

THE AUSTRALIAN NATIONAL UNIVERSITY

CENTRE FOR EDUCATIONAL DEVELOPMENT AND ACADEMIC METHODS
CEDAM

Friday, 19 December 1997

Dear Mr West

I would like to take advantage of the opportunity to respond to your discussion paper *Learning for Life*, and comment on the sections on graduate education, and Appendices 8 and 10 in particular. My first comment is to welcome the emphasis on issues to do with maximising student choice and the effectiveness of research training for future employment. I also agree very strongly with the view expressed in *Learning for Life* that supervision of research training candidates is a teaching function. This last point is critical to ensuring high quality graduate education. It is from this position that I would like to raise some further issues about the nature of research training and its supervision in the current environment in Australia.

I have recently completed with a colleague Lys Ford, a study funded by DEETYA, which we have titled *Open and Flexible PhD Study and Research*. As part of this study we looked at the demographic profile of doctoral candidates in 1996, distribution by Broad Fields of Study (BFOS) and enrolment status; interviewed many students, administrators and supervisors; and reviewed the relevant literature. In producing this report we sought to bring together the macro-level of policy analysis on research developments and research training (cf. ARC/NBEET 1966, Clark 1996, Scott 1997) with stories of the micro-world of students and supervisors experiencing the changing world of higher education and research. In so doing we raised more issues and questions than answers, but there is enough in our report we think to challenge some assumptions which underlie much of the current debate.

In our report we claim as indicated in the title that doctoral study is best seen as a form of open and flexible teaching and learning. We found that there is:

- a diverse population of candidates in terms of their age and sex; of the institution of enrolment and the candidates' geographic origin; and with respect to the discipline base of the program of study given the proliferation of knowledge, subspecialities and crossdisciplinary and applied research;
- the 'open campus' is a physical reality given mobility during candidature, part-time and 'mixed' enrolment, continuous on/off campus enrolment, and the growth of supervised research and study off-campus. The difference from before is however one of degree among candidates and institutions. Current debate and official data collection do not reflect this flexibility;
- the 'virtual' campus is increasingly a reality as communication and information technology (CIT) become more accessible. However not all candidates are participating in this virtual reality, and access should not be assumed. For those who are online, CIT is usually an enhancement of, or addition to other modes of communication, as opposed to being a complete substitute for previous methods of communication and supervisory interaction. For the online-literate CIT allows engagement with worldwide scholarly communities which can be wide ranging in interest, or very small and specialist;
- there are a variety of flexible supervisory arrangements in place to accommodate the varying needs of students within the context of more traditional supervisory practice, and within the

context of collaborative research arrangements. These arrangements are bounded by institutional regulations and codes of practice;

- some doctoral programs have been designed intentionally and differently to accommodate on/off campus enrolment, and research and study linked to the workplace (Pearson&Ford 1997, pp. ix-x).

Thus we see the present situation in higher education at the doctoral level as one characterized by diversity, complexity and mobility, where it is no longer useful to assume a 'norm' for research training candidates.

The diversity of the doctoral student population is significant for what it means about the needs of the students for support, and the type of relationship they might be expecting with their supervisors. Only a minority are the 'young persons' who seem to be assumed in *Learning for Life* p. 140 ('Postgraduate research training should create innovative young researchers who can lead Australia's research effort in the future'). Some 65% of doctoral students were aged 30 years or more in 1996. The explanation for this is that many are established professionals and industry people returning to study to consolidate their understanding and enhance rather than enter careers. A significant group are academic staff upgrading their qualifications. Even in the Broad Field of Study of science only 56% of the doctoral students were under 30 years of age in 1996.

Disciplinary diversity is also significant and masks even greater diversity if we look at the level of subspecialities. Only 55% of doctoral students were reportedly studying in the BFOS of science, veterinary science, health, engineering, and agriculture, which presumably require the provisions for 'clinical, laboratory' infrastructure referred to in p. 166 ('the value of tuition scholarships would vary by discipline group, for example, clinical, laboratory and other disciplines'). The 'other' 45% includes many doctoral students in professional fields, as well as students in the humanities and social sciences, some of whom carry out applied research. Moreover some candidates are workbased and carry out their research at the work site, and some are in areas of medicine which are nonclinical. Of course such distinctions are problematic in varying respects; my point is that any allocation of funds for research training needs to take account of the multiplicity of needs and arrangements now in place, and recognise that significant research, which is not field work, will be taking place outside universities.

This is significant as the trend is likely to be for more research training taking place in various sites, on and off-campus, and supervision coming from people other than supervisors in the institution of enrolment. These phenomena are related to the increasing complexity of higher education resulting from the drive to specialization, the changing nature of research, and the mobility of staff and students. As we stated in our report:

The balance of research carried out in universities, industry, government funded laboratories and other agencies is changing as part of the more fundamental change taking place in knowledge production referred to in Chapter 2. The impact of these global trends on Australian universities and research is discussed in a recent ARC report: *Patterns of Research Activity in Australian Universities (1996)*. More research within universities and across universities is interdisciplinary and multi-disciplinary, more applied and more industry related. This combined with growing specialization means that university departments are increasingly becoming organizational and administrative entities; research takes place in research groups or teams which may span existing departmental structures and industry. The increase of the numbers of professional students also means more interest in research and joint supervisory arrangements in industries such as nursing, education, social work, business and media. Universities are becoming part of 'a dense network of knowledge institutions that

extends into industry, hospitals, government and the media' (p. 11). There are various arrangements in place to structure PhD supervision in this context (Pearson&Ford 1997, pp. 50-51)

In this context too, staff and students can be mobile in different ways and to varying degrees. It has been a feature of discussions of PhD education in Australia to focus on the lack of 'mobility' of candidates who prefer to enrol for advanced study and research at the same institution, and often department, in which they undertook undergraduate study. However this focus misses the potential for and extent of mobility **during** candidature as candidates follow supervisors, seek supervision and collegial interaction in 'virtual' mode, carry out research and study off-campus for all of a candidature, or for limited periods of time in other laboratories or sites, within Australia or overseas, and change status from full-time to part-time enrolment and vice-versa as their life circumstances change. Some of this mobility takes place within those academic and professional networks, national and international, which counter disciplinary fragmentation.

As our study documents there are many strategies in place to address the current open and flexible system. These strategies include varying collaborations across institutions, national schools or institutes within specific disciplines such as Physics, Mathematics, and Housing and Urban Studies, specially structured programs such as the Multi-modal program at QUT, or arrangements for work-based research. What they all have in common is a recognition that doctoral students may wish to research and study in various locations, that expertise in specialised areas is scarce and may not be available in the institution of enrolment, and that many professional students will be combining their doctoral study with work.

This world of increasingly open and flexible PhD study and research renders problematic traditional ideas about the nature of supervision and the quality of the research environment. Established attitudes and practice may no longer be viable or appropriate. In our study we recommended more study, and in particular recommended (out of 6 recommendations) that:

Recommendation 3

The growing complexity of supervisory arrangements be recognised; and a rethink of 'traditional' supervisory practice be undertaken through a revision of the AVCC Code of Practice for Maintaining and Monitoring Academic Quality and Standards in Higher Degrees (1990) to reflect the existence of open and flexible study and research as usual practice.

Recommendation 4

There be further study of PhD education to address issues of how co-supervision can be provided optimally in various complex collaborative research settings, in industry, and in professional fields.

Yours sincerely

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References

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