



RESEARCH EVALUATION AND POLICY PROJECT

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Summary

Research quality:

- Whatever the system used to distribute research funds it must concentrate on recognising, rewarding and encouraging research quality.
- In order to improve its international research standing, Australia must follow the path of assessing research excellence through peer review informed by relevant performance indicators.

Assessing research quality:

- The results of current Research Evaluation Policy Project (REPP) research will be of direct benefit to any Australian assessment of research (RAE-style or otherwise) that is concerned with promoting research quality, and could place Australia at the cutting edge of research funding policy.

An Australian RAE-style scheme will:

- improve Australia's international research standing;
- fund research excellence wherever it exists;
- be transparent to government, taxpayers and universities;
- drive better behaviours.

Cost:

In the Australian case an RAE-type scheme would be cost effective as:

- in the UK case experience has shown that (including opportunity costs) an RAE amounts to less than 1% of the funds allocated on the basis of the exercise;
- not all Australian HEIs need participate in an RAE;
- using 'clusters' or fields of research would streamline the system.

The expense of the publications component of research assessment (whether RAE-style or otherwise) can be reduced by:

- using externally available and verifiable data.

Quality

When assessing academic research output it is accepted that quantity does not mean quality, yet Australia continues to fund research on this basis. The publications component of the IGS and RTS funding formula reward quantity and not the quality of publications. Butler (2002) demonstrates that an unintended behavioural consequence of Australian universities being rewarded for publishing articles and not for the standard or impact of their research is a sharp increase in Australian journal papers but in lower impact journals.

Publications presently comprise a small element of total performance-based block funding, estimated at \$37m (3.4%) of \$1092.3m awarded in 2003-4 (DEST 2003)¹. However, it is the component most easily influenced by the individual researcher and it could be easily modified to encourage research excellence.

Whatever the system used to distribute research funds it must concentrate on recognising, rewarding and encouraging research quality.

The UK Research Assessment Exercise (RAE) both informs funding decisions and reports on (and hence encourages) research quality. Volume data is expressed in terms of the number of researchers rather than the volume of output, and its focus upon research quality creates stronger incentives to publish better papers rather than more papers at the expense of quality. It is widely accepted that the UK RAE has increased and enhanced Britain's international research profile. Australia lags behind other countries (most notably Belgium, Denmark, Finland, Hong Kong, Ireland, Japan, the Netherlands, New Zealand, Switzerland and Taiwan) which have followed Britain's lead in implementing or developing models of judging research quality and distributing research funds based upon peer review and/or metrics (von Tunzelmann and Mbula 2003).

In order to improve its international research standing, Australia must follow the path of assessing research excellence through peer review informed by relevant performance indicators.

Assessing quality

It is likely that the UK will increase its dependence upon metrics and other relevant performance indicators to assist expert review panels in arriving at judgements of research quality (Roberts 2003). The move is towards as yet unspecified field-specific indicators or metrics, and in this respect the Research Evaluation Policy Project (REPP) is already one step ahead. REPP is engaged in an ARC Linkage project *Strategic Assessment of Research Performance Indicators* (see <http://repp.anu.edu.au/repp.htm>) designed to provide a knowledge base that supports informed decisions on the use of quantitative indicators of research performance. This knowledge base will consist of:

- a comprehensive range of quantifiable bibliometric and non-bibliometric performance indicators that could be used to assess research performance;
- an assessment of each indicator in terms of its validity, fairness, transparency, independence, cost effectiveness and behavioural impact;
- an evaluation of the likely effects on institutions, organisational units and individuals of using different performance measures; and
- an assessment of whether the application of field-specific weights to performance measures can provide a solution to inequalities that can arise from field-specific characteristics.

The results of this research will be of direct benefit to any Australian assessment of research (RAE-style or otherwise) that is concerned with promoting research quality, and could place Australia at the cutting edge of research funding policy.

¹ Table 2, p. 15.

An Australian Research Assessment Exercise

While academics tend to welcome the use of metrics in assessing research quality they are resistant to a metrics-only system (Roberts 2003). An RAE-style system allows expert panels to use performance indicators to inform their judgement within field-specific contexts.

Research assessment exercises act to strengthen a country's research quality and hence its international research standing. The UK RAE is recognised as an extremely effective mechanism for encouraging researchers to focus on the quality of research, and to ensure that it results in published outputs which in turn stimulate other researchers. The RAE also encourages more strategic institutional thinking about research priorities. In the UK case overseas sponsors and investors make extensive use of RAE ratings in deciding where to invest in the British HE sector. It also provides valuable information to prospective research students.

As RAE-type systems are increasingly adopted throughout the world, cross-national research assessments based upon research quality will evolve. International benchmarking exercises may eventually gain more credibility than national exercises. Australia will lose out if it is excluded from this process.

An RAE-style scheme incorporating indicators that measure research quality will:

- *improve Australia's international research standing*
- *fund research excellence wherever it exists*
- *be transparent to government, taxpayers and universities*
- *drive better behaviours*

Cost

In Britain the estimated cost of the RAE for 1996 (the last year for which figures are currently available) is £27m - £37m including opportunity costs of HEIs and funding bodies. ***This amounts to less than 1% of the funding allocated on the basis of this exercise*** (Roberts 2003). The UK RAE is not an annual exercise and the recent Roberts Review recommends a six year cycle.

An RAE-type exercise could be successfully tailored to the Australian HE system incorporating several cost-saving elements.

- Australia has 43 HEIs compared with the Britain's 132, so an RAE would be a much smaller-scale exercise.
- The 2003 Roberts Review notes that 40 of the 132 UK HEIs are non-research intensive and receive little funding in return for their participation in the RAE. Some Australian HEIs may choose not to be assessed if they judge the rewards to be less than the opportunity cost of participating, thus further reducing the scale of an Australian RAE.
- The 2001 UK RAE had 68 subject areas or units of assessment with a panel appointed to examine research in each of these areas. Bourke (1997) proposes a scaled-down Australian model of RAE funding using national discipline reviews operating at a university-wide field of research level. He suggests 12 'clusters' or fields of research, and system-wide discipline reviews of two 'clusters' each year forming a six year cycle². In addition to reducing costs an added benefit of this system is that it does not disadvantage or discourage interdisciplinary research, a criticism of the UK RAE.

The use of metrics and other performance indicators can assist in making research assessment more efficient and less costly than the present system. Butler (2002) found that the collation of the publications component of IGS and RTS funding formula is expensive in terms of auditing universities' returns and their compilation by the institutions, and proposes the less costly alternative of using externally available and

² The 12 'clusters' are Chemical Sciences, Social Sciences, Agricultural Sciences, Information, Computing & Communications Technologies, Humanities, Physical Sciences, Applied Sciences & Technologies, Biological Sciences, Mathematical Sciences, Earth Sciences, Engineering, and Medical and Health Sciences.

verifiable data. In the UK case over half of HEI responses to the Roberts Review agree that metrics should support the work of expert panels, and over half who expressed a clear preference for metrics playing a greater supporting role felt this would reduce burden and costs.

In the Australian case an RAE-type scheme would be cost effective as:

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<http://repp.anu.edu.au/repp.htm>