

Office of the Vice-Chancellor

Thursday, 29 May 2008

Mr Russell Chafer
Committee Secretary
Standing Committee on Industry,
Science and Innovation
PO Box 6021
Parliament House
CANBERRA ACT 2600

Dear Mr Chafer

Re: Inquiry into Research Training and Research Workforce Issues in Australian Universities

Please find attached Southern Cross University's submission to the *'Inquiry into Research Training and Research Workforce Issues in Australian Universities'*.

While many of the issues canvassed in the terms of reference to the inquiry relate to the university sector as a whole, it is important to recognise the specific issues faced by a small, relatively young regional university. This response to the inquiry highlights the particular issues Southern Cross University faces in relation to research training and workforce issues in the context of broader sector concerns.

Thank you for the invitation to Southern Cross University to make a submission to this Inquiry.

Yours sincerely



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Inquiry into Research Training and Research Workforce Issues in Australian Universities

Submission by Southern Cross University

Introduction

While many of the issues canvassed in the terms of reference to the inquiry relate to the university sector as a whole, it is important to recognise the specific issues faced by a small, relatively young regional university. This response to the inquiry highlights the particular issues Southern Cross University faces in relation to research training and workforce issues in the context of broader sector concerns.

SCU does not have the resources to invest in research across the entire spectrum of its activities. Rather it preferentially supports research in designated areas of research strength, which are broad areas of research strength designated for the purposes of providing an umbrella for Higher Degree Research (HDR) training.

These areas include research into: natural plant products; environmental science and management; children and young people; regional tourism; creative arts practice; sport, exercise and related health issues; indigenous research; change, innovation and organisational development; health promotion and disease prevention; and peace and social justice.

Southern Cross University provides a rich research training environment in these areas, producing graduates that have a broad skills base especially relevant to industry and the professions. The University has focused on producing industry-ready HDR graduates, through targeting industry-funded scholarships (from CRCs, ARC-Linkage, and direct from industry), and involving co-supervision with industry partners, mainly in the sciences.

Southern Cross University has also developed a Graduate Certificate in Research Management (GCRM) designed to enhance the skills and employability of HDR students. The success of its professional doctorate programs, particularly the Doctor of Business Administration (DBA) program, demonstrates a commitment to producing graduates with professional skills and connections with industry.

As a regional university, SCU focuses its research in a way that has relevance for our particular region but is also globally significant. A recent example is an ARC Linkage project with the regional dairy farming co-operative, Norco, which has a PhD scholarship attached.

Southern Cross University continues to strengthen its research profile, achieving significant milestones, both on a national and international level. For our size, we are now the number one university in Australia for research income from Cooperative Research Centres and are consistently ranked in the top three of all universities for overall student satisfaction in the Postgraduate Research Experience Questionnaire.

1. Research Training

(a) The contribution of research training programs to Australia's competitiveness in the areas of science, research and innovation

Postgraduate research training programs and professional doctorates both play a vital role in Australia's competitiveness in science, research and innovation. Research training programs not only contribute to the creation of new knowledge through original research but cultivate innovative thinkers and outstanding leadership and management skills, particularly when such programs have a professional component, such as SCU's GCRM and DBA programs.

As well as creating the next generation of researchers and knowledge workers, our postgraduate research and professional doctorate students make a major contribution to ongoing research. In disciplines such as environmental science and plant genetics, they are the research workers for our most outstanding researchers, essential to the momentum of our research programs and the co-authors of many significant publications.

(b) The effectiveness of current Commonwealth research training schemes

Research Training Scheme (RTS)

Since the RTS was introduced in 2001, the total pool of funded places has not kept pace proportionately with the increase in enrolments and completions. This has impacted on Southern Cross University (SCU) to the extent that, like other universities wanting to meet demand and increase completion rates, we have had to significantly over-enrol postgraduate students: currently we have 232 equivalent full-time enrolments for 166 funded places which means our funding per capita is inadequate, with serious implications for the resources we can provide to postgraduate students. This is in a context when other universities are struggling to fill their RTS places. **We recommend an increase in the number of RTS places available to Australian universities which can fill them.**

We would argue that while our rate of completions is very competitive (according to 2006 data, SCU ranked 10th out of 36 universities and 1st out of regional universities), we have difficulty in attracting the levels of research income that partially drives the funding formula for RTS places (23rd out of 36 universities; 4th out of the regionals). If the RTS is to continue as a major funding source for postgraduate research training, **we recommend a review of the funding formula, with a higher proportion determined by completions**, e.g. an increase from 50% to 60 or 70%, especially for smaller, regional universities which are less well-placed to attract competitive grants, but are more able to provide focused postgraduate support.

The full cost of providing quality supervision and infrastructure falls far short of the funding made available through the RTS. This shortfall in a small university can be particularly difficult to manage. **We recommend that funding should reflect the full costs of HDR student support.**

The system of payment of RTS on completion makes it difficult for investment in research training in new areas of research. For instance, SCU is one of the few universities with a commitment to Indigenous research, but because so few students have yet completed, there is no funding to pay either for supervision or infrastructure support for postgraduate students. Thus the university has to subsidise research training in this vital area. **We would therefore recommend a review of the system of funding RTS places on completion.**

Scholarships

Southern Cross University is encouraged by the recent federal budget announcement that the government will double the number of new Australian Postgraduate Award (APA) scholarships. Demand for applications has long exceeded supply – SCU generally receives applications from up to three times the number of eligible applicants than there are scholarships available. According to 2006 data, SCU ranks 18th out of 36 universities in the number of APAs as a proportion of Operating Grant and 2nd out of nine regional universities. However, increasing the number of available scholarships does not address the issue of the inadequacy of the stipend which has failed to keep pace with cost of living rises and other income sources. At around \$20,000 per annum tax free, the value of PhD stipends paid under the scheme is insufficient to meet the living expenses of students. At Southern Cross University, almost every student on an APA scholarship supplements their income with part-time work, which severely compromises their capacity to commit their full attention to their studies. Furthermore, students on CRC scholarships, for instance, are receiving stipends of around \$30,000, which means that these students are much less likely to be working part-time to supplement their income. In effect, this creates a two-tiered scholarship system in which APAs are considered poverty income compared with more generous and realistic industry funded stipends. The APA (Industry) program enables the links to industry but lacks the potential for cohort development and support afforded to CRC candidates.

Our experience is that the duration of the APA is too short to allow for students to complete in a reasonable time, particularly if coursework and other enhancement components are contemplated (such as our Graduate Certificate in Research Management as part of the Government's Commercialisation Training Scheme – discussed below). **We recommend that: (a) APA stipends are increased by at least 30% per annum tax free and are appropriately indexed; and (b) that the duration of APA funding be increased to 3.5 years with a further six month optional extension.**

International students

Australia is not competitive in offering attractive scholarship packages to the best and brightest students around the world. While SCU has a relatively small cohort of international postgraduate students, they are essential in bringing depth to our research programs, often bringing skills not available in Australia. In some areas of research, particularly in CRCs, it has simply not been possible to fill scholarship places from within Australia. Southern Cross University receives significant numbers of applications from international students every year, but we only have 2 International Postgraduate Research Scholarships (IPRS) available. On 2006 data, SCU ranked 23rd out of 36 universities and 4th out of the 9 regional universities in the number of IPRS scholarships allocated. We have not availed ourselves of

international scholarships offered under the Endeavour program which is complex and poorly targeted. Internationally, many countries are offering scholarships that offer payment for tuition fees as well as a stipend and without this incentive, it will be difficult to be attractive to the highest quality international students. SCU therefore **recommends an increase in the number of IPRS awards to reflect the growth in the international student cohort and that each award fully funds the fees and living allowances payable by the student.**

(c) The adequacy of current research training schemes to support Australia's anticipated future requirements for tertiary-qualified professionals in a wide range of disciplines

Postdoctoral positions

Australia is not keeping pace with other OECD countries in regard to the number of PhD graduates per capita. As well as the inadequate levels of support available for candidates, the current Australian employment market and availability of high salaries for commencing graduates makes it difficult to attract quality candidates, as discussed above. Undergraduate enrolments in enabling disciplines (especially science) have been steadily declining for a number of years, creating a supply problem for research candidature. At SCU these issues are exacerbated by the undersupply of post doctoral positions (and consequently supervisors) and low research income. We would argue that there is no clear career path post-PhD and this is why nationwide there is difficulty in attracting PhD students, and why there is a dearth of adequate PhD supervision. We would **recommend that the Federal Government investigate a funding scheme targetted at post-doctoral positions.**

Graduate Certificate in Research Management

Southern Cross University recognised the gap in the training of PhD students that meant they have been underprepared for work in industry and the professions. To address this long-felt need in the Australian industry/higher education environment, SCU developed a Graduate Certificate in Research Management to overcome the perceived barriers to the employment of University trained PhDs. Since its inception in 2005, over 115 students have enrolled in the Graduate Certificate, and completed 301 units. Building on SCU's success in CRCs, the largest uptake of the course was initially by employees of the industry and core partners in the CRCs that became sponsors for the program. This enabled us to broaden the appeal of the course, including the running of customised workshops for particular CRCs.

When DEST introduced the Commercialisation Training Scheme (CTS) for selected PhD students for all participating Universities, SCU was approved as a Higher Education Provider based on the success of the Graduate Certificate. The University has agreements with five other universities to enrol their students under the CTS. This has underpinned the viability of the course, and will allow us to expand our offerings. It also means that now the bulk of the students currently doing units in the Certificate are PhD students. For SCU, the CTS has been a valuable scheme. An evaluation of the effectiveness of our Graduate Certificate in terms of its capacity to improve the employment capacities of doctoral candidates is currently being designed.

Diversity of the HDR Cohort

SCU recognises that it is important to acknowledge and respond to the diversity of the HDR cohort, their ages, prior study and employment experiences, their skills and attributes sets and needs and the varied motivations for undertaking a research degree. One size does not fit all in either describing or meeting the needs of research students and research programs and we argue that support mechanisms must respond to this. At Southern Cross University, we have a majority of mature age students, many are part-time and a significant proportion are not adequately funded.

Improved and Innovative Health Care Approaches

There is a shortage of higher trained research personnel in health care specialisation in Australia. The need is for graduates with research training at the professional doctorate level for health care leaders with executive type positions and for health care specialists (senior clinicians) to have research training to create the research literate clinician who can be innovative in seeking to create new ways for the delivery of health care for the changed population dynamic of Australia in the 21st century. The need for support at the Federal level for such professional doctorates in health care is critical to improve the quality of the health care system and its delivery of services.

2. Research Workforce Issues

(a) Adequacy of training and support (including income support) available to research graduate students in Australia

Income support issues have been addressed above. SCU provides professional training (a requirement that supervisors are trained every 3 years) via participation in a continuing on-line Supervision program, as well as scheduling of an annual face-to-face training program. HDR students receive a thorough induction program offered twice per year. The Graduate Research College (GRC) offers individual mentoring and support for both postgraduate students and supervisors, as well as supporting the formation of postgraduate peer support groups. The quality of our support programs is reflected in the consistently high ratings the University receives in the Postgraduate Research Experience Questionnaire (PREQ). In terms of overall satisfaction, SCU has rated in the top three universities over the past four years.

The extra training offered through the Graduate Certificate in Research Management, described above, is another initiative where interdisciplinary skills training aims to enhance PhD programs, outcomes and contributions to the global economy. While a formal evaluation is currently being designed, anecdotal evidence suggests that this enhancement has proved valuable in offering graduates a competitive edge in employment.

(b) Factors for graduates that determine pursuit of a career in research

It is sometimes argued that there is a belief that Australian-trained researchers are not as good as those who have either been entirely or partly trained overseas. This lack of respect for our research training capacity is a real threat to the development of integrated career paths and a healthy research culture in Australia. Our small community needs to be bolstered by active working international links, not

diminished by comparison with them. Because of our regional university status SCU is particularly susceptible to this perception. **We would recommend funding support for working partnerships with overseas researchers and research units via exchange programs.**

The importance of good workplace conditions to the development of a sound research workforce is illustrated well by the dearth of women career researchers. In science, one of the big problems is the low pay, leaving women with little disposable income to arrange quality child-care and home help, unlike in some professional disciplines where higher base-incomes allow for much greater flexibility. Real progress has been achieved for early-career female academics, with grants for talented women for re-entry after absences for family reasons (e.g. University of Queensland), mentoring schemes for early career women researchers (e.g. Flinders University), bursaries to enable women (and other disadvantaged staff) to update their qualifications to PhD (e.g. Southern Cross University among others), and potential for part-time work. Very little support, if any, is available, however, for the woman who has jumped those hurdles but is struggling to compete with male colleagues in publication rate and research activity.

Many research positions are funded by project funds ("soft money"), again denying the job security often sought by graduates, especially those who have been previously employed prior to embarking on a research degree. This disincentive is heightened for the average PhD graduate who is in their mid 30's – with associated financial and family commitments to meet. Additionally, current measures of research performance and excellence are dependent on continuity of service and research output. This is especially difficult for women who wish to interrupt their career for family reasons, particularly in lab and field based sciences.

(c) Opportunities for career advancement for research graduates and staff

In summary, our main recommendations for improving career advancement include:

1. Proper funding of universities to enable an increase in tenured academic staff and better salaries to keep career academics in the system (whether they are research-only or traditional academics).
2. An increase in postdoctoral fellowships, with improved tenure arrangements.
3. Support, mentorship and skills training for early career researchers both in academia and industry.
4. Expansion of mid-career research support, especially workforce re-entry scholarships.
5. Better recognition of the need for depth in postgraduate training, which can be supplied by a better-funded two-step process (PhD followed by post-doc); sufficient supervisors with the freedom and incentives to conduct appropriate and dedicated supervision; and support for research networks.
6. Appropriate support for research and research training within the national and international community across the full range of research activities. This requires innovative thinking, building on existing mechanisms.
7. Maintaining and enhancing sabbatical leave for academics.

(d) Factors determining pursuit of research opportunities overseas

International exposure and global collaborations are as important for researchers, especially those early in their careers as they are during candidature. It is important that mechanisms are in place to enable introduction to these networks and appropriate international contacts. Funding is needed to support international collaboration (both face to face and virtual through appropriate infrastructure). The latter is particularly important for researchers with family responsibilities especially if dual careers make it difficult for partners to work overseas.

We would therefore **recommend an active mechanism for supporting across-continent research collaborations**, the benefits of which would be gauged by the usual benchmarks of publication and research activity. This can start with good funding for conference attendance by Australian researchers (a particular impediment for women), through to active financial support for the establishment of real research partnerships.

(e) Australia's ability to compete internationally for high quality researchers

Competition for "star researchers" and high quality research students is fiercely competitive, both to attract internationals and retain the best of our own. Academic salaries are comparatively low by international standards and lack of housing availability and high living costs are additional disincentives. For a regional university such as ours, it is also difficult to offer the same services that are available at metropolitan universities. Coupled with a high level of project funded, fixed term positions and consequent lack of security, it is relatively more difficult for a university such as SCU to attract international research talent in the absence of appropriate scholarship support.

(f) Whether Australia's academic workforce is ageing, and the impact this may have on Australia's research capacity

An issue that we face as a small regional university is the difficulty of attracting research candidates in professional fields where end-on honours years are rare, for example in education and nursing. If the Government funded honours years for candidates in the professions we may attract more highly qualified younger teachers and nurses into postgraduate research degrees.

Recent studies have shown that two thirds of Australia's academic staff are over 40 years of age and universities are likely to lose between a fifth and a third of their staff in the next decade or so. At SCU, over 67% of our academic staff are aged over 45, with only 5% under 35. The long lead times to attract and train doctoral candidates, coupled with more and more PhD graduates seeking employment outside of academia means the university sector as a whole faces a looming crisis. This will be even more acute for regional universities such as SCU, where staff turnover is low. It is hoped that implementing the recommendations put forward in this report will go some way to alleviating this situation.