

**Submission to the Evaluation of the *Knowledge and Innovation Reforms***

by

**The Australian Academy of the Humanities**

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## Introduction

One of the stated aims of the *Knowledge and Innovation* reforms was the introduction of

performance-based funding for research student places and research activity in universities, with allocative formulae and transitional arrangements designed to ensure that all universities are able to compete effectively under the new arrangements<sup>1</sup>

Whatever the merits of the new system at the institutional level, it is apparent that not all disciplines or discipline clusters have been able to compete effectively, and some have been significantly disadvantaged by unintended consequences of these reforms. The Humanities disciplines have suffered particularly, due to various knock-on, iterative and proxy effects of the several funding formulae. The Academy welcomes the opportunity to address some of the shortcomings of a system that, whatever its achievements in terms of the sector as a whole, has caused considerable harm to the Humanities along the way.

The Evaluation of the *Knowledge and Innovation* reforms, reflecting the orientation of the 1999 White Paper itself, is geared primarily towards institutions and encourages responses from a whole-of-institution perspective. Consonant with the mission of the Academy, this submission engages with only those elements of the research and research education reforms that impact upon the disciplines of the Humanities in particular.

Our submission consists of a short discussion of the key elements of the three funding regimes under evaluation (RTS, IGS and RIBG), with particular reference to the question of the validity, utility and effect on the disciplines of the current research indicators and their weightings in the performance formulae.<sup>2</sup> This substantive submission is supplemented by an appendix offering brief replies (informed by the foregoing considerations) to those of the key consultation questions that are of relevance to the Academy and that can be approached from other than an institutional perspective.

## The formulae

The RTS provides funding for institutions for research education based on their performance according to a formula comprising three elements: numbers of research students completing their degrees (50%), research income (40%) and publications (10%). The IGS model is constructed from similar components: 60% for research income; 30% for HDR load (subject to RFM); and 10% for publications. The RIBG is a formula-driven relative allocation based on success in attracting competitive research funds.

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<sup>1</sup> Dr D.A. Kemp, *Knowledge and Innovation: A policy statement on research and research training*, December 1999. p. 4.

<sup>2</sup> Evaluation of *Knowledge and Innovation* reforms; Terms of reference.

## **Funding for research students**

Within the RTS funding for research students is related to completions, which is weighted according to nominal cost of provision, so that a 'high cost' HDR completion is funded at 2.35 times the rate of a 'low cost' completion, and doctorates at twice the rate of the corresponding masters level completions. The problems with this element of the formula are manifold.

The weighting scale employed – the Relative Funding Model (RFM) – was an exceedingly crude instrument at the time of its introduction in 1990. The model has gained prominence through its employment in the performance indicators for the RTS and the IGS, which has only magnified the problem. The formula is supposed to deliver a Weighted Equivalent Full Time Student Unit (WEFTSU) that is “weighted according to discipline and level of course”.<sup>3</sup> However dividing the entire research education enterprise in Australia into two portions – expensive and cheap – is clearly well short of a meaningful disciplinary disaggregation. It is obvious that there will be significant variation in the actual cost of delivery (supervision, resources, infrastructure, etc.) within each of these clumps. Universities are thus provided with clear financial incentives to pursue enrolment in those disciplines with high revenue to cost-of-provision ratios. As a certain amount of the cost of provision for all students is virtually constant across disciplines – supervisors' salaries, library access, office space, research and conference travel expenses, etc. – the high cost band is the area that offers the greatest opportunity for economy relative to the completion dividend. Thus universities are effectively encouraged to pursue enrolments in disciplines funded in the broad high cost category but offering opportunities for savings. As there is little fat on the low cost HDR with which to achieve relative economies (the cost of provision being difficult to trim when it is already so modestly funded), universities are provided a material disincentive to pursue enrolments in Humanities and other 'low cost' HDR disciplines.

More fundamentally, the use of the RFM in this portion of the calculation of the funding regime is irrational. The reason for providing extra funding for the more expensive research education programmes goes to the cost of provision – this is a question of load funding and is appropriately dealt with within the IGS (see below). While the IGS does indeed take account of the extra cost of provision in its formula, the additional bounty to 'high cost' disciplines in the RTS formula that is not ostensibly structured around cost factors is illogical and clearly skews the playing field in favour of 'high cost' enrolments. The function of the RTS is to provide an incentive bounty to assist departments to find reasons to help their students complete their degrees. The interpolation of the RFM into this model only serves, unaccountably, to offer less incentive to low cost departments than to their high cost colleagues for this presumably equally laudable aim. It is our view that a flat, unweighted payment for a successful completion is the appropriate mechanism in this formula. If, on the other hand, the RTS is also meant to bear some of the burden of load funding by means of post-partum cost-recovery, then the unwieldy two-pronged RFM is a most inferior tool with which to achieve this (dubious) aim.

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<sup>3</sup> DEST, *RTS Guidelines 2003*. p. 4.

Additionally, the high *proportion* of the total formula for the funding of research education that is attached to completion – as opposed to funding for load – also disadvantages Humanities HDR students, who are far less likely to be working in research settings such as laboratories where basic infrastructure is funded from supplementary sources. This means that a significant additional pressure is placed upon Humanities students and departments to achieve completions, despite their candidature being served in environments with fewer outside resources to lend the necessary support to achieve completion. If a greater proportion of the cost of provision were funded in the scheme designed to pay for load – the IGS – then Humanities HDR students would reap a greater relative benefit for the same percentage shift away from completion emphasis in the funding formula (even at the rate of 2.35:1). Ironically, it is likely that this would result in improved completion figures since departments would be better able to provide the resources to support students through to completion, resources that are limited under the present end-weighted regime.

Under the *Knowledge and Innovation* reforms, universities have been encouraged to nominate areas of research strength and to increase the concentration of HDR places within these areas. Due to the operation of the above factors, as well as the narrow range of disciplines represented in the current National Research Priorities, there is a clear incentive for universities to produce research strength rationales that coincide with the higher points on the funding incline. Previously, universities have traditionally allocated HDR places to students on the basis of merit, ranking all applicants and allocating places accordingly. However, in response to *Knowledge and Innovation*, some universities have adjusted their selection criteria to place more emphasis on increasing the concentration of HDR students in areas of research strength that have been tailored to exploit the bias of the reforms. Similarly, the allocation of scholarships to faculties and departments is now increasingly influenced by research performance, and a desire to concentrate student places in areas of research strength. The intention is to award more scholarships to applicants of academic merit who wish to study in an area of research strength, preferably in a department or research centre which performs well in terms of completions, research income and publications. This is not a problem in the abstract, but when areas of research strength are being selected for their capacity to extract the most value from the structurally biased funding rules, the flow of students and other research funds away from equally important fields is inevitable.

Another consequence of the combined effect of the RFM and the completions loading for HDR funding is that institutions are motivated to discourage Masters by Research enrolment in favour of doctoral candidature. In the Humanities, where it is still possible to envisage a role for the Masters by Research (a rapidly disappearing qualification in the Sciences) this is a further disincentive for a practice that many would argue has not outlived its usefulness.

Within the IGS the HDR component is funding for student load – the actual number of EFTSU enrolments, rather than the completions factor in the RTS – and so it is appropriate that cost-of-delivery differentials are factored into this calculation, in the formula that is designed to address the actual expense of provision. It would be of benefit to most students and departments, but particularly those in the Humanities, were a greater proportion of HDR funding focussed on load rather than completions.

As in the RTS, however, the promise that this component would be “weighted to reflect cost differentials associated with broad fields of research”<sup>4</sup> is only very crudely implemented through the simplistic RFM.

### **Funding for research income**

Over half of the IGS and nearly half of the RTS allocations are awarded based on research income, derived from HERDC data. Additionally, the formula-driven RIBG money is allocated on the basis of the relative success of each institution in attracting competitive research funds. These measures are functions of the capacity to attract simple dollars, rather than the number of grants, the prominence or utility of the application of outcomes, or any other measure of research value outside revenue to the university. As Humanities research activities are almost always considerably cheaper to fund than those in other discipline clusters, the crudeness of this measure actively punishes institutions for employing Humanities researchers who can achieve their research outcomes for fewer dollars than their big-spending counterparts in other areas. This situation provides an obvious incentive for Humanities researchers to work up high-expense projects simply on the basis that it will favour their institution’s performance under the RTS, the IGS and the RIBG on this measure. While such projects may be useful, and would not be funded unless their value could be demonstrated, this incentive means other equally worthy but less expensive and hence (perversely) less attractive projects may not be attempted. That a group of recipients of public funds should be systematically penalised for delivering their outcomes at less expense is irrational.

Additionally, research income from all sources is weighted equally under the reforms. Previously, income from ARC large grants was weighted 2:1, to reflect the greater relevance to government research funding analysis of projects that have been selected for grant funding. This change has had the effect of increasing the priority given to applied and commercial research, in the absence of countervailing funding measures. The disadvantage to the Humanities, where a lesser proportion of research lends itself to commercial application or collaboration, has been considerable.

### **Funding for publications**

The small proportion remaining of each of the RTS and IGS formulae (10% in each case) flows according to publications data, which are also derived from HERDC figures. This is an area in which Humanities scores well, yet it is a small and endangered proportion of the formula. In many Humanities disciplines, as in some sciences such as astronomy and theoretical physics, the circulation of ideas constitutes a significant proportion of the total research output (without being overshadowed by other outputs such as patent registrations, etc.). The chief means of achieving such circulation of ideas is scholarly publication, and the marginal regard for the significance of this indicator in terms of its contribution to the formula is detrimental particularly to those disciplines.

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<sup>4</sup> Dr D.A. Kemp, *Knowledge and Innovation: A policy statement on research and research training*, December 1999. p. 16.

## Net effects

According to DEST,

The specific objectives of the IGS are to:

- support the general fabric of institutions' research and research training activities;
- allow institutions to manage their own research activities and set their own priorities;
- assist institutions to respond flexibly to their research environment in accordance with their own strategies; and
- enhance support for areas of research strength.<sup>5</sup>

As in the RTS, however, the intended flexibility and autonomy are structurally overwhelmed by clear if unintended financial incentives to pursue funding in areas that are relatively lucrative as opposed to areas that may be of strictly academic strength or renown. Institutions that are inclined to resist such pressure are, by virtue of the competitive nature of the funding formulae, compelled to align their strategies to these incentives once their counterparts begin to play the system, or risk escalating their exclusion from the funding pools.

All of the factors outlined above contribute to significant problems when universities come to work out how their internal research distributions should be constructed. Despite statements to the effect that national formulae are not intended to be applied internally, it is difficult to see how institutions could fail to apply some version of these relativities to their internal research profiles. Moreover, this would only be possible to resist were all universities to choose to ignore the funding incentives and disincentives for the sake of maintenance of their chosen research mixes. Due to the relative weighting of the system – particularly with respect to the separations pool that provides new HDR money within the RTS – once one institution plays the percentages, other universities inevitably follow suit in order to avoid entrenching a pattern of escalating relative disadvantage.

Under the RTS, shifting the allocation of research places on the basis of completions installs a mechanism for rapid decline in disciplines that are disadvantaged for structural reasons that may have nothing to do with quality or efficiency. If a department steadily loses HDR allocations due to their relatively modest harvest in revenue terms, then completions will slowly dry up. Fewer students will then achieve fewer completions, and fewer places will be allocated in future. Without any compensation for this depletion of student places, over time research places will become heavily concentrated within certain university departments – overwhelmingly, we submit, in those with lucrative RTS payouts – at the expense of others.

Just as the system will magnify inter-institutional relative benefits over time, as patterns become reinscribed and disparities emphasised, the effect of the internal

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<sup>5</sup> DEST, *IGS Guidelines 2003*. p. 4.

application of national formulae for resource-allocation is to entrench the downward spiral. Less lucrative research or research education activity is less well resourced, resulting in poorer outcomes, leading to a further diminution of inputs, and so on. When both the starting position and the steepness of the descent are influenced by factors entirely unrelated to objective research performance or the actual health of the research enterprise – factors to do with belonging to a discipline that is structurally disadvantaged, in part because it does not place as much of a load on the taxpayer – then the unintended result for the Australian research enterprise is plainly damaging. Once the importance of the Humanities for many aspects of our national interest is considered – our declining Asian literacy being just one topical example – it is apparent that this is not only a matter of academic fairness but also one of urgent national strategic importance.

The structural disadvantages in the *Knowledge and Innovation* system for the Humanities are so dramatic that one regression analysis estimated that even a Humanities Faculty that was able to capture and concentrate *all* of the Humanities funding in Australia would still be unable to get ahead, such are the disparities in the system. The Humanities disciplines are unable to improve their research-driven allocation even if they improve their research performance in the areas in which they can compete. At best the Humanities could hold their own, but only if no other disciplines or departments in the national research system improved its lot. However, since the Humanities are structurally unable to improve at a rate faster than those privileged by funding ratios of 2.35:1 for students, access to competitive funding in nominated Priority Areas, rewards for the conduct of high-cost of research, and so on, the inevitable result in a closed-loop competitive system is a rapid decline in fortunes for the Humanities.

In real terms, the system as it is currently structured ensures that the Humanities are indeed faced with a situation in which any outcome would be unfavourable or in which success would be impossible. It does not seem likely that this has been an outcome of design, as the Humanities embraces disciplines that serve not only our long-term social good, but also our short- to medium-term national interests. Nevertheless, the effect is the just same: the research effort in the Humanities is so marginalised by the *Knowledge and Innovation* regime that without urgent targeted measures being introduced we will witness the acceleration of the current decline to the point of extinction of key elements of our Humanities research capability. On behalf of the Australian Academy of the Humanities, I urge the Evaluation Reference Group to make recommendations and the Minister to take action in order to avert this imminent and disastrous outcome.

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## Appendix

### Responses to selected key consultation questions

#### Evaluation Context

- *Are the funding principles for research (excellence; institutional autonomy and responsiveness; student choice; linkage and collaboration; and transparency, contestability and accountability) still relevant?*
- *Should the existing principles be amended in any way?*
- *Are there new principles emerging which should be taken into account?*

The principles are not themselves flawed, but they are incomplete. Additional principles need to be added to address viability, diversity, and the public good. The Australian research enterprise as a whole must be supported to preserve the full range of research disciplines; to ensure that nodes of favoured research focus do not become oversubscribed; and to foster vital public good areas that cannot rely on market inputs (unless the public, via government can be rightly defined as a consumer of this research and fund it accordingly).

#### Overarching Issues for Performance-based Funding

- *Has the introduction of performance-based funding reforms had the desired effect of implementing the goals outlined in Knowledge and Innovation?*
- *Do the Knowledge and Innovation reforms encourage the attraction and retention of high-performing research staff?*
- *Do the Knowledge and Innovation reforms allow the possibility of an individual institution's markedly improving its funding position in a reasonable time (say 5 years) by good research management?*
- *Does the Knowledge and Innovation package and its implementation at the institutional level encourage the development of pockets of international level research activity at the majority of universities?*
- *Are the current block funding formulae encouraging universities to move in the directions laid out in Knowledge and Innovation?*

These outcomes may well have been achieved overall (we do not seek to offer an answer to this), but at unforeseen and detrimental cost to some disciplines within institutions.

- *Has beneficial concentration of research effort occurred?*

The machinery of research concentration has been, in balance, quite harmful to the Humanities.

- *Should the double weighting for national competitive grant funds be restored?*

Yes.

- *Should the research publications element be removed from the formulae?*

No, it should be increased and broadened to capture other types of publication that result from currently unrecognised but legitimate research activity (such as in the creative arts).

- *Should the research publications element of the formulae include quality measures?*

Yes, ones with objective indicators that are resistant to market skewing by participants, such as higher weightings for international journals that are not dominated by Australian researchers.

- *Should performance in block funding mechanisms be measured at university level or at department/faculty level or areas of research strength?*

Departments/faculties should be measured against their peers in other institutions for a preserved proportion of research funding so that meaningful relativities are preserved between like endeavours in different institutions rather than being swamped by factors imported from other disciplines.

- *Are the requirements for universities to contribute funds to collaboratively funded programs leading them to inadequately support other research projects?*

Yes, particularly in the Humanities where the number of opportunities are fewer and where there is less of a history of working this way (especially with for-profit enterprise).

- *Have the current arrangements given sufficient encouragement to universities to support the activities of early career researchers, or those who are seeking to re-establish research careers?*

No, they are geared towards picking winners with established track records, and this presents particular difficulties in the Humanities where early career researchers are less able than in the Sciences to gain experience and exposure as junior partners in more complex research teams during the establishment phase of their careers.

### Research Training Scheme

- *Has the allocation method had the desired effect of placing research students into research environments which provide the best research training and research infrastructure support?*
- *Has the RTS succeeded in concentrating research training in areas of excellence?*

It has placed untoward if unanticipated pressure on the disciplinary mix of research student populations to the detriment of the Humanities, and within disciplines (anecdotally) on the selection of research projects.

- *Have the funding arrangements provoked a shift in students between masters and doctorates?*

Yes, and this is not necessarily a desirable trend in the Humanities when driven by formulae rather than by demand.

- *Should the time allowed for a full-time student undertaking a doctorate be increased from four to five years?*

Yes.

- *Has the use of similar formulae by institutions to internally allocate funding produced any undesirable side effects?*

Yes, emphatically so – please see discussion above.

- *With regard to the formula for the RTS:*
  - *What changes, if any, should be made to the RTS formula itself?*

Publications funding should count for a greater proportion. Rewards for securing grants should be on a more sophisticated and equitable basis than raw dollars harvested. The RFM should be abandoned for the completions portion of HDR funding featuring in the RTS, and completions funding should also be diminished relative to the load funding.

- *What alternative approaches could be adopted to fund research training?*

Examining overall national need – based on a full, inclusive and wide-ranging inquiry that does not set out to harvest only particular kinds of activity as ‘visible’ research – and ensuring that an intelligently managed national research programme that supports sufficient research and research education activity across the board is put in place. Where market forces, disciplinary characteristics or differential research uptake patterns require specific support programmes in order to maintain viability and the capacity to train the next generation of researchers, such intervention should take place. A greater emphasis placed upon core and ancillary skills development, pedagogical support, infrastructure provision and supervisor training would be most beneficial. Modification of the binary postgraduate funding model to favour coursework uptake for training academics as part of their research degrees would have a significant effect on the domestic and international value accorded our research education system, with a favourable effect of promoting inflow and limiting outflow of promising young researchers.

#### *Institutional Grants Scheme*

- *Is the IGS achieving its stated objectives of increasing institutions’ flexibility and autonomy?*

No. Institutions are able to make choices, but are simultaneously given a clear set of incentives to pursue a very similar set of goals, so flexibility and autonomy are captive to financial constraint instead of to regulation.

- *What changes should be made to the IGS formula?*

Publications funding should count for a greater proportion. Rewards for securing grants should be on a more sophisticated and equitable basis than raw dollars harvested. The RFM should apply only to IGS (i.e. to student load funding) and should be disaggregated to reflect actual cost of provision within disciplines, averaged across the system to avoid rewarding inefficiencies.

Research Infrastructure Block Grants (RIBG) and related issues

- *Is the use of different formulae for IGS and RIBG unnecessarily confusing? Should only one formula be used?*
- *Should RIBG funds be directly attached to competitive grants? If so, how?*

No, this is still more of the same that only confirms the skewing effects of the rest of the system. Instead, RIBG should be scrapped and replaced with a scheme specifically designed to offset the deleterious unforeseen effects intrinsic to other research funding measures. It should offset the systematic disadvantage accruing to disciplines, institutions, and student cohorts from the *Knowledge and Innovation* reform package.