

An alternative future higher education performance fund

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I acknowledge the Wurundjeri people who are the traditional custodians of this land. I respect the elders both past and present of the Kulin Nation and extend that respect to other Indigenous Australians present.

Introduction

Thank you for this opportunity to contribute to the discussion of alternative ways forward for the higher education performance funding for teaching and learning. I have a simple argument in three steps.

- 1 The Australian Government currently has well established institutional performance funding of research, although this will presumably be further improved when the excellence in research for Australia assessments are available. The Government is also developing its institutional performance funding for student equity with its loading for enrolling students from a low socio economic status background. The 'higher education performance fund' should therefore be for institutional performance in the other major higher education role, teaching.
- 2 Surveys of student satisfaction and outcomes have to be retained in the short term because they are the only measures even vaguely related to institutional performance in teaching. But they are not adequate measures of teaching performance. I'm not even convinced that they are measuring the same thing, for unlike research performance indicators the teaching and learning performance indicators are not congruent – many institutions perform well on some measures but poorly on others.
- 3 Two possibilities occur to me. One is the assessment of higher education learning outcomes being investigated by the OECD, although this would be a measure of student achievement rather than of teaching quality. The other is the peer review of teaching. We are most fortunate in having our session chaired by Dr Kerri-Lee Harris of the Centre for the Study of Higher Education who led one of the recent Australian Learning and Teaching Council projects on the peer review of teaching in Australian higher education, so this part of our discussion will be well informed.

Institutional performance funding

The Australian Government has long had institutional performance funding for research, at least since the 'clawback' of some of the research component of general operating grants and their competitive reallocation in 1989 (DEET, 1995). While the research clawback was highly controversial at the time, institutional research performance funding is now well established, and I believe, reasonably well accepted. The Government has allocated funds to institutions according to their performance in student equity since 1999 (DETYA, 1999: 63). (Before then the government allocated institutional equity grants according to institutions' performance

against targets agreed with the department in a process that was apparently similar to the compacts process now being developed.) While the method for allocating funds for institutional performance in student equity remains controversial, the Government is seeking to build agreement on a new method for identifying students from a low socio economic status background and thus allocate institutional equity performance funding (DEEWR, 2009c).

In *Transforming Australia's higher education system* (Commonwealth of Australia, 2009a: 33) released with the 2009-10 Commonwealth budget the Australian Government introduced what it there called 'performing funding' and what the department calls in the relevant discussion paper (DEEWR, 2009b: 3) 'higher education performance funding for teaching and learning'. The Government thus now has three institutional performance funds, for research, student equity and teaching and learning.

The Australian Government delayed the start of many of the increases in funding it announced in the 2009-10 budget, so the best indication of the budget's medium term effects on the sector are the allocations for 2012-13, the last year of the budget's forward estimates. This shows that the loading for enrolling students from a low socio economic status background will be 8% of all the funds the Australian Government allocates for institutional performance. The higher education performance funding for teaching and learning will be a further 8% of total institutional performance funding. The balance of 84% of funding for institutional performance will be for research. Some 26% of institutional performance funding will be for research assessed by peers - sustainable research excellence in universities and the research infrastructure blocks grants scheme. Some 20% of institutional performance funding for the joint research engagement scheme will support research assessed by users – the joint research engagement scheme.

Some \$657 million or 46% of research funds or 38% of all institutional performance funding is for the research training scheme. Arguably this is neutral between peer evaluated and user evaluated research. However, if the government decides to allocate a sizeable part of the research training scheme according to performance in the excellence in research for Australia assessments this would shift the government's current balance between peer and user evaluated research decisively in favour of peer evaluated research.

Table 1: Australian Government's institutional performance funding, 2012-13

Program	Funding 2012-13 \$m	% of all
Low SES enrolment loading	132	8
T & L performance fund	138	8
<i>Sustainable research excellence in universities</i>	200	12
<i>Research infrastructure blocks grants scheme</i>	234	14
<i>Joint research engagement</i>	347	20
<i>Research training scheme</i>	657	38
Sub total research performance funding	1,438	84
Total of institutional performance funding	1,708	100

Sources: Commonwealth of Australia (2009a), (2009b: 55).

The department (DEEWR, 2009b: 3) says that the teaching and learning performance fund 'will serve the dual objectives of extending reach and enhancing quality'. I suggest that the measures in the teaching and learning performance fund for 'extending reach' are redundant. There should be no need for special funding to encourage institutions to increase their number of commencing domestic undergraduate students – the combination of the Commonwealth

grant scheme amount and student tuition fees should be enough to encourage institutions to increase their enrolments. If it isn't, the very small part of the learning and teaching performance fund attributable for increasing enrolments will be too small and will be countered by at least one of the numerous other indicators which moves in the other direction.

Neither should student equity indicators be included in the teaching and learning performance fund. Again, enrolment loadings for students from a low socio economic status background and perhaps members of other equity groups should be sufficient to meet the government's aims. If additional student equity performance indicators are thought necessary they should be incorporated with the low ses enrolment loading to form a student equity performance fund. This would allow the government to direct the teaching and learning performance fund to the other major part of higher education institutions' role, teaching.

Measuring the quality of teaching

The department's proposed teaching and learning performance indicators include students' progress and retention and graduates' proceeding to further education or full time employment. These are affected by many factors aside from the quality of teaching such as field of education, student's entry score, mode of study and type of attendance, etc. The department's (DEST, 2005) *Technical note 1: student outcome indicators of Australian higher education institutions, 2002 and 2003* reports that only about 2% of the variance in student progress, attrition and graduates' employment rates are explained by the student's institution. Indeed, from 80% to 90% of the variance in these rates was not explained by any of the data the department collects. So whatever these rates measure, it isn't the quality of teaching.

Table 2: amount of variance in student progress and attrition rates explained by factors collected by the department, 2002 and 2003.

Factor	Student progress rate		Attrition
	Commencing bachelor	Non-commencing bachelor	Commencing bachelor
<i>Institution</i>	2.39	1.84	1.65
Basis of admission/TER	1.82	0.06	1.41
Mode of study (internal/external)	1.71	1.32	1.1
Type of attendance (full-/part-time)	1.41	2.67	2.27
Field of education	1.39	1.09	0.65
Sex	0.7	0.58	0
Age	0.43	0.56	0.73
Indigenous status	0.37	0.21	0.16
Location (rural/isolated)	0.21	0.11	0.25
Level of course	0.18	0.14	0
Size of institution by field of ed	0.15	0.03	0.06
SES - education/occupation	0.13	0.06	0.01
SES - economic resources	0.12	0.06	0.01
Disability status	0.07	0.21	0.02
New to higher education	0.01	Na	0.04
Residency (Australia/overseas)	0	0.01	0.37
NESB status	0	0.01	0.63
<i>Sub total non institutional factors</i>	8.7	7.12	7.71
SUM	11.09	8.96	9.36
Unexplained	88.91	91.04	90.64

Sources: DEST (2004) table C3: bivariate regressions on progress rate, adjusted R² % and table C4: bivariate regressions on attrition rate, adjusted R² %.

Table 3: amount of variance in graduates' progression to further study and full time employment explained by factors collected by the department, 2002 and 2003.

Factor	Further study	Employment
<i>Institution</i>	<i>4.97</i>	<i>1.71</i>
Field of education	8.84	7.34
Age	1.67	0.14
Mean TER by institute by field of education	1.44	0.46
Level of course	1.38	0.15
Size by institution by field of ed	0.65	1.53
SES - education/occupation	0.52	0.18
SES - economic resources	0.17	0.33
Location (rural/isolated)	0.1	0.12
Unemployment rate	0.05	0.22
Sex	0.04	0.13
NESB status	0	0.57
Disability status	0	0.27
Indigenous status	0	0
Residency	na	na
<i>Sub total non institutional factors</i>	<i>14.86</i>	<i>11.44</i>
SUM	19.83	13.15
Unexplained	80.17	86.85

Source: DEST (2004) table C1: bivariate regressions on graduate destinations outcomes, adjusted R² %

Furthermore, these measures don't correlate well with each other. Progress and retention rates understandably correlate well with each other (0.68) but with nothing else. The rate at which graduates proceed to further study or full time employment correlate with none of the other measures. And the measures taken from the course experience questionnaire correlate well with each other, of course (0.66, 0.73, 0.83), but with nothing else.

Table 4: mean of correlations in each discipline group of measures in the 2009 learning and teaching performance fund

	Progress	Retention	Further study	FT employ	General skills	Good teach	Overall satisfac
Progress rate	1.0						
Retention rate	0.68	1.0					
Further study	0.28	0.32	1.0				
Full time employ	0.03	0.11	0.06	1.0			
General skills	0.18	0.15	0.04	0.13	1.0		
Good teaching	0.01	-0.1	-0.06	0.02	0.66	1.0	
Overall satisfaction	0.17	0.15	0	0.09	0.73	0.83	1.0

Source: DEEWR (2009a)

From this I conclude that the only measures currently available that are even indirectly related to the quality of teaching that are suitable for the learning and teaching performance fund are those taken from the course experience questionnaire. In addition some of the scales from the Australasian survey of student engagement may be useful, although many seem to me to overlap with the course experience questionnaire which is better established –

Table 5: Australasian survey of student engagement scales and measures and their description

Item	Description
<i>Engagement scale</i>	
Academic challenge	The extent to which expectations and assessments challenge students to learn
Active learning	Students' efforts to construct knowledge actively
Student and staff interactions	The level and nature of students' contact and interaction with teaching staff
Enriching educational experiences	Students' participation in broadening educational activities
Supportive learning environment	Students' feelings of support within the university community
Work integrated learning	Integration of employment-focused work experiences into study
<i>Outcome measure</i>	
Higher order thinking	Participation in higher order forms of thinking
General learning outcomes	Development of general competences
General development outcomes	Formation of general forms of individual and social development
Overall satisfaction	Students' overall satisfaction with their educational experience

Source: ACER (2009: 62-3) table 12 AUSSE engagement scale descriptions and items and table 13 AUSSE outcome measure descriptions and items

Another possibility is the graduate skills assessment. This was developed in 1999 by the Australian Council for Educational Research with funding from the Australian Government. The test is 30 multiple choice items that take 2 hours and writing tasks of 1 hour. The test seeks to measure critical thinking, problem solving, interpersonal understandings and written communication (ACER 2001: vii, 1). I have found only 1 evaluation of the graduate skills assessment, the *Graduate skills assessment stage one validity study* (Hambur, Rowe, and Luc, 2002). The study found that level 3 students performed distinctly better than level 1 students, suggesting that the graduate skills assessment may be measuring the effects of higher education. However, too small a number of students participated in the study to match level 1 and level 3 students and so the better results of level 3 students may be because more able students are retained to level 3. The authors recommended that the same students be tested in their first and then third level of study to establish the effect of higher education experience (Hambur, Rowe, and Luc, 2002: 47) but I am not aware of a report of any such study.

Most of the variance in scores in the graduate skills assessment – 16.5% - was explained by students' field of study. Some 70% of the variance in graduate skills assessment scores was unaccounted for, presumably due to variables specific to students such as motivation and student ability. Crucially for the government's purpose, the study did not find a statistically significant variance in scores by institution (Hambur, Rowe, and Luc, 2002: 50-2). I can't see

the point in the government persevering with the graduate skills assessment for assessing institutional performance until this point can be met. In addition, notwithstanding universities' ubiquitous references to general skills in their educational statements, they don't seem to be so interested in general skills to assess them directly and so the graduate skills assessment is taken by few students at few universities.

I suggest that it is worthwhile investigating other measures of institutional teaching quality. Two possibilities are the assessment of higher education learning outcomes being investigated by the OECD and the peer review of teaching.

Assessment of higher education learning outcomes

The OECD's assessment of higher education learning outcomes seeks to be higher education's PISA, a measure of learning outcomes of higher education students that supports international comparisons like the program for international student assessment. The OECD's feasibility study is being conducted in 4 strands: general skills, the disciplines of economics and engineering, learning contexts and value-added or the marginal gain from higher education. The general skills study is an international pilot test of the Collegiate Learning Assessment, a US test of students' ability and learning in critical thinking, writing, and synthesising quantitative and qualitative data. The discipline study is seeking to 'assess competencies that are fundamental and "above content", i.e. with the focus on the capacity of students to extrapolate from what they have learned and apply their competencies in novel contexts unfamiliar to them, an approach that is similar to PISA' (OECD, 2009: 13).

The study of learning contexts will gather information from public statistics, previous research, and surveys of students and staff on physical and organisational characteristics (observable characteristics such as enrolment figures or the ratio of male to female students), education-related behaviours and practices (student-staff interaction, academic challenge, emphasis on applied work, etc.), psycho-social and cultural attributes (career expectations of students, parental support, social expectations of institutions) and behavioural and attitudinal outcomes (students' persistence and completion of degrees; continuation into graduate programs or success in finding a job; student satisfaction, improved self-confidence, and self-reported learning gains claimed by students or their teachers) (OECD, no date).

The fourth study of value-added or the marginal gains by higher education institutions will be a review and analysis of possible methods for capturing marginal learning outcomes that can be attributed to attendance at a higher education institution. The study will examine potential data sources, methods and psychometric evidence from existing national data with a view to advising on the development of a value-added measurement approach for a fully-fledged AHELO main study (OECD, 2009: 15). The OECD is currently developing assessment frameworks and instruments and it plans to test instruments towards the end of this year and report on July 2011.

If the OECD does indeed manage to develop an assessment of higher education learning outcomes as powerful as the program for international student assessment of 15 year old school students it will be most useful for the Australian government as well as for higher education institutions. However, learning outcomes are affected by students' commitment and ability or prior achievement as well as the contextual factors identified by the OECD. So while an assessment of higher education learning outcomes would be most valuable, it would not be a direct assessment of teaching quality. For that we may try the peer review of teaching.

Peer review of teaching

The Australian Learning and Teaching Council has supported two studies of the peer review of teaching: the project led by Kerri-Lee Harris (Harris et al, 2008) which developed resources to support institutions in developing and embedding effective policies and practices in the peer review of teaching and a project led by Crisp at the University of Adelaide on *Peer review of teaching for promotion purposes* (Crisp et al, 2009). As Kerri points out in her handbook on peer review of teaching, the peer review of teaching is not just experts' inspection of classes, but 'encompasses all teaching activities, including curriculum design, choice of assessment, face-to-face teaching, and the design of web-based resources' (Harris et al, 2008: 34). It will therefore involve a review of curriculum and teaching materials.

I will compare assessment of teaching with the assessment of research later, but none of the basic indicators of research performance – research grants, publications and citations – are generated to assess the quality of research directly. They are all generated for other purposes and are surrogates for research quality. Likewise, as Kerri observes in her handbook (Harris, 2008: 21) the peer review of teaching is likely to be accepted and implemented if it is incorporated within a department's core activities or an institution's other processes such as staff probation, promotion or other recognition. It may also be part of an institution's quality assurance or even curriculum approval, and Kerri (Harris et al, 2008: 22, 24) describes its incorporation in academic development programs.

Kerri's team proposed criteria for assessing teaching based on the Australian Learning and Teaching Council's (2009: 7-8) criteria for its awards for university teaching, which were developed by the CSHE:

- 1 Approaches to teaching that influence, motivate and inspire students to learn
- 2 Development of curricula and resources that reflect a command of the field
- 3 Approaches to assessment and feedback that foster independent learning
- 4 Respect and support for the development of students as individuals
- 5 Scholarly activities that have influenced and enhanced learning and teaching.

Professor Crisp's (2009: 56-8, 69-71) team proposed similar criteria for the peer review of teaching for promotion.

While both studies made considerable advances in the peer review of teaching, I think both teams would agree that staff, institutions and the sector need to develop peer review of teaching much more before tools let alone measures available for a comprehensive peer assessment of the quality of teaching in Australian higher education institutions.

Discussion and conclusion

I shall conclude by proposing a general framework for considering the assessment of institutions' teaching by comparing it with the assessment of institutions' research. The first step in both activities is to gain support for the activity. In research this often but of course not always involves obtaining external research grants, and the number and amount of external research grants of various types are important indicators of institutions' research performance in Australia and many other countries. I suggest the analogue for teaching is gaining curriculum approval. But this is an internal process for all universities and is not considered a mark of distinction. Even when non self accrediting institutions are required to get external approval and when universities get their programs accredited by external bodies this is usually considered a bureaucratic rather than academic achievement. Gaining support for teaching activities may indicate basic competence but it is not an indication of teaching quality.

The conduct of research and teaching is largely unobserved by peers who are not conducting the activity. But I suggest the peer review of teaching is an attempt to observe at least part of teaching. So while the peer review of teaching has been derived by analogy from the peer review of research, it is quite different in attempting to evaluate the activity directly. Publishing the results of research is of course widely used as a measure of research achievement, but publishing assessment results reflects the quality of students' performance rather than that of their teachers. Arguably the direct impact of research upon the field and peers is indicated by citations to the research publication. I suggest there is as yet no measure of the direct impact of teaching, but the assessment of higher education learning outcomes would be such a measure.

I suggest that most measures of student satisfaction such as the course experience questionnaire and many of the scales of the Australasian survey of student engagement are particular instances of surveys of client satisfaction. While they are relied on heavily as surrogates for the quality of teaching, I suggest there is no direct analogue in research. The longer and broader impact of teaching is often assessed by graduates' proceeding to further education or to (relevant) employment. The analogue for research is improved economic or social processes or increased community understanding. But the difficulties that the Australian and British governments have had in assessing research 'impact' as it is called suggest that teaching 'impact' may be an equally problematic measure of the quality of teaching.

Figure 1: measures to assess research and teaching

Research	Activity	Teaching
Awarded a research grant	Gained support	Curriculum approved, program accredited
	Conducted activity	Peer review
Published a paper	Reported	Published assessment results
Funders happy	Client satisfaction	Students happy
Field informed (citations)	Direct impact	Students learned
Improved processes or community understanding	Longer impact	Students get job or proceed to further education

I regret that I have no firm proposal for you to debate, but I hope I have at least contributed to our discussion fruitfully.

Gavin Moodie
26 January 2010

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