



Science & Technology AUSTRALIA

Performance-Based Funding for the Commonwealth Grant Scheme

21 February 19

Dear Professor Paul Wellings,

Thank you for the opportunity to provide feedback to inform the implementation of performance-based funding for the Commonwealth Grant Scheme.

Science & Technology Australia (STA) is the peak representative body for more than 70,000 scientists and technologists in Australia through our member organisations, including associations and societies, research institutes, and research strategy bodies such as councils of deans. Our mission is to connect science and technology with governments, business, and the community, to enhance the role, reputation and impact of science.

STA does not support the implementation of performance-based funding for the Commonwealth Grant Scheme. The evidence shows that as a whole, the higher education sector consistently achieves beyond expectations, despite the funding and performance pressures that have been placed upon it over the past 6 years¹.

The decision to implement performance-based funding has been justified by a need to address attrition, graduate employability, student satisfaction and value to the taxpayer. It is our assertion that the proposed changes will not address any of these issues effectively.

As the changes are Government policy however, we have outlined recommendations to ensure they are implemented in a way that is thoughtful, effective, and that achieves minimal disruption to the sector. These recommendations include:

- A return to demand driven funding but with 2.5% of that funding being used for performance-based funding;
- Use specific performance metrics that reflect the unique profile of each university;
- Withheld funds be provided to the university that did not achieve the required metrics on the proviso that a detailed plan to address the metrics can be provided and the withheld funds are directed towards that plan;
- Due to time lag and reporting costs, performance metrics should be analysed every 3-years rather than annually; and
- Performance-based funding be measured and administered by the Tertiary Education Quality and Standards Agency

Kind regards,



Professor Emma Johnston AO
President, STA



Kylie Walker
Chief Executive Officer, STA

¹ ["Mapping Australian higher education 2018"](#) Grattan Institute, 2018

Introduction

While STA will provide feedback regarding the implementation of performance-based funding of the Commonwealth Grant Scheme, it is our view that the implementation of these measures is costly and unnecessary. Over the past decade there have been numerous reviews and inquiries into the higher education system in Australia, and while changes have been recommended, at no point have these reviews suggested that the higher education system in Australia is failing to achieve its goals.

This being said, there is an increasing need for the education sector to increase the number of science technology, engineering and mathematics (STEM) skilled graduates to meet demand.

It is estimated that Australia is creating STEM jobs at 1.5 times the rate of non-STEM jobs. However, the proportion of STEM qualified workers is only increasing by 15%/year compared to non-STEM workers at 26%/year².

The end of the demand driven system means that we will be unable to achieve an adequate number of STEM-ready graduates to fill this gap and satisfy demand.

The discussion paper highlighted a number of areas that would be used to measure the performance of the higher education sector, and we explore below why these provide limited capacity for improvement and little justification for a restructure of education funding.

Issues breakdown

Attrition

Concerns regarding student attrition were raised by then Minister for Education and Training, Senator Simon Birmingham, to demonstrate that the demand driven system was lowering university entry standards for students, allowing students to enrol who were not motivated to complete their degree³.

When considering attrition, two false assumptions are often made:

Firstly, that non-completing students were wasting time and money without any commensurate benefit to themselves or the economy for the education they did complete. Recent research however has indicated that students that do not complete their degree in full still gain employment and educational benefits from the time they were studying⁴.

The second assumption is that attrition increased under the demand driven system. Close examination of attrition rates shows that this was not the case⁵.

² [“Perspectives on Education and Training: Australians with qualification in science, technology, engineering and Maths”](#) Bureau of Statistics, 2015

³ [“New figures highlight need for uni performance funding”](#) Simon Birmingham, 2017

⁴ [“The financial and educational outcomes of Bachelor degree non-completer”](#) Michael Luckman, Journal of Higher Education Policy and Management, 2018

⁵ [“More students but attrition rates remain stable”](#) Peter Shergold, The Australia, 2017

Furthermore, attrition was closely linked to issues such as income, mode of study (part-time vs full-time), and being the first tertiary education student in the family. Performance-based funding may appear to be an effective model to address these issues of support because it incentivises the university to provide appropriate support structures for these students. In reality however, it shows how complex the underlying causes of attrition are and the importance of supporting universities to address these issues through initiatives like the Higher Education Participation and Partnerships Program.

Tax-payer value

Much of the discourse around higher education policy is centred on “value-for-money” for the Australian tax-payer. Research shows the sector represents outstanding return on public investment. The higher education sector is the third largest sector in the country, the single largest services industry in Australia, and the third largest export industry in Australia (worth \$33.9B in 2018 alone)⁶. Higher education injects \$66.4 billion annually into the national economy through innovation, education and increased employment for graduates^{7,8}.

The sector also provides social benefits to communities across the country such as developing a community’s cultural identity, addressing societal challenges, and attracting international talent to a community⁹. For example, in the technology sector, it was predicted that \$15 trillion could be added to the Australian economy through cyber-physical systems, but this requires adequate graduates and a strong, ambitious and well-funded education sector to realise¹⁰.

Cuts to higher education funding across all government grants and the freezing of the demand driven system are putting financial pressure on universities and could pose a risk to the quality of Australian higher education. While funding remains stagnant, the cost of providing a degree has been calculated to increase approximately 3% a year¹¹. In spite of these cuts and “efficiency dividend”, the higher education sector has continued to provide the benefits outlined above. The introduction of a performance-based funding policy will add further pressure to a sector that is already stretched thin and increasingly funded via non-government sources, putting at risk the national benefits provided by a secure, publicly funded higher education system¹².

Employability

The employability of university graduates is another marker with which the success of higher education institutes is traditionally measured. Graduates of higher education are more employable and start out with a higher salary compared to those who have not obtained tertiary qualifications¹³. The

⁶ [“Overseas student earnings hit \\$33bn”](#) Tim Dodd, The Australian, 2019

⁷ [“Is tertiary education worth it?”](#) KPMG, 2018

⁸ [“Universities contribute \\$66.4 billion to the Australian economy”](#) The University of Queensland, 2018

⁹ [“Seven ways universities benefit society”](#) Jean-Paul Addie, The Conversation, 2017

¹⁰ [“Australia 2030: Prosperity through Innovation”](#), Innovation and Science Australia 2017

¹¹ [“Cost of delivery of higher education”](#) Deloitte Access Economics, 2016

¹² [“Universities 2017”](#) Audit Office of New South Wales, 2018

¹³ [“Graduate salary peak is higher, later than non-tertiary education”](#) Julie Hare, The Australian, 2016

government's own employability survey shows that 4-years after graduation, the vast majority of university graduates are gainfully employed¹⁴. Recent evidence also suggests that graduates who are not being employed in the areas in which their degree were obtained, are still successful in the workforce which highlights the higher education sector's ability to prepare the current workforce for with the high-value transferable skills that are needed in an increasingly dynamic employment pelandscape¹⁵.

Inclusion of Under-represented Groups

STA recognises that equity in higher education attainment continues to be a challenge for the sector. With the support of programs like those implemented through the Higher Education Participation and Partnerships Program¹⁶, equity in higher education has greatly improved. One of the recent changes to this program was to better evaluate the effectiveness of the funded programs to address areas of inequality in higher education participation¹⁷. Existing initiatives such as Science in Australia Gender Equity (SAGE) are also making headway and would be a much more effective focus for tackling this issue.

One of the suggestions made in the discussion paper was to use attrition, employability and graduation of people within underrepresented groups as a measure of performance.

Our concern is that by attaching performance funding to equity performance, there is the possibility that universities will not actively seek to enrol students from low-SES backgrounds, for example, as they may be perceived as having an increased risk of attrition which adversely affects the required metrics for improved funding.

The correct weighting of performance metrics may potentially circumvent some of these concerns however they will have to take into consideration the unique profile of each university which STA has outlined in the consultation questions.

Based on the performance of universities and higher education organisations in these four areas, STA is concerned that the introduction of performance-based funding would be a step in the wrong direction.

¹⁴ "[2018 Graduate Outcomes Survey National Report](#)" Quality Indicators for Learning and Teaching, 2018

¹⁵ "[2018 Graduate Outcomes Survey National Report](#)" Quality Indicators for Learning and Teaching, 2018

¹⁶ "[Access and Participation](#)" Department of Education and Training, Accessed February 2019

¹⁷ "[Evaluation of the Higher Education Participation and Partnerships Program](#)" National Centre for Vocational Education Research, 2017

Consultation Questions

1. How should the PBF scheme be implemented?

STA strongly believes that increasing investment in universities based on basic populations measures is ineffective and does not truly reflect the requirements or achievements of these institutions.

The suggestion of using regional population growth as a metric is particularly inaccurate for example, as it does not take into account regional, rural and remote students or students that are undertaking study across state lines¹⁸. Funding based on regional population growth also fails to take into account the nature of modern Australian universities. Almost all universities have multiple campuses, provide online courses to differing degrees, and many have campuses that cross into multiple states. Assigning funding to universities based on regional growth would therefore not reflect the requirements of decentralised universities such as the Queensland University of Technology.

Similarly, there is also risk in basing funding on the growth of 18-65-year-olds. With an ageing population in Australia, the rate in which people are passing the 65-year-old threshold is increasing and yet the industry demand for individuals with Higher Education training increases. Meanwhile there is the expectation that the number of enrolments at universities will remain relatively constant. This leaves the entire sector on the brink of decreasing or stagnant funding based on this metric of population growth.

The STEM sector, for example, is competing on an international stage and neighbouring countries are pouring resources into the education of their primary, secondary and tertiary students. This is a response to the growing jobs market for STEM-trained employees, which we see in Australia too with STEM jobs being created at 1.5 times the rate of non-STEM jobs¹⁹.

This critically important workforce trend and the consequence for educational demand is not captured by population growth.

To limit funding to the Australian population in 2017 for example, will limit Australia's future STEM capability and competitiveness.

Given the challenges of using population growth as a measure for increasing the Commonwealth Support Grants, STA is recommending that we return to the demand-driven system in which the cost increase per student is increased annually by CPI to cover increasing costs. To implement performance-based funding STA recommends that 2.5% of the commonwealth support grant is then used as recommended by the Bradley review²⁰. By retaining the demand-driven

¹⁸ "[Performance-Based Funding for the Commonwealth Grant Scheme](#)" Department of Education and Training, 2018

¹⁹ "[Perspectives on Education and Training: Australians with qualification in science, technology, engineering and Maths](#)" Bureau of Statistics, 2015

²⁰ "[Review of Australian Higher Education](#)" Department of Education and Training, 2008

system universities will be able to ensure the demand for a STEM trained workforce can be met while still applying performance-based funding.

This increase would only apply to universities that achieve the performance metrics required under performance-based funding, but also ensures that the quality of the education being delivered by successful universities is not put at risk.

2. What performance measures should the PBF scheme draw on?

The discussion paper outlines numerous options for measures that the PBF scheme could draw from. Each of these metrics will prove challenging for the sector because they have different lag times, do not truly reflect the quality of the institutions, or have potentially negative effects on under-represented groups.

For example, using completion rates as a performance measure is difficult given the potential lag in reporting. Attrition after the first year as a measurement is something that can be determined in the short term, however completion within 6 years will lead to a delayed and inaccurate picture of student retention. It could also discourage the recruitment and enrolment of students with disabilities or from disadvantaged backgrounds, due to the extended times these cohorts often take to complete a degree²¹. Other metrics around student perceptions of quality are also challenging, as the more academically rigorous universities and degrees are often marked more negatively by students regardless of quality²². Similarly, female academics are often marked more harshly by students than male academics, as are teachers with non-English speaking cultural backgrounds and those teaching in quantitative-based courses²³. Within the academic sector, there are ongoing efforts to understand appropriate metrics to measure student satisfaction, especially given the generic nature of the current surveys and very low response rates.

The difficulty of choosing the right combinations of metrics is one of the major factors that has led to the failure of performance-based funding in the past²⁴.

Taking this into account STA would recommend that any metrics chosen for performance-based funding must:

- Be developed in direct consultation with universities
- Take into account the unique situations of each university
- Be based on the institution's previous metrics, focused on improving individual performance rather than benchmarking against the sector
- Be implemented over the long term (minimum 5-years) so as to allow universities to address these metrics

²¹ ["Understanding the completion patterns of equity students in regional universities"](#) National Centre for Student Equity in Higher Education, 2017

²² ["Do the best teachers get the best ratings?"](#) Frontiers in Psychology, 2016

²³ "Student evaluations of teaching: teaching quantitative courses can be hazardous to one's career" Uttl, B & Smibert

²⁴ ["Higher education in Australia: A review of reviews from Dawkins to today"](#) Department of Education and Training, 2015

3. How should the PBF scheme be designed?

As mentioned in the discussion paper it is important that the design of the PBF takes into account the unique demographics and focus areas of each institution. While there is an argument for having a few core metrics that every university should strive towards, each institution must have the capacity to maintain its own strategic goals. Regulations that encourage conformity will disadvantage a small nation such as Australia that requires diverse training opportunities to be made available from a small number of competing institutions.

One of the particular challenges for science, technology, engineering and mathematics are the associated costs for delivering high quality education in these fields²⁵. This must be incorporated into any assessment of institutions, as it would be nothing short of a disaster for Australia's economy if the more expensive degrees, such as science and engineering, were dropped in favour of delivering cheaper courses in other disciplines.

A balance must be struck, and we cannot allow universities to be put in the position where they must select coursework or design delivery largely based on cost of delivery.

The intent to use performance-based funding to improve participation of under-represented groups should also be carefully considered to avoid any perverse unintended consequences. If performance-based funding were to be used to incentivise participation by underrepresented or minority groups, then it will be important to measure every step of the students' progress among each group. Ideally STA would rather see further improvements to specific equity programs addressing the underrepresentation of student groups such as the Higher Education Participation and Partnerships Program. This will result in increased participation for low-SES and students who may be the first in their family to enrol in a university and provide support for students from other minority groups.

4. How should performance measure benchmarks be set?

STA cautions against the suggestion of a ranking system to measure the performance of universities.

Diversity across institutions is a desirable attribute of the Australian higher education sector especially where it allows institutions to develop deep expertise in specialty areas. Diversity in what is offered, diversity in the student experience, and diversity in education techniques all work to ensure a stronger system over-all that is producing a stronger, more capable and flexible workforce. Any new approach to funding should work to enhance this strength rather than provide incentives to homogenise the sector or introduce uniformity.

STA recommends that performance metrics should be based on the profile of each individual university. This profile will need to include characteristics such as average student age, regionality, online teaching, student and family income and much more. These profiles will result in better, more informed insights on

²⁵ ["Cost of delivery of higher education"](#) Deloitte Access Economics, 2016

attrition, employability, student satisfaction and other outcomes, as well as more relevant pathways to improve them.

5. Should the PBF funding of unsuccessful universities be redistributed?

Redistribution of funding from unsuccessful universities has the benefit of ensuring that further cuts to the higher education are not detrimental to the sector. When performance-based funding was announced, a key concern for the sector was having to deal with further cuts following a decade of funding cuts and “efficiency dividends”. In 2018, the NSW Auditor General warned of “market concentration risk” for universities that relied heavily on International student income for adequate functioning²⁶. Any further pressure to increase this income stream from cuts to Federal government funding builds on this vulnerability in the system.

Redistributed funding should be strategically and intelligently invested to build on the independence and strength of the higher education sector. It is vital that funding is not taken from one university and given to another that meets the performance measures. It is STA’s opinion that such a policy would result in the creation of unhealthy and inequitable competition within the sector that would serve only to pronounce disparity between institutions and not improve performance.

STA proposes an alternative model for the distribution of performance-funding. We propose that universities that achieve the required performance metrics be provided with the funding in full, while those universities that do not meet performance measures be required (and supported) to improve. We propose that to access this support, universities be required to provide a specific action plan to address the area of underperformance, including a budget. Plans that demonstrate clear commitment and propose tangible, measurable performance improvement outcomes be supported financially by reassigning the funding that would have been awarded if that university had met all the criteria. By supporting the implementation and evaluation of such programs, underperforming universities would be incentivised and supported to address the underperformance.

6. How much “lag” is acceptable between PBF data and the funding year?

The expected lag between PBF data and the funding year is one of the key issues facing the implementation of any performance-based funding scheme. Three factors should be considered when determining an acceptable lag.

Firstly, there is already a lag in the reporting of figures in higher education, for example enrolment figures which take at least 18 months to be available. While enrolment numbers can be assessed with a certain degree of rapidity, metrics such as attrition take longer. Measurements of graduation or employment within a certain time frame, such as 4 years for example, cannot be used as a measure of performance until half a decade out from the time of enrolment.

²⁶ [“Universities rely too much on foreign student fees, auditor says”](#), the Guardian 2018

Secondly, it is important to ensure that the lag between PBF data and the funding year is short enough that changes in a university's performance can be assessed and addressed in a meaningful and timely fashion. The lag will therefore rely heavily on what metrics are used to measure performance and the weighting applied to each metric.

An alternative option could be to measure performance every four to five years. To ensure that those universities which underperform are able to correct their performance and their funding as quickly as possible, we recommend requiring institutions to conduct annual assessments.

7. How should the PBG scheme be regulated?

Given the presence of a respected quality assurance body within the higher education sector, the Tertiary Education Quality and Standards Agency (TEQSA), STA strongly recommends that measures based on performance should be regulated by this body. Additional to the proposal for TEQSA to manage the assessment of universities' performance, STA also sees TEQSA as the logical choice as the assessor for those who fail to meet the performance standards and require rectification. The reestablishment of funding should be determined by the same body that assesses performance so that there is a continuity of assessment that is informed by the university's historical performance.

Any Parliamentary involvement could risk the independent determination of performance and independent assessment will protect the sector from influences such as savings for the Budget bottom line.