# THE KNOWLEDGE ECONOMY AND HIGHER DEGREE RESEARCH TRAINING

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**Abstract**:

This paper examines three factors driving Australian universities generally, and Faculties of Education specifically, to develop explicit higher degree research (HDR) training curricula. These three factors are (1) the imperatives of the knowledge or informational economy, (2) national policies based on progress and performance measures and (3) accountability to knowledge users/consumers.

A case study of how one institution responded to these demands in terms of an explicit, structured HDR training program is explored. Specifically the paper examines the design of the HDR curriculum, its enactment and outcomes. It is argued that research supervision should be regarded as one of the most complex and advanced forms of teaching, and one that requires urgent attention.

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# THE KNOWLEDGE ECONOMY AND HIGHER DEGREE RESEARCH TRAINING[1]

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## Introduction

In its most recent document, *Higher Education at the Crossroads*, the Department of Education, Science and Technology (DEST, 2002) sets out the parameters within which the consultation process for the review of Australian Higher Education will take place.[2] The title indexes "crisis" and the need for "right decisions". Arguably it therefore calls into question much of present practice and assumptions in that domain. *Higher Education at the Crossroads* thus continues in the vein of the earlier discussion document *New Knowledge, New Opportunities* (Kemp, 1999a: 9), and the consequent policy statement *Knowledge and Innovation* (Kemp, 1999b). Of significance is the emphasis that is placed on the education and training of higher degree research (HDR) students in these and other recent federal government documents on higher education reform.

Within these official discourses, HDR students are constituted as a major resource in terms of research yield, academic rejuvenation and dissemination of 'knowledge and skills within and between the research and wider communities' (Kemp, 1999b: 17). They are also, as the 1998 paper, *Research Training for the 21st Century* (Report No. 33, DETYA, 1998), emphasizes, of critical 'importance to Australia's economic future' in 'developing to the maximum its intellectual capital' (p.1).

However, the documents report that there have been persistent concerns about the 'quality and breadth of research training' (Kemp, 1999a: 910, cf. also Report No. 33, DETYA, 1998). These persistent concerns have been voiced by users/consumers of research training, namely graduate students and industry employers. These groups report that research training is often 'narrow and limiting in its specialisation; poorly supervised and out of line with the needs and expectations of employers' (Kemp, 199a: 10). The 1998 Research Training paper adds detail to this issue, noting under the header 'Quality of Supervision' the following skills that are considered 'to be in demand by research and development managers':

> fluency of ideas, information ordering, logical reasoning, oral communication, originality, persistence, social sensitivity, persuasion, problem sensitivity, resistance to premature judgement and written communication (DETYA, 1998: 4).

Reform of the higher education sector, in order to redress these "deficiencies" and 'reduce the high rates of drop-out and significant waste of both talent and investment', is to be achieved by performance based funding imperatives (DETYA, 2000: 10).

In the first three pages of the current discussion paper *Higher Education at the Crossroads* (DEST, 2002), the government lays out the limits and possibilities for the outcomes of the consultation process it then sets in place. Thus 'a framework of principles is presented … to guide thinking about the sort of higher education Australia seeks and needs' (p.2). In this magisterial formulation we[3] are told 'The Government has emphasised that…' and 'The Government sees the purpose of higher education as…' (p.1). In a series of subheadings we find that higher education is ideally construed as 'value adding', 'learner-centred', 'high quality', 'equitable', 'responsive', 'diverse', 'innovative', 'flexible', 'cost-effective', 'publicly accountable' and 'socially responsible' (pp.2-3).

These desired attributes for contemporary higher education are cobbled together (cf. Laclau & Mouffe, 1985) into an array of themes common to discourses of the post-industrial and post-modern state: the imperatives of the knowledge or informational economy, national policies based on progress and performance measures, and accountability to knowledge users/consumers. The points which follow, taken from the *Crossroads* document (DEST, 2002), exemplify the range of demands and expectations for the post-modern university[4], and the complexity and tensions of their articulation:

- developing "human capital" for the benefit of the individual ('to invest in their future') and for their community/society ('a productive contribution to the community' p.1)
- an "instrumental" and "flexible" approach to "economic growth" ('a dynamic synergy between research and development and innovation' p.1)
- resolving a conjunction of stresses from "globalisation" and "post colonialism" (hence the emphasis on 'international education and research, the global economy and international relations' p.1)
- equitably meeting the diverse needs of a "multicultural" population, indigenous peoples
- knowledge/skills/technology as a "market-oriented commodity" ('enabling individuals to adapt and learn, consistent with the needs of an adaptable knowledge-based economy' p.1; and to 'add value to individuals and the society' p.2)
- an "economically rational" use of resources, including staff and students, and a demand for greater efficiency/effectiveness ('efficiently use the financial resources' to achieve prescribed results) (p.3)
- a requirement for public "accountability" and "responsibility" – 'institutions are accountable to their respective stakeholders' (p.3) including government, industry and the community as well as "clients", hence the need for 'transparent' policies and 'public scrutiny'
- coping with "unpredictability" – hence the need to 'generate new ideas, solve problems, improve products or processes and adapt to new and changing environments' (p.2); 'changing national priorities' (p.3) and

- "flexibility" — higher education 'needs resilient absorptive capacity for accommodating unforeseen changes in demand' (p.3) 'organisational flexibility' (p.3), resource and staffing flexibility, a range of 'effective pathways for learning' including 'modes of learning, delivery methods, assessment, and availability of learning resources' (p.3)

Despite a veneer of "democratic" process (submissions, consultative meetings, a consultative forum) these recent government discussion and policy papers (DEST, 2002; Kemp, 1999a, 1999b) show not simply that the Government will maintain its control over higher education, but how this will be done. We refer here not only to the by-now well-known process of macro-management (nicely described as "steering at a distance" by Kickert, 1991) in which autonomy to deliver broadly specified programs and services is balanced by tighter accountability measures (Knight & Lingard, 1997), but also to increasing pressure to change the traditional content and processes of higher education to meet the demands of the so-called post-Industrial (Bell, 1973), post-modern (Lyotard, 1985), informational (Castells, 2000), and globalised economy (Harvey, 1989). We note also concomitant pressures to 'undo' aspects of the Dawkins (1988) 'Unified National System' of Higher Education (HE) reforms in order to achieve supposedly greater specialization and differentiation between HE institutions, and in particular, the regional universities. These putative changes index the imperatives of the knowledge or informational economy, government policies based on progress and performance measures and demands for accountability to knowledge users/clients.

In short, the official discourses of *Higher Education at the Crossroads* (DEST, 2002)*, New Knowledge, New Opportunities* (Kemp, 1999a) and *Knowledge and Innovation* (kemp, 1999b), exemplify and apply many of the central themes of the post-modern condition. We note, for example, the shift in practice and values from truth to knowledge to power, from pure to applied research, from science to technology, the commodification and commercialization of knowledge, the marketization of education as a product, with clients, consumers, and value-added products. We note with Lyotard (1985: 46) the new goal of 'performativity', defined as 'the best possible input/output equation'. Research and knowledge, he argues, are legitimated through performativity. Thus he concludes that the critical issues for higher education have become 'What use is it', 'Is it saleable?' and 'Is it efficient' (Lyotard, 1985: 51). David Harvey's (1989) distinction between 'Fordist modernity' and 'flexible postmodernity' is equally germane.[5] This is exemplified in the contrast between the Dawkins' (1988) *White Paper* and Nelson's (current federal Minister for Education, Science and Technology) opus, with its stress on flexibility, adaptability, diversity, decentralisation, strategic management, entrepreneurialism, multiple tasks, information communication technologies (ICT) and other alternatives to traditional modes of teaching and learning.

Our position here, however, is neither to bury Caesar nor to praise him. We seek to move beyond (though not to negate) critique. Rather, given the parameters elaborated above, and taking their rhetoric at face value, what sort of 'good work' is possible and justifiable within and upon such a field of possibilities? Here, with Laxon and Knight (1992), we would make the point that in "Western", "democratic" societies state policy prescriptions are typically both enabling and disabling (cf. also Laclau & Mouffe, 1985). Morgan (1997: ix), in speaking of 'the art of the possible', has made this point well. In taking this position, we seek to move beyond the necessary but negative stance of 'critical policy analysis' (e.g., Taylor, Rizvi, Lingard & Henry, 1997).

Our objective then, is to describe a program for developing the skills and knowledge of HDR students which is educationally justified *and* justifiable in terms of the assumptions built into recent federal government discourses on the higher education sector generally, and higher degree research training more specifically. In other words, we describe a HDR training program that aimed to be 'learner-centred', 'high quality', 'equitable', 'responsive', 'diverse', 'innovative', 'flexible', 'cost-effective', 'publicly accountable' and 'socially responsible' (DEST, 2002: 2-3). It also attempted to construct a pedagogic context in which students acquired the information/knowledge resources considered important to prospective employers, namely, information ordering, logical reasoning, persistence, social sensitivity, problem sensitivity, and oral and written communication skills (DETYA, 1998: 4).

First, however, we review institutional responses to the external audit and accountability measures imposed by higher education funding authorities. Then, we describe how one university department (Faculty of Education, QUT) produced a HDR training program that attempted to meet the educational needs of students, as well as the performance and accountability demands of government.

**Institutional Responses: Audit Measures, Training Plans and Programs**

In an attempt to manage HDR performance outcomes, universities worldwide have instigated numerous structural or organizational changes, ranging from the development of HDR training plans and programs to the introduction of 'audit' mechanisms to measure 'teaching effectiveness', 'research quality' and 'research output' (Delamont, Atkinson & Parry, 1997; Shore & Wright, 1999). Without doubt, academics have vested interests in contesting external accountability and audit measures introduced by funding organizations. After all, they are engaged in a struggle to define what constitutes university knowledge work, and

consequently what constitutes the post-modern university (Cowen 1996). At the same time, however, academics have produced a number of studies on HDR pedagogic work, specifically detailing the categories of knowledge needed for effective supervision. Thus academics have been active in not only challenging and contesting the external audit measures introduced by funding organizations, but also producing alternative instruments for monitoring the quality of HDR pedagogic work.

**Research Supervision as Explicit Teaching**

The debate in the literature on the form of pedagogy appropriate to HDR studies centres on the character and aims of postgraduate research education. At the core of this debate is whether the value of doctoral studies lies in their outcome (new knowledge) or in the process (training in research) (Latona, 2001). On the one hand, academics (Deem & Brehony, 2000; Giblett, 1992: Green & Lee, 1999) propose that postgraduate research supervision is one of the most complex and advanced forms of teaching. From this perspective, supervisors need to be trained/educated in the *pedagogical content knowledge* of HDR supervision. On the other hand, there are cohorts of researchers who suggest that HDR supervision is a form of 'mentorship' or 'critical conversation' rather than 'direct instruction'. These academics place priority on the independent research rather than the pedagogical component of HDR studies. However, as noted above, recent federal government policies tend to lean towards the pedagogical stance on HDR supervision (Gibson, 2002). The position adopted by the government within these policy statements is substantiated by research studies which indicate that the 'quality of supervision' is the most significant variable influencing HDR completion rates (Latona, 2001). Specifically, these research studies indicate that there is a strong correlation between the quality of the feedback provided by the supervisor to the student throughout the period of candidature and HDR completion rates. 'Feedback must be timely, thorough and critical and be given within a supportive personal relationship between supervisor and student' (Latona, 2001: 5).

In recent years, the focus on HDR supervision as pedagogic work has produced a number of teaching innovations, some of which are listed below:

- the rights and obligations of all parties made explicit through guidelines,
- induction and/or structured research skills training,
- supervision by academic panels,
- conferences, workshops, formalized peer group meetings,
- accredited staff training and needs-based staff development (Latona, 2001).

In addition, the focus on HDR supervision as pedagogic work has produced a spate of studies on the forms or types of knowledge necessary for effective supervision. In terms of HDR

training, researchers not only have to manage knowledge pertaining to the teaching/learning component of pedagogic work, but also discipline specific research knowledge, and organizational systems knowledge.

A number of researchers have discussed the implications of the exponential growth in discipline specific research knowledge to HDR training. Specifically, they argue that universities are no longer the sole and/or key sites or institutions for the generation of new knowledge (Clark cited in Cowen, 1996; Johnston, 1998). New forms of research-based bodies in the private sector, in non-government organizations and in civic advocacy forums (Muller, 2000: 147) compete with universities in the production of knowledge. Moreover, these researchers note that all specialist expert knowledge is encoded in highly complex symbolic forms and must be decoded or translated (pedagogised) in order to be accessible to those outside the specialist domains. At the same time, knowledge producers increasingly lack the time and/or resources to convert or translate new knowledge into a form accessible to non-specialist consumers. Thus, the pedagogising of knowledge is increasingly undertaken by agents of recontextualization, that is, academics or educators engaged in designing HDR training and supervising doctoral candidates. This has implications for 'what' knowledge is available to be converted into pedagogic communication, 'who' (social division of agencies and agents) will undertake the work of pedagogising knowledge, and 'how' this knowledge is transformed into pedagogic forms (Bernstein, 2000).

A number of researchers (Hegarty, 2000; Turner-Bissett, 1999) have attempted to classify the knowledge base of agents (teachers, academics, industry-based researchers) responsible for translating or converting expert knowledge into pedagogic communication. Turner-Bissett (1999: 43) classifies teacher knowledge (defined as *pedagogical content knowledge*) into eleven categories namely, (i) substantive subject knowledge; (ii) syntactic subject knowledge; (iii) beliefs about the subject; (iv) curriculum knowledge; (v) general pedagogical knowledge; (vi) knowledge/models of teaching; (vii) knowledge of learners: cognitive; (viii) knowledge of learners: empirical; (ix) knowledge of self; (x) knowledge of educational contexts; (xi) knowledge of educational ends. She proposes that this classification system enables teachers to develop a better grasp of what they need to know and understand, as well as what they need to be able to do, in order to teach effectively (Turner-Bissett, 1999). Other researchers have differentiated between knowledge that can be readily codified or made explicit and therefore commodified, and knowledge that is tacit or implicit (Roberts, 2001). The former category of knowledge includes abstract or propositional knowledge, as well as knowledge that has been embedded into systematic routines and procedures, or encoded into institutional policy. By

contrast, tacit knowledge includes embodied knowledge, that is, knowledge acquired by doing-the-job and grounded in specific contexts (Singh, McWilliam & Taylor, 2001).

The selection and organization of knowledge for the purposes of pedagogic communication has become an increasingly complex matter that is not only of concern to the community of peers/scholars, but also the wider general public. In the context of performance-based funding imperatives, universities cannot afford a 'trial and error'' approach to HDR pedagogic work. Nor can HDR training be contained within the one-on-one supervisor-to-student pedagogic relation (Singh *et al.,* 2001).

In what follows, we describe how one faculty responded to these new times of a knowledge economy, state performance-based funding imperatives, and public demands for accountability in terms of explicit HDR training. In a culture of knowledge productivity or performativity, non-completion and/or slow completion of HDR studies constitutes an institutional failure to perform. In other words, a university's investment in research training and supervision, that is, the investment of intellectual, social and material capital, has been poorly managed in terms of HDR productivity outcomes. Poor management of HDR training materialises when: (1) students do not complete on-time; (2) fail to complete postgraduate work despite substantial investment of intellectual, social and material capital/resources, and/or (3) transfer to another institution during the period of candidature and thus transfer intellectual and social capital, as well as federal government funding awarded to institutions on the basis of HDR completions.

**New Universities in New Times: A Case Study Institution**

QUT was conferred university status in 1989 as part of a Federal government initiative to constitute a unified national system (UNS) of higher education institutions by removing the old binary system of research/teaching and teaching only institutions (Dawkins, 1988). In 1990, following QUT's amalgamation with the Brisbane College of Advanced Education, staff in the Faculty of Education, QUT, who had previously only taught in preservice and inservice teacher education programs, were also expected to: (1) compete for nationally competitive research funding, (2) manage research projects, (3) publish research findings in refereed outlets, and (4) supervise higher degree research (HDR) students. Moreover, this cohort of teacher educators were expected to compete in a research field in which many had little experience, and alongside colleagues who had a history of research work via their employment in the older research universities.

The conceptualisation of research in the Faculty of Education, QUT, is very much a product of this recent transition to university status. According to Kenway (forthcoming: 8) given the history of Education Faculties, the research focus has often been driven 'from experience and problems in practice'. It is only within a few sub-disciplines of education, namely educational sociology and psychology, that research is viewed as a contribution to a body of knowledge 'which exists above and beyond the more fluid and fleeting investments of the profession and education systems' (Kenway, forthcoming: 8).

Moreover, HDR students in Education faculties most often come to postgraduate study 'seeking a specialization directed towards enhancement of their professional practice and possibly their career choices' (Kenway, forthcoming: 9). Thus, most postgraduate programs are directed towards professional development rather than preparation for further research. In addition, the cohort of students who undertake HDR studies in Education faculties are most likely to be enrolled 'part-time, mature age, and typically established, mid-career education professionals' (Kenway, forthcoming: 9).

**Explicating Pedagogical Principles of HDR Work**

What follows is a description of the knowledge and skills selected and organized within one research higher degree training exercise within the Faculty of Education, QUT. We are not claiming that QUT, or indeed the Faculty of Education, has a unique role in terms of organizing postgraduate student conferences. Rather, our purpose is to document the curricular knowledge produced, disseminated and consumed by students through this training initiative. Specifically, we document the generative principles (sets of rules, ensemble of procedures) which guided this foray into constructing curricula and modes of pedagogy that would assist a large number of postgraduate students to acquire, as one student put it, '*the finer details of academic discourse'* (see Bourdieu, Passeron & de Saint Martin, 1994).

Broadly, the *Getting on the Conference Trail* postgraduate training exercise was conducted over a period of seven months. It was specifically designed to minimize the risks associated with non-completions and slow completions of HDR studies in the Faculty of Education by providing students with skills in writing for conference presentation and publication. Many of the staff involved in the HDR training initiative wanted to shift postgraduate research teaching from the 'trial and error' or 'hit or miss' approach (an approach where some students get access to the privileged texts of academic discourse by chance, luck, or working the system) to a more systematic, explicit, and intensive mode of HDR pedagogic work. In the past, students who acquired HDR knowledge tended to come from privileged backgrounds

and therefore had the requisite social, intellectual and material capital (Bourdieu, 1997) to negotiate the university system and ensure that they attained the knowledge and skills to complete their dissertations. Given the substantial increase in the number and diversity of students completing HDR work, as well as the importance of research skills and knowledge to gaining meaningful employment in knowledge industries, staff were particularly concerned with developing explicit HDR training curricula.

In general terms, the aim of the HDR training exercise was to shift the local, disciplinary-specific or 'craft' pedagogical knowledge of the individual academic supervisor into a wider institutional communication system (Muller, 2000). The selection and organization of research training curricular was based on the assumption that a core component of HDR work is the development of analytically rigorous reading and writing skills, that is, a particular mode of interrogation (Brown & Dowling, 1998). The conference organizers wanted to assist students, through a structured teaching/learning context, to acquire the mental and bodily dispositions or *habitus* to recognize what (content, form) constitutes a research paper, as well as produce and present such a paper (Bernstein, 2000; Bourdieu, 1992). Specifically, staff (led by the first author) attempted to construct a teaching/learning milieu that supported and systematically guided students through the stages of writing a 5,000 word paper for presentation and publication on one aspect of their research work. Thus students had to learn to distinguish between the content and form of various academic discourses, namely conference research papers and papers for an edited book publication. In addition, students were expected to distinguish between the different types of discourses within the broad category of postgraduate research papers, namely, literature review, theoretical paper, and analytic reportage of data. Significantly, the research paper had to be publicly presented and therefore defended, as well as subjected to a rigorous review process. Thus the team of academics involved in the HDR training exercise designed a teaching/learning context to assist students develop the skills of critically assessing reviewers' comments. Moreover, students were guided in the process of rewriting their papers, taking into account the reviewers' comments.

The acquisition of research knowledge was conceptualized as entailing an accumulation of a labour of self-formation, a labour of inculcation and transformation through a long process of pedagogic socialization (Bernstein, 2000; Bourdieu, 1992). Specifically, the focus was on three forms of research pedagogical knowledge or resources that students needed to learn or acquire, namely, procedural, propositional and dispositional knowledge (Billet, 1993; Billet & Rose, 1996). These different types of knowledge are depicted in the following table (see also Singh, Best & Dooley, 1999):

| **Knowledge Type** | **Descriptor** | **Example** |
|---|---|---|
| Procedural knowledge | Techniques, skills, and ability to secure goals – both general and specific | Technique of writing an opening paragraph for a conference paper, thesis chapter. Knowledge that is readily available for codification. |
| Propositional knowledge | Facts, assertions, concepts, propositions | Developing theoretical tools from the literature review. Applying these tools to analysis of data. Knowledge that can be codified and made explicit. |
| Dispositional knowledge | Attributes and values associated with becoming a researcher | Writing each day, drafting and redrafting, editing. Embodied knowledge, tacit, implicit. |

**Table 1: Categories of Research Pedagogical Knowledge**

In the HDR training exercise, the emphasis was on gradually moving students from the stage of non-publisher to novice publisher of research work. Students were thus provided with one-on-one and group learning activities focused on the development and refinement of research writing skills. The group learning activities included a series of four research training workshops:

- Writing a paper abstract and/or proposal
- The Paper Review Process
- Writing Workshop on Draft Full Paper
- Effective Conference Presentation Skills

A virtual learning milieu was also constructed for those participants who could not access the workshops. Thus, materials presented at the workshops were made available to all students via posting on the conference web-page. In addition, a *Designing Researcher Group* was organized by staff and students to discuss theoretical and methodological issues of HDR work. This group met on a monthly basis (later on a fortnightly basis). Students also took the initiative of setting up their own informal support networks in order to read and comment on papers and/or to trial conference paper presentations. A crucial feature of the project was that a retired academic (the second author), who had extensive experience with successful HDR supervision, was employed as an academic adviser for the duration of the training initiative to assist students in the drafting, writing, and re-writing of papers. Students were encouraged to submit a draft of their paper for feedback one week prior to the *Writing Workshop on Draft Full Paper*. Many students received comments on their draft paper from their supervisors, the academic adviser, and at times the Director of a respective Research Centre. At the *Writing Workshop on Draft Full Paper*, students were taught some generic principles of academic writing. They were then encouraged to work in pairs and provide critical constructive

feedback on each other's work. Students were encouraged to attend to the feedback on their draft paper before the conference presentation. At the *Effective Conference Presentation Skills* workshop students were encouraged to rewrite their paper for oral presentation. Explicit instruction was provided in the design of resources or aides to accompany the paper presentation (overhead transparencies, power-point slides). In addition, key points about media presentations were elaborated. For example, the principles of the MBE, namely present a message (Message), explain why it is important (Because), give a concrete illustration (Example) were discussed with the students at the workshop.

Students were again encouraged to re-write their paper using feedback from the conference presentation sessions, and submit for publication in an edited book collection (Singh & McWilliam, 2001). All papers were sent out to two reviewers, and students were encouraged to seek the assistance of their supervisor(s) and the academic adviser in terms of interpreting the reviewers' comments. Finally, students were expected to submit their revised paper for publication with an accompanying letter detailing how they had addressed the reviewers' comments. In addition to the teaching/learning activities organized by the group of academics involved in the HDR training exercise, some students established collegial peer sessions, such as a writing symposium and a preliminary conference presentation session.

The pedagogic activities documented above attempted to follow the four phases of the guided on-the-job model of learning, namely, modelling, coaching, scaffolding and fading (Billet, 1993; Billet & Rose, 1996).

| | | | |
|---|---|---|---|
| Modelling → | Coaching → | Scaffolding → | Fading |

**Figure1: The guided model of learning on-the-job.**

Tasks in each of these phases were defined as follows:

***Modelling*:** workshop leader explicates the knowledge required to execute and accomplish a task such as writing a conference paper.
***Coaching:*** supervisor(s), academic adviser, peer support group provide regular feedback while the learner performs the task. The feedback may consist of repeated demonstrations of the task and verbal explanations.
***Scaffolding:*** refers to the support provided to learners, but at a greater distance than available at the stage of coaching. This support may take the form of assistance with interpreting reviewers' comments on paper. At this stage, the expert accurately assesses the learner's current skill level, as well as the optimum or maximum skill level that the learner can attain in a training session. Learning materials or opportunities are provided to maximize knowledge development.
***Fading*** refers to the gradual removal of support from the learner. By the end of the HDR training exercise some of the students were in a position to write and submit papers for publication autonomously.

This is not meant to imply that all of the workshops ran smoothly, or that the construction of each workshop did not involve negotiation of different research agendas/perspectives between various discipline specific interest groups within the faculty. Such is the diversity of research within Education faculties that struggles over what skills/knowledge should be selected for a HDR training initiative, and how these skills/knowledge should be taught and evaluated are inevitable. However, in the context of state imperatives questioning the 'wastage of public and private resources' (DETYA, 1999) in relation to non-completions and slow-completions of HDR work, concerted attempts were made to work across these differences and teach generic research skills/knowledge associated with the production of academic discourses.

At the time of this postgraduate training exercise, 162 students were enrolled in doctoral studies (PhD and Education Doctorate) in the Faculty of Education, QUT (Pivot Tables, http://www/qut.edu.au/chan/pr/data/pivot/pvt01.html). Out of this cohort of students, 32 submitted a conference paper abstract; 29 actually presented a conference paper; and 22 papers were accepted for publication. It should also be noted that 75 people registered and attended the postgraduate student conference day (47 students, 25 staff, and 3 guests). Moreover, some of the student attendees indicated their willingness to participate more actively in a HDR training exercise in the following year. In addition, at the time of writing this paper, four students stated that they had relevant articles accepted elsewhere, and mentioned that the pedagogic work of the HDR training exercise had '*helped significantly'* in this publication process.

Feedback from the students indicated that they had acquired a number of academic skills through this specific HDR training exercise. Some of the students' comments are captured below:

- *the discipline of writing to a strict word limit and speaking in a limited time*
- *forced me to articulate my study*
- *made my thinking logical*
- *challenged to write, produce a paper*
- *fine-tuning ideas*
- *opportunity for post grads to express themselves and develop their respective academic portfolios*
- *the development of collegiality ... informal conversations and networks that are proving to be very valuable – in that they encourage a sense of connectedness that I didn't think existed before*
- *tightening up some of my writing skills and has helped me clarify some aspects of my study*
- *intellectual rigour, the art of academic writing, perseverance and tenacity as well as collegiality.*

At the same time however, much of this academic skill development continued to happen on a one-to-one basis, either with the supervisor and/or the academic adviser employed for the duration of the HDR training exercise. Attendance at the workshops varied from 10 to 20 participants, with the most common reason given by students for non-attendance being *'work commitments'*.

The HDR training initiative documented above has continued with the retention of the academic advisor to run workshops with research students, and to assist with dissertation work. In addition, students have been encouraged to submit and present one refereed conference paper this year. Moreover, funding has been set aside for a structured workshop-based approach leading to a postgraduate student conference on a bi-annual basis. In 2003, the faculty will move towards offering modularised research training courses. HDR students will be expected to select and complete a range of these modules in order to build a comprehensive research training portfolio.

**Conclusion**

To acknowledge the postmodern condition or *inter alia* the postmodern university is not *per se* to approve them. We could also, perhaps, acknowledge that in their prior situation universities and colleges were equally subject to a range of constraints and prescriptions from governments, governing bodies and resource limitations. Yet for many of us who continue to work in universities, the question of *doing good work* remains. We have attempted to sketch out one way in which we believe good work can be done, and done well. Drawing on Laclau and Mouffe's (1985) notions of articulation and rearticulation of discursive elements, we would argue that the themes and discourses of the *Crossroads* document and other recent policy statements can be adapted and reconstrued to support and justify approaches such as we have outlined. This program was constructed to operate effectively and efficiently within the imperatives of the knowledge or informational economy, national policies based on progress and performance measures and accountability requirements to knowledge users/consumers. It was designed to be 'innovative', 'flexible', 'learner-centred', 'equitable', 'cost-effective', 'accountable' and 'responsive to diverse needs and interests'. It sought to develop such research skills as 'fluency of ideas, information ordering, logical reasoning, oral communication, originality, persistence, social sensitivity, persuasion, problem sensitivity, resistance to premature judgement and written communication' (DETYA, 1998: 4). Those who observed and those who participated can vouch that it did meet these criteria.

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1 An earlier version of this paper is included in the book which emerged out of the postgraduate student conference, QUT, Faculty of Education: Singh, P. & McWilliam, E. (Eds) (2001). Designing Educational Research. Theories, Methods and Practices. Flaxton: PostPressed.

2 We note in passing the irony of the Minister quoting that arch-imperialist orator Winston Churchill to the effect that 'the empires of the future will be the empires of the mind [!]' – a strangely anachronistic and colonial discourse to preface a document predicated on Australia's global and post-industrial situation.

3 The deictic use of this pronoun is deliberate. We are not only the objects of this discourse, we are to be subjected to it.

4 To speak of the conjunction of "post-modern" and "university" may seem an oxymoron to traditionalists, but is that not a characteristic of the post-modern?

5 We might note also Dean Ashenden's (1992, p.60) insightful claim that 'schooling is the last of the mass cottage industries' and extend this to much of the teaching undertaken at both undergraduate and postgraduate levels in universities.

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