



To: Ms Maria Vamvakinou
Chair, House of Representatives Industry, Science and Innovation Committee
House of Representatives, PO Box 6021, Parliament House, Canberra ACT 2600.

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From: Professor Alison Lee
On behalf of the Australian Association for Research in Education

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The Australian Association for Research in Education (AARE) recognises the importance of Education to innovation and economic and social advancement. The Association is committed to the development of research capacity in Education to achieve a skilled, informed and creative workforce and citizenry, in schools, universities, workplaces, organisations and communities. It acknowledges the critical contribution that research training makes to this agenda.

AARE is consequently pleased to submit the following response to this Inquiry into research training and research workforce issues in Australian universities, addressing the terms of reference of the Inquiry. The Association is keen to participate in forums, workshops or other consultations to expand on any of the issues outlined below.

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INQUIRY INTO RESEARCH TRAINING AND RESEARCH WORKFORCE ISSUES IN AUSTRALIAN UNIVERSITIES

Response by the Australian Association for Research in Education

PRELIMINARY STATEMENT

The Australian Association for Research in Education (AARE) is the premier organisation of Education researchers in Australia. Its objectives centre on advancing scholarly inquiry in Education, enhancing quality in Education research, and seeking to promote the effective and positive impact of Education research on policy and practice in education and associated areas of society. AARE currently has approximately 1000 members, including 100 overseas.

A major focus of the Association's activity centres on building the capacity of Education researchers by providing opportunities for them to enhance their research skills, and through fostering and supporting early-career researchers and postgraduate research students.

The Association provides submissions to national inquiries and takes a proactive role in generating and considering policies with respect to the recognition, funding and quality control of education research. The Association also seeks to enhance public understanding of quality Education research, the benefits for the nation of having soundly-based Education research, and the need for its continued funding.

SUMMARY OF RECOMMENDATIONS

- 1. AARE recommends an increase in the number of RTS places available to Australian universities in order to increase availability to Education research students**
- 2. AARE recommends Government create a flexible research training scheme that facilitates and encourages:**
 - inter-university collaboration;**
 - networks of professionals working part-time on research;**
 - appropriate support structures, entry and exit points, and**
 - mechanisms to encourage movement in both directions between Education professions and the academy**
- 3. AARE recommends that APA stipends be increased so that their value to recipients increases by 30% on current levels, and be indexed thereafter**
- 4. AARE recommends an increase in the length of APA funding to 4 years with a six-month optional extension**
- 5. AARE recommends a review of ranking criteria for APA and RTS places to take account of diverse entry points into HDR programs, especially in professional fields such as Education**
- 6. AARE recommends that the Government conduct a systematic review of programs for the development of research capabilities across the disciplines, as part of a drive for sustainable quality improvement in HDR outcomes. Further, AARE recommends a study into the specific requirements of research education in Education**
- 7. AARE recommends an adoption of the term 'research education' in preference to 'research training', in order to acknowledge and to address the complex work of**

developing advanced level research capacities for a rapidly changing, complex knowledge economy

DISCUSSION ADDRESSING TERMS OF REFERENCE FOR THE INQUIRY

1. The contribution of research training programs to Australia's competitiveness in the areas of science, research and innovation

AARE endorses the five point CHASS Plan for Government (CHASS March 7, 2008). This plan outlines strategies to 'improve the value' of the doctoral award in the humanities and social sciences in Australia. It acknowledges the many problems and issues with the current system for supporting HDR in Australia, including the value of stipends, the problem with differential funding support across disciplines, the need to review terms of candidature, the problems of falling domestic enrolments, the need for international competitiveness, and the need to review industry requirements and graduate destinations across the social sciences and humanities disciplines.

The following points in this submission address these matters as they particularly apply to and impinge on Education, as the largest social science discipline, and one that has complex professional responsibilities and a critical workforce shortage.

1.1 The contribution of research qualifications in Education to Australia's competitiveness in the areas of science, research and innovation

Education is Australia's largest social science discipline, with around 10% of all the HE students in the country engaged in some form of teacher education or Education inquiry.

Education research is key to responsible innovation in formal education as well as to capacity-building for advanced learning within the economy: workplace skills, professional formation and development, lifelong learning and organisational learning, development and change. The familiar contribution of Education research to formal schooling is expanded through its alignment with wider societal processes of learning and change. Education has a central place in any consideration of innovation and productivity and a strong Education research capability is required for an effective and targeted response to global and technological pressures and opportunities, and the building of a skilled workforce and citizenry.

Education faces several critical problems in terms of its capacity for renewal and its national and international value. One of these is its capacity to attract research funding through the ARC's Discovery Grant Scheme, which rarely allocates more than 2% to Education research (see most recently the *ARC Annual Report, 2006-7*). Education research averages 3-4% of all the research funding given to universities by all sources (compared to around 25% for Health).

Yet Education researchers are highly productive. Comparative to its share of income, Education's research productivity is high in relation to other disciplines and with other countries in the same field. In fact, Australia's share of international publications is greater in Education than in any other major field in this country. The ARC Annual Report for 2006-7, citing Thomson Scientific in 2006, reports that, in the five years from 2001-2005, Australia's share of science and social science papers is 2.91 per cent of the world total. Of the 114,047 research papers indexed that listed at least one author address in Australia, journals classified under the heading of Education had the highest percentage (5.44 per cent), followed by plant and animal sciences (5.30 per cent) and geosciences (5.02 per cent) (ARC 2007, p56)

While the volume of effort (person years) going into Education research has increased by around 350% in the last 20 years, a great deal of this growth has been in the contribution made by research students. In the most recent ABS data available (2002) 74% of the of the 3544 person years of effort spent on education research in universities was contributed by research students (cf 43% of 1062 person years in the late 80s; or 57% of all academic effort across all disciplines; ABS,

2002). Education research is therefore heavily reliant on HDR students, who currently provide three quarters of its research capacity (measured as labour input).

Doctoral candidates in Education are drawn from the school and further education teaching professions, education bureaucracies, professional disciplines within higher education, and other professional fields that contain an education or training component. There is a strong link between education research and the building of advanced skills and capacities in the teaching workforce, in the different sectors (DETYA 2000, Evans 2002, AARE, 2005).

There is a general decline in HDR domestic commencements across the disciplines over the past decade and Australia is lagging behind other OECD countries in regard to research training output, with only 2.3 doctorates per 100 university graduates compared with 3.9 in Canada, 10.1 in Switzerland and 11.2 in Germany. Overall, there has been a 29% decline in HDR domestic commencements since 1995 - from 8298 to 5885 in 2006.¹ In connection with the particular issues of shortages in the Education workforce addressed in the next section, there is a critical need for a general increase in domestic HDR funding.

Recommendation 1: AARE recommends an increase in the number of RTS places available to Australian universities in order to increase availability to Education research students

1.2 Attracting and retaining high-level doctoral graduates to replenish aging academic workforce

The Education profession is confronting a critical workforce shortage. The skills shortage has been recognised in the natural sciences, and in technical fields, but to a much lesser extent in social sciences fields. Studies of future workforce growth and decline show that the greatest growth expected is in the professional-managerial sector, which includes Education (CHASS 2008).

The general aging of the academic workforce is well documented (Hugo 2005, 2008). Academics are older than most other groups in the workforce and this, in itself, means that academia is likely to experience a period of substantial loss of workers through retirement over the next decade. According to Hugo (2008) between 1/5 and 1/3 of current staff expect to retire over the next decade. The average age of university staff is higher than any other trade or profession, except farmers.

Education has been recognised by Universities Australia as one of the discipline areas most at risk because of the age of its workforce. 60% of the academics working in general and teacher education are over 50 years old. *Review of Australian Higher Education: Discussion Paper* (June 2008), p22

There is an urgent need to maintain and build doctoral graduations in Education to supply an aging academic market, and to educate new generations of Education professionals in ways that are responsive to the major changes in the cultures of learning.

The aging Education academic workforce parallels and exacerbates the problem of the aging teaching workforce. The DETYA (2003) Review of teachers and teacher education noted that, in the light of significant aging of the teaching workforce, 'attracting, recruiting and retaining people to teach will have to become a top national priority'.

http://www.dest.gov.au/sectors/school_education/policy_initiatives_reviews/reviews/teaching_teacher_education/ (see also MCEETYA data reported in *Top of the Class* 2007)

There is a further loss of capacity for innovation through HDR enrolments, due to a declining proportion of the workforce undertaking postgraduate study, including HDR, as a significant course of professional advancement and sector renewal. This has been attributed to: the introduction of fees for postgraduate study; the increase in teachers' workloads; the ageing of the teaching

workforce; the lack of financial reward for gaining post graduate qualifications; and the perception that further study is not linked to career advancement (*Top of the Class Report* p 96). The report documents a decline in the amount of professional development undertaken. It identifies a need for more substantial partnerships between universities schools and colleges, and a more coordinated approach to providing appropriate forms of advanced skill and knowledge development for an innovative and competitive teaching workforce.

Given these critical factors of age and declining participation, and given the rapidly changing face of educational practice through ICTs, diversification of curriculum, including VET in schools and other pressures, Education faces an urgent need to attract younger, early-career professionals and produce state-of-the-art doctoral graduates to replenish and innovate in Australian schools, colleges and workplaces. In addition to an overall increase in availability of RTS funding for HDR places, there need to be creative and responsive schemes to attract and recruit high-level applicants. These will include measures to assess applicants on criteria more relevant to the profile of the discipline (see Recommendation 5 below; see also AARE 2005).

HDR students in Education are largely part-time, are in full- or part-time employment, and are often experienced, senior professional practitioners (Evans 2002, Gale, 2005). This differentiates potential Education research students from the overall HASS profile (CHASS 2008) but aligns it with other professional disciplines, where the Masters degree is undertaken for purposes of advanced professional development and is a major avenue for recruitment into HDR programs (Evans 2002). Because Education research is substantially focused on the development of knowledge and skill in the area of schools, colleges, other formal and informal sites of working and learning, there is a range of different types of research degrees with different characteristics for a workforce within the university, the teaching profession and educational work in other professional fields. These different kinds of degrees include PhDs, and professional doctorates with an educational focus. Their research is often directly related to professional practice or to policy and leadership development within their profession (Bourke & Holbrook 2000, AARE 2005).

There is a need to collect better data on the quantum and diversity of demand for advanced research qualifications in Education, as in other fields, so that Australia can predict and prepare for the needs of the future. Any failure to properly fill vacancies in the tertiary sector will have a compound effect, as Australia will not have the capacity to train the next generation of doctoral graduates. For Education, building a capacity to research professional practice is a key way to build and sustain innovation within education systems and educational work in other areas. This diversity is important to building innovative links with professions and workplaces. To enable high-achieving education professionals to advance their skills, knowledge and leadership capacity, there is a need for a greater flexibility in provision of support for doctoral work in professions such as Education. AARE endorses the general recommendation for a review of government programs providing support for industry links for doctoral students, and has several further recommendations that address the specific needs of career professionals.

As with some other professional areas, support for postgraduate research in Education needs to be tailored to the career aspirations and pathways of Education academics. Given that very few academics are recruited into Education in Australian universities who have followed a direct path from undergraduate degrees with Honours to PhD, funding schemes that are based entirely on the conventional needs of Arts or Science are not appropriate to the professional orientation of Education researchers.

Therefore AARE strongly recommends a broader review of the government programs that provide support for industry links for HDR students, with a view to providing appropriate partnerships for Education research students. It further recommends the creation of a new, flexible research training scheme that facilitates and encourages movement of professionals among universities, and between industry and the university, and provides appropriate and sustained support for HDR students.

Recommendation 2: AARE recommends Government create a flexible research training scheme that facilitates and encourages:

- i) inter-university collaboration;*
- ii) networks of professionals working part-time on research;*
- iii) appropriate support structures, entry and exit points, and*
- iv) mechanisms to encourage movement in both directions between professions and the academy*

A possible model to consider in an exploration of possibilities for such lateral thinking is the Inter-university Centre for Education Research (abbreviated to ICO from the Dutch; <http://www.ou.nl/eCache/DEF/1/90/986.html>) This model, which has been operating since 1988, consists of a collaboration among the education research institutes of 10 of the 13 publicly funded Dutch universities. The ICO keeps a register of PhD students and graduates from within the participating universities. It publishes the PhD graduates' thesis topics, currently listing 186 dissertations with completion dates ranging from 1993 to 2008. The ICO educational program conducts a series of courses for PhD education. Of the 1200 course-hours available, students must attend at least 600 hours, including an introductory course, two themed master classes, a research methodology master class, and an international summer school. The benefits of systematic education/training of models such as this are strongly advocated by AARE and form a base for Recommendation 6.

Harnessing existing, cross-institutional capabilities will add significant momentum to the development innovative research education programs and awards. AARE has taken a national leadership role in this regard through the establishment of the Australian Research Directors in Education Network (ARDEN), running events such as research training workshops, workshops, and providing awards and financial support for HDR students. Substantial cross-institutional participation in these bodies and events is indicative of the support in the field for further developments in this area.

2. THE CHALLENGES AUSTRALIAN UNIVERSITIES FACE IN TRAINING, RECRUITING AND RETAINING HIGH QUALITY RESEARCH GRADUATES AND STAFF

2.1 Adequacy of training and support (including income support) available to research graduates in Australia

Underpinning the achievement of sufficient numbers of high quality doctoral graduates is the need to provide viable rates of APA stipends, to rise above poverty levels, and realistic duration of APA stipends. AARE welcomes the recent doubling of APA awards but strongly endorses the CHASS recommendation to increase the value of the stipend to that applying to the APA (Industry) award, \$26,140. More generally, AARE recommends an indexed stipend:

Recommendation 3: AARE recommends that APA stipends be increased so that their value to recipients increases by 30% on current levels, and be indexed thereafter

In terms of length of candidature, AARE supports the CHASS recommendation of an extension of candidature commensurate with average completion data in the humanities and social sciences (Western et al 2006):

Recommendation 4: AARE recommends an increase in the length of APA funding to 4 years with a six-month optional extension

At the same time, AARE is cognisant of the need to consider other national models of research training/education, for example the 4+2+3 models being adopted in some other countries. Therefore, recommendation 4 is presented within the current context and is subject to review should other models be considered by the Government.

2.2 Opportunities for career advancement for research graduates and staff

As a significant proportion of Education HDR students are experienced professionals, they often qualify through Masters degree mid-career, rather than proceeding through Honours direct from initial undergraduate qualification. This offers a potential advantage to the field as the experience of advanced professionals undertaking practice-relevant research builds a maturity into the knowledge production at this level. There is a need to review the assessment of criteria for stipends in relation to the profile of Education HDR students. They are currently disadvantaged in relation to applicants in disciplines with a strong Honours pathway. There is a corresponding further need for a study into pathways for research training other than Honours; in professional areas, Honours does not guarantee a good foundation for research degree work.

Recommendation 5: AARE recommends a review of ranking criteria for APA and RTS places to take account of diverse entry points into HDR programs, especially in professional fields such as Education

In conjunction with this, a flexible funding scheme would also facilitate closer relationships with professions and employing bodies. The introduction of initiatives such as the funding of employing bodies for part-time release for professionals undertaking advanced higher degree work, including research, would potentially facilitate productive partnerships between universities and practice settings. These considerations articulate with the call for the introduction of a flexible research education/training scheme, outlined in Recommendation 2.

2.3 Ensuring continued national improvement in HDR

Concerns about the quality of the provision of research education in humanities and social science disciplines more generally have been well documented. Western & Lawson (2008) summarise the need for improvement across a range of areas, including:

- i) improving the quality of supervision (Western & Lawson note that the best indicator of prompt completion is a supervisor involvement index)
- ii) improving the student experience, through offering greater support and resources, more sociality, reducing isolation, a stronger induction program, and so forth;
- iii) early assessment of students (including a more formal 9-12 month review of candidature)
- iv) focusing more awards on projects, rather than students developing their own project
- v) The sharing of 'best practice' between institutions and across disciplines on questions of recruitment, retention, supervision, completion, and the development of generic, transferable and professional skills (adapted from Western & Lawson 2008).

Less than 50% of doctoral graduates become academics, smaller proportions go on to a full-time research career. A large proportion return to professional practice, enhancing the research capacity and productivity of organisations and enterprises in a wide range of ways (Bourke & Holbrook 2000). To encompass and enhance the capacities of graduates to undertake a range of advanced knowledge work, a broader framework for understanding the capacities is required.

The Australian Government is encouraged to undertake a systematic national inquiry into the provision of education and training for research students, in order to prepare them for the diverse outcomes for which they are undertaking doctoral study. In order to address the lack of good, systematic data, in order to build a national capacity for continuous quality improvement and enhance international competitiveness, AARE recommends a broad study along the lines of the Carnegie Initiative on the Doctorate (Carnegie Foundation 2008a). Further, AARE encourages the Australian government to support an inquiry into the specific needs of Education research, along the lines of the Carnegie Project on the Education Doctorate (Carnegie Foundation 2008b)

Recommendation 6: AARE recommends that the government conduct a systematic review of programs for the development of research capabilities across the disciplines, as part of a drive for sustainable quality improvement in HDR outcomes. Further, AARE recommends a study into the specific requirements of research education in Education

The ARC refers to 'research education' rather than 'research training (ARC Annual Report 2006-7). The term acknowledges the complexity of the process beyond narrow conceptions of 'training', in particular, that the education of researchers involves not only the acquisition of advanced research skills but also a broad set of experiences that help develop autonomy as a researcher, induction into research communities, nationally and internationally, and preparation for post-graduation outcomes. The adoption of this term reflects the scholarly literature in the field, acknowledging the complex development required to build capacity in the research sector.

Recommendation 7: AARE recommends an adoption of the term 'research education' in preference to 'research training', in order to acknowledge and to address the complex work of developing advanced level research capacities for a rapidly changing, complex knowledge economy

The Education research community has initiated innovative ideas about research education. It has fostered inter-institutional collaboration, connecting postgraduate student research with real world problems of policy and practice, as well as to fundamental understanding.

Further, Australian Education researchers have been prominent internationally in the conceptual, empirical and developmental work of building a strong base of knowledge in research education, having undertaken a number of ARC and other major studies into doctoral work in Australia, and led the field in research and publication (eg Green Maxwell & Shanahan, 2001, McWilliam et al 2002, Evans et al, 2005, Boud & Lee, 2008). This work enters into a dialogue with scholarly developments in research education internationally. There is an important role for scholarly, evidence-based debate and dialogue about the best ways forward for research education for Australian universities. Generic attributes debates (eg Borthwick & Wissler 2003), together with debates about the best practice for the provision of education and training for HDR students, are not best addressed through simplistic short-term solutions. AARE would welcome an opportunity to engage in rigorous examination of ways forward.

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