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Submission to the

Strategic Review of Health and Medical Research in Australia

Summary

The National Tertiary Education Union (NTEU) submission is informed by two major concerns; firstly, the scale of the academic and research staff replacement challenge facing Australian higher education in the next ten years, and secondly, the risk exposed to the sector through the continued reliance by universities and related research organisations upon insecure employment.

It is imperative that the Commonwealth Government act now to establish both general and targeted incentives under the *Higher Education Support Act (2003)* requiring universities to establish workforce planning and development programs. The purpose of these programs must be to assist research organisations, such as universities, not only in providing greater employment security, promotion prospects and professional development to the many highly-skilled staff who continue to be employed in health and medical research on an insecure basis, but to reward institutions that effectively and demonstrably enhance career pathways.

1. Introduction

The NTEU represents over 25,000 staff employed in tertiary education in Australia. Tertiary education covers a wide range of institutions that deliver post-secondary education, including universities, TAFEs and other education providers. The Union's coverage also includes research centres and institutes that drive Australia's national innovation, research and development effort. In this sense we would note that while much of this submission refers specially to research staff, it also includes those who may be classified as professional, technical or administrative but who are directly engaged in research work or research projects.

We commend the Australian Government for establishing the McKeon Strategic Review of Health and Medical Research. The Review comes at a critical time.

It is in Australia's long-term interests to have a viable, internationally competitive health and medical research sector. By pushing the frontiers of medical research, the net benefits to Australian society occur not only through a demonstrable economic return on investment,

but through the long-term improvement of health and well-being amongst the Australian population as a whole.¹

In the NTEU's Research Workforce Strategy submission in 2010, we proposed that university employers should not look to only meet the current demands for Higher Degree Research (HDR) qualified individuals, but that they strategically plan for future demands. This requires not only sustaining the current workforce but to ensure that mechanisms are in place to promote future growth.² In our submission, we recommended that the next phase should be to undertake research in relation to:

- The nature of research cultures: the relationship between institutional support, job security, project funding and collegial environments,
- Organisational cultures within Australia, including research cultures produced by engagement with major grant bodies, organisational culture of grant bodies,
- The types of research employment and career pathways within the university setting,
- Comparison of institutional support structures including: planning and talent management strategies, progression and retention strategies, up skilling strategies, mobility strategies, career pathways,
- Transitions between teaching and research and research-only careers.

For the purposes of this submission, the NTEU will focus upon one of the Terms of Reference, namely the 'strategies to attract, develop and retain a skilled research workforce which is capable of meeting future challenges and opportunities'.

2. Data quality in relation to insecure employment in Health and Medical Research

The NTEU believes the Review is well-placed to analyse a particularly important component of the strategic vision around Australian health and medical research which relates to the sustainability of the health and medical research workforce in Australian universities.

In our recent submission to the *ACTU Independent Inquiry on Insecure Work*, the NTEU identified that Australian tertiary education is characterised by one of the highest levels of precarious employment in Australia, with less than 36% of all university employees having continuing employment.³ Job security is even more problematic for teaching-only and research-only staff. Almost nine out of ten (86.5%) teaching-only staff were employed as casuals in 2010. Eight out of ten (80.5%) research-only staff were employed on a limited-term basis. We also note that Dobson (2010) has claimed recent growth in staffing numbers has predominantly been in terms of research-only staff, reaching 9,000 in 2007.⁴

It is more difficult to accurately determine the profile of research staff numbers in health and medical research in Australia. Data compiled by the former Department of Education, Employment and Workplace Relations (DEEWR) via their *Selected Higher Education Statistics* series does not clearly indicate the numbers, nature or extent of employment

¹ Deloitte Access Economics (2003) *Exceptional Returns – The Value of Investing in health R&D in Australia*, Australian Society for Medical Research: Canberra.

² National Tertiary Education Union (2010) *NTEU Response to the Meeting Australia's research workforce needs Consultation Paper*, Melbourne.

³ Daniel Edwards and T. Fred Smith (2010) 'Supply issues for science academics in Australia: now and in the future', *Higher Education*, No. 60, pp.19-32

⁴ I. Dobson (2010) 'Uneven development: The disjointed growth of university staffing since Dawkins', *People and Place*, vol. 18, no. 1

amongst staff involved in health and medical research. Departmental statistics cover staff in the Health discipline employed on 'Teaching only' or a 'Teaching and Research' basis. This constitutes 4,658 Full Time Equivalent (FTE) persons or 6,315 persons as a headcount in 2010. Furthermore, the data does not distinguish 'research only' (or other functions) performed by 'Health' staff in an Academic Organisational Unit Group on the basis of broad discipline, and only in aggregate it identifies 32,485 FTE, which translates into a headcount of 37,102 across all Academic Organisational Unit Groups in Australia. However, if we were to extrapolate that at least 8.5% of research-only staff were in the Health discipline (consistent with the proportion of Health staff employed on a teaching only or teaching and research basis), this would constitute at least a further 2,761 FTE or a headcount of 3,154.

The Australian Academy of Science's *Australian Early-Mid Career Researcher Forum* used a definition of early to mid-career (up to 15 years after completion of higher degree research) to estimate that early to middle career researchers in the health and medical research sector constituted only 1,590 people in higher education institutions alone (private enterprise excluded) in 2010. Without a breakdown of research-only staff based upon discipline, we believe this to be a significant underestimation. Furthermore, the NTEU notes that many Medical Research Institutes (MRIs), and particularly those within universities, routinely appoint staff on casual and fixed term contractual arrangements. While employers state that this practice is due to the nature of grant funding (which are of limited duration), there are employment mechanisms that would allow research staff to be employed within more secure employment structures.

It is vital that more accurate and targeted data focusing on the type, nature and extent of employment across publicly-funded research is collated and made publically available. Such information is a fundamental prerequisite for organisations to properly define an appropriate strategic vision to attract, develop and retain a skilled research workforce which is capable of meeting future challenges and opportunities.

3. Are the settings right to sustain Australian Health and Medical Research careers?

As identified by Edwards, Bexley and Richardson (2011), a critical factor in ensuring the supply of graduates remains at a high level is the extent to which the academic profession is seen as an attractive proposition. Based upon the *National Research Students Survey* (NRSS), they described three major disincentives for younger postgraduates against pursuing an Australian academic or research career:

- Substantial numbers intend to pursue academic work overseas.
- A major disincentive is a perceived lack of availability of positions.
- Students tend to believe that the salaries obtained in an academic career are not as attractive as options that are available through other work opportunities they have considered.

The perception that the Australian academic employment is faced with deteriorating working conditions and reduced job satisfaction is widespread.⁵ As Harman (2003) acknowledged,

⁵ See Bellamy, S., Morley, C., and Watty, K., (2003) 'Why Business Academics Remain in Australian Universities Despite Deteriorating Working Conditions and Reduced Job Satisfaction: an intellectual puzzle', *Journal of Higher Education Policy and Management*, 25.1, pp. 13 - 28; G. Harman (2003) 'Australian Academics and Prospective Academics: Adjustment to a More Commercial Environment', *Higher Education Management and Policy*, Vol.15, No.3, pp. 105-22; H. Coates, I. Dobson, D. Edwards, T. Friedman, L.

‘(N)either Australian university managers nor government agencies have seriously addressed the implications of the new entrepreneurial environment for the future of academic work and the academic profession’.

Recently Coates *et al* (2009) claimed that in comparison to other higher education sectors, Australian academics sat at the lowest end of the satisfaction scale, with only UK academics reporting lower levels of satisfaction.⁶ Similarly, findings by Edwards, Bexley and Richardson (2011) highlighted from the *National Research Student Survey* (NRSS) that nearly one-quarter (23 per cent) of students who wanted to enter an academic career did not see themselves as being in this occupation in the medium to long-term. The study noted a particularly large gap in the fields of health and education, suggesting that while students in these areas have a desire to enter academia, a large proportion believe this is not realistic.

Furthermore, in dedicated research on the Australian Science, Engineering and Technology (SET) workforce, Edwards and Smith (2008) have argued that for many young academics in science, the appeal of senior positions is waning due to an increase in short-term contracts and a perceived growth in the administrative, research and teaching workload placed on academics at this level.⁷ Research by Giles, Ski and Vrdoljak (2009) on Australian science, engineering and technology postgraduates suggested that new researchers believed job opportunities for science graduates were low.⁸ This has been reiterated in relation to women researchers in SET.⁹ These findings also correlate with the University of Western Australia’s 2004 *Lake Report* and Queensland University of Technology’s 2007 *Research Staff Benchmarking Project*.¹⁰

The Giles, Ski and Vrdoljak (2009) study is also important because it asserts that ‘lack of job security’ was the most important ‘other influential factor’ impacting on the working lives of SET postgraduates (other than specific career aspirations). They claimed that the lack of secure employment was a major reason in shaping SET ‘brain drain’, or the movement of 30% of young SET graduates overseas to pursue academic careers.

We would observe from the NTEU’s own internal research and feedback from our members that the three issues that dominate employment dissatisfaction were:

1. employment security,
2. promotion prospects, and
3. professional development.

Goedegebuure, and L. Meek (2009) *The attractiveness of the academic profession: A comparative analysis*, Melbourne: LH Martin Institute for Higher Education Leadership and Management; D. Edwards, E. Bexley and S. Richardson (2010) *Regenerating the Academic Workforce*; Canberra: Department of Education, Employment and Workplace Relations; E. Bexley, R. James, and S. Arkoudis (2011) *The Australian academic profession in transition: Addressing the challenge of reconceptualising academic work and regenerating the academic workforce*, CSHE, Melbourne.

⁶ H. Coates, I. Dobson, D. Edwards, T. Friedman, L. Goedegebuure, and L. Meek (2009) *The attractiveness of the academic profession: A comparative analysis*, p.15.

⁷ Daniel Edwards and T. Fred Smith (2010) *idem*.

⁸ Marnie Giles, Chantal Ski and Davorin Vrdoljak (2009) ‘Career pathways of science, engineering and technology research postgraduates’, *Australian Journal of Education*, v.54, no.1, pp. 69-86

⁹ Sharon Bell, et al (2009) *Women in Science in Australia: Maximising Productivity, Diversity and Innovation*, Federation of Australian Scientific and Technological Societies (FASTS), Canberra.

¹⁰ National Tertiary Education Union (2003) *Survey of Researchers at The University of Queensland: Report on Results*; UWA Working Party on Research Staff (2000) *Report of the Working Party on research Staff to the Teaching and Research Nexus Party*; Ruth Bridgstock (2006) *Project Report: Research Staff Benchmarking Project*.

Members at Medical Research Institutes consistently assert that for most research staff there is little prospect of a secure job. Moreover, classification and pay levels of researchers are determined by grants, not by the level of skill of the job to be performed or even by systems analogous to academic promotion.

Many researchers and research managers tell us that talented researchers in their 20s and 30s leave research because of job insecurity – they cannot get a mortgage as they are only temporary workers (even though they may have worked as a researcher on short term contracts for a decade). Furthermore, the inadequacy of research grants means that a minority of highly qualified staff do not have any space to pursue their own lines of research enquiry or publish, but are limited in their work to being over-qualified technicians.

There are also important issues around job security that apply to research staff employed in non-academic functions. Institutions that maintain high quality research environments do not only need academic researchers but technical, professional and administrative staff to support that research environment. Some of these people work directly on research projects as research team members, and are subject to the same vagaries of employment conditions as their researcher colleagues.

Many of them work in the maintenance of laboratory infrastructure, research administration, publication, instrument design, and other specialist and generalist areas that enable the effective work of the research teams. Research funding arrangements do not allow for the costs of such staff, and they are often “funded” by creaming an administration/infrastructure charge off each research project. The result is that they, too, are seen as “research funded staff” by the employing institutions, and therefore there is very high resistance to providing them with anything other than short-term employment. Once again, this is an irrational outcome for the system. Funding arrangements should support common infrastructure and administration costs for research centres to enable such staff to be retained, and employed on a fair basis.

Taking into account that Hugo and Morriss (2010) have previously called for research that compares institutional support structures that include planning and talent management strategies, progression and retention strategies, up skilling strategies, mobility strategies and career pathways, more research on these topics would be particularly useful in relation to Health and Medical Research.¹¹ We anticipate that the research project currently being conducted by the National Academies may address some of these issues.

4. Incentives for building career pathways for Early and Mid Career Researchers

Underemployment and periods of unemployment of highly skilled research-only staff is common, with many existing positions reliant upon grant funding that often only provides short term contracts of less than 3 years duration, and many of which are on a part-time basis. However, NTEU’s own analysis of the actual work practices and turnover of research staff shows that, in fact, a large proportion of these staff could be employed on a continuing basis.

¹¹ G. Hugo and A. Morriss (2010) *Investigating The Ageing Academic Workforce: Stocktake*. Canberra: Universities Australia.

Changing the behaviour of institutions is necessary because Australian universities play a distinctive role as both a critical source of Research and Development (R&D) activity and as the educators of future researchers. The majority of Australian researchers (almost one half) work in the university sector.¹² Universities are the key institutions responsible for expenditure on basic and strategic basic research.¹³ Further to this, as demonstrated in a 2009 *Allen Group Consulting Report*, the anticipated growth in demand for researchers by Australian universities is more optimistic than for businesses, research centres or even government agencies.¹⁴

The structural problem, as outlined in NTEU's *Insecure Work* submission, is that on one hand, the responsibility for research workforce planning is shifted by government onto universities, with government (quite rightly) saying that universities are autonomous institutions responsible for their own industrial practices. However, on the other hand, universities present a counter argument by (quite rightly) saying that the insufficient levels of government funding per student for teaching, coupled with the structural mechanisms that govern research funding, encourages insecure and short term employment practices.

NTEU has long campaigned for Government to lead the way in improving research employment conditions, through targeted funding to support strategic employment initiatives.

As such, NTEU recommends that the Government establishes a funding pool that allows and encourages universities to participate in the trials would be selected on a competitive basis based on a set of criteria to be developed by the Research Workforce Strategy Reference Group. The pilot programs would be assessed at the end of a three year period to judge their effectiveness.

NTEU also believes it is time to explore funding incentives provided through a discrete funding pool that rewards research organisations for meeting workforce targets, particularly in relation to ongoing careers (rather than contracts); opportunities for self-directed research, proper remuneration systems and a career structure for all researchers – whether continuing or fixed term.

While Government strategic funding is warranted, NTEU notes that universities must also bear responsibility for strategic planning on developing the future research workforce. Furthermore, given the impending retirement of a large proportion of its most experienced academic research workforce within the next decade, it is essential that each university develop its own early career workforce development programs.

In addition to increasing the number of early career placements, it is necessary for each university to support these placements with additional staff development opportunities in order to ensure a successful transition from PhD graduate to academic or independent researcher. What the nature and scope of these staff development opportunities would or

¹² ABS 8112.0 (2009) *Research and Experimental Development, All Sector Summary, Australia, 2008-09*, Australian Bureau of Statistics (ABS).

¹³ Where private non-profits invested \$73m in basic research in 2008-09, government invested \$143m and business invested \$88m, higher education contributed almost \$2billion. Where private non-profits invested \$245m in strategic basic research in 2008-09, government invested \$823m and business invested \$872m, higher education contributed almost \$1.4billion.

¹⁴ Allen Consulting Group (2010) *Employer Demand for Researchers in Australia: Final Report*, Canberra, p.59

should be will differ not only from university to university, but also from individual to individual.

Recommendations:

- 1. That better and more accurate data is collected by the Department about the extent of insecure employment across publicly-funded research organisations.**
- 2. That the NHMRC commission research which compares institutional support structures for all staff, including projects including professional, technical and administrative staff involved in Health and Medical Research. Such research must at least look at planning and talent management strategies, progression and retention strategies, up-skilling strategies, mobility strategies and career pathways.**
- 3. That research organisations and universities be supported in developing professional development programs, including mentoring programs between senior and early career researchers.**
- 4. That the Commonwealth Government develop a program to enhance gender equity in Health and Medical Research, particularly for senior research and academic positions.**
- 5. That the Commonwealth Government commit to a sustained increase in the number of long limited-term research grants and the remuneration amounts for research staff whether they be classified as academic or professional staff more accurately reflects the wages and conditions being paid in the public and private sectors for persons with the same qualifications and experience.**
- 6. That a proportion of all grants should be targeted at mid-career researchers.**
- 7. That Australian universities be provided the opportunity to develop and pilot Early Career Researcher Development Programs supported by dedicated Commonwealth funding. Participants in the trials could be selected on a competitive basis, based on a set of criteria developed by the Research Workforce Strategy Reference Group.**
- 8. That the Commonwealth Government considers the creation of a discrete funding pool to support institutional investment in the Australian research workforce at large. Health and Medical research organisations including MRIs which receive large amounts of grant funding, should be rewarded if they are meeting targets in relation to:**
 - Careers;**
 - Opportunities for self-directed research;**
 - Proper remuneration systems; and**
 - Career structure for all staff involved in research whether they be researchers or other professional and/or administrative staff and whether they be employed on continuing or fixed term.**