ‘outcomes’ – to employ systems speak – that matter for universities, but also the ways and means by which outcomes are achieved; the culture of binding values, and the practice of collegiality. It has been insightfully said that “the unity of a university is a product of its difference” and it coherence “lies in its refusal to allow differences to remain incoherent and inarticulate.”

achieved, and there are both internal and external pressures operating to restrict open and reflective academic dialogue and cooperative endeavour.

There are also challenges for world-class research-intensive universities to integrate their research strengths with their educational programs. The 2004 ANU Quality Review Committee enjoined us to make better use of our research capabilities in providing distinctive educational experiences for all our students, undergraduate and postgraduate. We now see the Australian National University as an education-intensive research institute – a unique positioning among Australian universities, in view of our high ratio of research activity to educational activity. We are committed to teach where we research – to harness the disciplinary expertise of the University in the design and delivery of our educational programs. For us that means meeting the expectations of students who are attracted to ANU on the basis of research reputation and performance, because of the quality of learning they have the opportunity to experience. The SJT world rankings have heightened student expectations and our responsibilities.