



Australian Council of Deans of Education Incorporated

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Australian Council of Deans of Education Inc.

**Response to the Commonwealth Review of Teaching and Teacher
Education Discussion paper:**

**Young People, Schools and Innovation: towards an action plan for the
school sector**

Authorised by:

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Executive summary

The mind is not a vessel to be filled, but a fire to be kindled.
Plutarch.

Innovation is maligned, misunderstood and mandatory for success in education. The Australian Council of Deans of Education concurs with the Discussion Paper that a key aim of education should be to develop a culture of innovation and an innovative capacity in students. This does not simply mean the greater provision of information and communication technologies (ICTs), the constant celebrating of the 'new', nor even the sponsorship of programs of innovative practice alone. A holistic approach is needed to foster a culture of innovation. Change must be systemic: curriculum, assessment, school environments, and the role of educators all need to be reconceptualised in light of the knowledge economy. A culture of innovation is necessary to engage with complex changes in the conditions of commerce, technology and culture which mark the twenty-first century. Establishing environments in which innovation is encouraged, developed and rewarded is essential to the long-term success of Australian education. Ultimately, it is essential to the long-term success of Australia.

The following submission draws on *New Learning: A Charter for Australian Education* (ACDE 2001), on the ACDE submissions to Crossroads discussion papers (2002, available at www.acde.edu.au), and on the initial ACDE submission to the Commonwealth Review of Teaching and Teacher Education (October 2002). In particular, the Council notes that examples of innovative teacher education programs were included in its initial submission to the Review, and many recommendations of that submission remain of relevance to this Discussion Paper.

This submission begins by attempting to answer the key questions posed by the discussion paper, concerning the appropriate skills and capabilities required within the knowledge economy. In this context, the Council maintains that the knowledge economy concerns much more than economics. As the *Charter* outlined, substantial societal changes are evident in the conditions of culture, technology and commerce. Innovative strategies are needed in cultural, political, and social arenas, and to focus simply on the economic benefits of innovation is to frame the issue in overly narrow terms. In the knowledge economy, individuals will require a range of skills, capabilities and knowledge for their economic prosperity, but also to appreciate and work productively with cultural diversity, to contribute to civic life, to work collaboratively, and to feel comfortable and secure in their own identities.

Having highlighted the skills and sensibilities necessary for good learners in the knowledge economy, the submission addresses the role of technology raised by the discussion paper. The Council concurs that technology is important to the promotion innovative learning, but only when it is aligned to effective pedagogy. The Council also notes the existence of an alarming and growing digital divide in Australia: for technology to be harnessed effectively for the benefit of all students, substantial public investment will be required.

The submission then examines learning in a culture of innovation, arguing that curriculum and assessment need to be reframed. To create the conditions where innovation will flourish, learning environments must promote flexible assessment, interdisciplinary curriculum, and broad problem-solving skills. Student-designed and directed learning should be at the heart of new learning. An innovative framework would address the obstacles to more flexible learning environments in which individual students can be treated and assessed as such. To this end, the Council proposes a number of innovative trial programs in the subsequent section on blurring the institutional boundaries.

Teacher preparation, professional development, and establishing better links between schools and faculties of education are all essential to developing a climate of innovation. The Council maintains that the role of educators is central, both to innovation and to the knowledge economy more broadly. Simply, any attempt to produce a culture of innovation which ignores the role of educators is untenable. Better opportunities for, and recognition of, professional learning are critical, as is establishing the centrality of professional practice. The three case studies which conclude this submission emphasise the need for professional practice to be at the heart of teacher education, and for both teaching and teacher education to focus primarily on the improved learning of students.

External obstacles to innovation are numerous: at a fundamental level, an explicit national vision, and better coordination between state and territory governments towards realizing this vision, are necessary if innovation is to be truly encouraged and rewarded within our education systems. More specifically, this submission addresses barriers caused by the nature and actions of some regulatory authorities, and by a continuing paucity of public resources. This is particularly noticeable in the often neglected but highly important area of educational research, and also in support for many innovative programs such as those at the University of Sydney highlighted in the concluding case studies.

Young people, schools and innovation

The Discussion Paper correctly identifies that ‘if innovation is to be more actively pursued in schooling today, it is necessary to identify more explicitly:
What the appropriate knowledge, skills and attributes are;
What needs to be modeled and taught by schools, teachers and others; and
What priorities need to be developed, supported and evaluated collaboratively (p.3).

The knowledge, skills and attributes that individuals require for success can only be understood in the context of the knowledge economy. ACDE has articulated in detail the shifting commercial, cultural and technological conditions which define the knowledge economy, in *New Learning: A Charter for Australian Education* (2001). In the *Charter*, ACDE argued that national success within the knowledge economy will be marked by economic prosperity but, equally importantly, by social cohesion and productive diversity. Instilling innovation is necessary not only for economic success in fields such as science and technology, important though this goal is. Innovation in education has the potential to transform cultural and social relationships, and to contribute to the fulfilment of the promise of democracy. The effective establishment of conditions and processes to facilitate innovation would have far-reaching political, cultural and economic effects.

ACDE believes that knowledge today is distinguished by three characteristics: it is highly situated; rapidly changing; and more diverse than ever before. Knowledge is highly situated and increasingly particularist, that is, very specifically linked into an area of specialist knowledge, or a particular technology, or a particular subcultural interest, or a particular community group (Gee 2000). This sheer range of alternatives and lifeworld settings carries consequences for learning environments, highlighting the limitations of any curriculum focused around empirically right and wrong answers, or of any assessment techniques which seek only to measure knowledge within this narrow context (Lo Bianco 2000).

Similarly, knowledge is rapidly changing, and changing at such a rapid rate that any facts or truths learnt in schools today are likely to be redundant or contested tomorrow, no matter how immediately relevant they may seem (Gee, Hull and Lankshear 1996). In this context, the key questions are what kinds of learning will be durable, and how can we measure these? Finally, contemporary knowledge is diverse, increasingly determined by the peculiarities of a particular social and cultural context (Nakata 2000). An ability to negotiate change and difference is critical, and highly specific skills necessarily co-exist with broader understandings and sensibilities.

Knowledge workers will be situated in a climate of constant change, where individual industries are uncertain and where new forms of employment appear on a constant basis. Tomorrow’s workers will be:

flexible, possessing problem-solving skills, using multiple strategies for tackling a task, and employing a flexible solutions-orientation to knowledge (Cope and Kalantzis 2000);
self-directed learners, designers of their own learning experiences;
collaborative learners, recognizing that knowledge is increasingly created collaboratively;
good teachers and good communicators ;
of open sensibility, able to work productively with linguistic and cultural diversity;
intelligent in more than one way, including emotionally, analytically, creatively or critically; and
broadly knowledgeable, and able to engage with the different interpretative frameworks and contexts of specific information.

Developing these qualities will not be achieved through a prescriptive or inflexible curriculum. Indeed, the learning environment must be made increasingly learner-centred. Promoting critical awareness in students, and encouraging them to explore and be secure in their identities, to design their own learning experiences, and to embrace and practice innovation, are ultimately the important educational goals. Innovation policies must not aim to reach pre-ordained outcomes or targets, but rather to establish environments in which students are able and encouraged to be innovative. The case studies examined in this submission all focus on student-centred programs where the aim is to promote a culture of innovation, rather than to prescribe specific material outcomes. In reshaping the school environment to promote student-centred learning and student-directed innovation, in the promotion of learning communities, and in the enhanced professional development of educators, the Commonwealth can play a clear and ongoing leadership role.

The impact of ICTs

The Discussion Paper highlights the pervasive influence of information and communication technologies (ICTs), citing a rapid rise in household and business internet use. In the Charter, the Council maintained that technology would become central to all learning. However, it also noted that while technologies of digitization have the capacity to transform learning relationships for the better, transformation will not occur without a vision and commitment to address areas such as the growing digital divide. In fact, e-learning has the potential to be quite harmful where it is used only as a cost-cutting device to replace teachers. Learning will occur increasingly through technology, but also about technology. There is a need for technology to be humanized, and based on a critical and balanced view of its use to humans rather than a decontextualised 'how it works' view. What can technology do for us, or, when denied access, do for just some of us and thus create new inequalities? In a broad view, technology is a series of relationships, amongst humans and between humans and the natural world. It includes the capacity to use various tools and instruments to get things done, technique, method, practical reasoning, science, human impacts on the environment. All learning today should include technology in this sense as one of the key areas of learning. Technology is not just a tool for learning, in other words. It should be one of the main things that learning is about. It should be a message as well as a medium.

This is equally true of learners and teachers, given the rapidity with which technology changes.

Certainly, increasing use of technology can lead to innovative learning. Possible advantages include: whereas the chalk-and-talk classroom worked for the typical child somewhere near the middle of the class, computers can cater for classroom diversity by providing customised learning experiences which meet the needs and interests of individual students. Whereas the information resources and perspectives available in a textbook were limited and required no selection on the part of the learner, the information available on the internet is virtually unlimited and requires the development of skills of navigation and discernment. Whereas students in traditional classrooms were highly dependent on instructions ('pick up your pens and write ...'), computer aided instruction can develop the autonomous, active and interactive learner. Whereas everybody in the traditional classroom, the learners and the teacher, had to be on the same page at the same time (rigidly synchronous learning), learning through computers can be asynchronous and thus correctly paced to meet each student's needs. Whereas group work was not so easy in conventional classrooms, students can easily work collaboratively in online groups, and these groups do not have to be bounded by the walls of the classroom—they can be as wide as the world. And whereas the traditional boundaries of learning (and barriers to entry, progression and opportunity) were geographically defined (the classroom walls, the university campus), now learning can happen anywhere and at any time—at home, at work and in community settings.

However, for these kinds of new learning to occur successfully, new pedagogies and curricula will need to be designed. This will also require the professional development of teachers in understanding and using the new technologies in ways that genuinely enhance learning. It will also require addressing the growing digital divide. The *Charter* highlighted ABS figures showing that households earning \$100,000 or more are three times more likely to have access to a computer at home than those in the lowest income bracket, and nearly seven times as likely to have home internet access. As learning increasingly revolves around new technologies, access to computers and the internet is critical. One way in which the digital divide can be tackled is through the education system. Every student should have access to a computer and to the internet, in class and at home. The knowledge nation must be inclusive, and must provide opportunities for those from all backgrounds.

Challenges: learning in a culture of innovation

Learners should be encouraged, motivated, and assisted by educators to design their own learning experiences, to develop innovative capacities, and to fulfil their learning potential. To return to Plutarch's epigraph, kindling the fire of the student mind requires a retreat from prescriptive and rigidly defined educational outcomes, and an embrace of flexible, autonomous, collaborative and innovative learning. In particular, policies should aim to promote an environment in which particular skills and sensibilities can be developed. We have identified these qualities earlier in this submission, arguing that good learners will be: assisted and self-directed; flexible; collaborative; good teachers; good communicators; of open sensibility; intelligent in more than one way; and broadly knowledgeable.

The implications of these findings are numerous and significant. Perhaps most fundamentally, learning will increasingly be about creating a kind of person, with kinds of dispositions and orientations to the world, and not just persons who are in command of a body of knowledge. These persons will be able to navigate change and diversity, learn-as-they-go, solve problems, collaborate and be flexible and creative. Promoting these qualities will require substantial changes to both assessment and curriculum regimes. In assessment, for example, new techniques will mean redefining what is meant by terms such as competence, ability, capacity and intelligence. Indeed, they even involve changing the measure, from the replicated sameness of outcome anticipated by standardised testing, to similar or comparable outcomes amongst learners whose life experiences, interests and thinking styles are invariably very different. New learning advocates taking students in the direction of comparable levels of personal autonomy, self determination and access to social resources in the worlds of work, citizenship and personal life (ACDE 2001).

Within the school curriculum, new learning subjects will increasingly be interdisciplinary in their focus, and the issue of the so-called 'crowded curriculum' may be partly addressed through connective specialization. The following analysis is drawn from a forthcoming discussion paper by Ryan and Arnold. Ryan and Arnold draw on what Young (1998) describes as *connective specialization* which he contrasts sharply with the *divisive specialization* that he suggests underpins academic/vocational divisions. At its simplest, connective specialization enables individual subjects to be viewed from the point of view of the whole curriculum rather than the other way around. In the description below Young presents connective specialization in a way that is more expansive and filled with potential for reconceptualising learning and teaching,

In the sense used here, connective specialization is concerned with the links between combinations of knowledge and skills in the curriculum and the wider democratic and social goals of education. At the individual level it refers to the need for an understanding of the social, cultural, political and economic implications of any knowledge or skill in its context and how through such a curriculum, an individual can learn specific skills and knowledge but also the

capacity to take initiatives and responsibility, whatever her or his specific occupation or position (Young, 1998, p.77).

According to the ACDE new learning will be built around knowledge and capability sets, located and transferable learnings and disciplined and reflexive learning (2001). Such descriptors encapsulate the importance of real acknowledgement, understanding and action in learning and teaching within and around contexts defined by ongoing changes in individuals, communities, economies, workplaces, schools and in the world as we may think we know it.

Recent curriculum changes across Australia have seen Queensland include Life Pathways and Social Futures and Active Citizenship; South Australia: Interdependence and Identities; Tasmania: Communicating, Personal Futures, Social Responsibility and World Futures; and Brennan's proposal for ACT High Schools includes community building and learning to live together and with others. Significantly, these emphases follow a preoccupation with those aspects of schooling most easily measurable: English, Mathematics, Technology and Science. The reshaped curricula shift the focus to education's social agenda and its purposes.

A narrow focus on education, training and employment pathways is likely to meet only some of the needs of young people and in so doing overlook social, spiritual and emotional needs. In this light, Abbott's comment (1998) in "Why Good Schools Alone Will Never Be Enough" is important:

Life is more than work. If we give children the idea that they need high-level skills only for work, we have got it all wrong. They are going to need even higher-level skills to perform in a democratic society. We have got to get this absolutely right: the issue is not technology, but what it means to be human, what kind of future we want for the human race (p.24).

New Learning shifts the focus from teaching processes and products to the contexts in which learning occurs, the individual characteristics of learners and the quality of their engagement with knowledge. Curriculum, then, will increasingly be about preparing individuals for learning, working, and citizenship in a globalised context (Kalantzis 2000, 2001; Cope and Mason (eds) 2001; Gee, Hull, and Lankshear 1996). It will also be tied to restoring the promise of democracy, and will need to promote diversity and opportunity across the whole spectrum of society. To this end, concepts such as the 'new basics' will gain currency, and the need for continually evolving content will be underlined. ACDE believes that curriculum initiatives will also need to be tied to more flexible assessment practices, and taken out of a strictly institutionalised context. As schools become reconceptualised as centres of community, the importance of publicly owned and driven curriculum will be further emphasized (Kalantzis, Cope and Harvey 2002).

Blurring the institutional boundaries

Formal educational institutions will not become less important in this new learning environment, but their role will change dramatically. No longer will they be so self-contained, so neatly separated as an institution.

Educational institutions, for instance, must become more open and more closely connected with wider communities. In the Charter, ACDE recommended a number of transformations to the school, including:

- *12 by 7.* Educational institutions, including schools, should themselves offer learnings outside the formal curriculum, and outside their narrowly confined hours. They might be open 12 hours a day, from 7.00am to 7.00pm, and seven days a week, offering ‘edutainment’ activities which go well beyond the confines of the conventional curriculum—theatre programs, computer games, internet access, music, excursions, video production, sports. Increasingly, children are learning ‘out of school’, and this is most strikingly illustrated in their capacities to use the new technologies, for which their ‘education’ begins with Nintendo. It would also provide working parents with options for their children which were more structured and more educationally purposeful than ‘child minding’.
- *Socially Responsible Work.* Childhood is a time of dependence which has been radically extended in recent decades by increased retention rates in post-compulsory schooling. For adolescents, this has produced many problems of identity and behaviour, particularly for those for whom the school curriculum does not seem to have meaning and relevance and who, outside of conventional school hours, have a lot of time on their hands. Part of the blurring of institutional boundaries needs to involve breaking down the institutional and life separations of education from responsible, socially useful work. Why not place a twelve year old for several hours every other day as a helper in a pre-school or a nursing home? For a sixteen year old, why not create accredited community or work options, supervised by a mentor, and leave regular school subjects to be picked up in the evening or at the weekend? Some of this may be a matter of filling spare time. But in another respect, it could create a sense of contribution, responsibility and belonging denied young people by the now painfully attenuated dependencies of childhood. These strategies need not detract from the notion of the teacher as a professional with deep knowledge and broad skills.
- *Cross-Institutional Links.* Schools should increasingly make links with other educational institutions. Students might also take subjects offered by universities, TAFEs, workplace trainers and adult education providers. Some of this is already occurring, particularly through the VET-in Schools program, and through Learning Communities such as Albury-Wodonga, but these programs need much greater expansion and exploration.

- *Transitions.* Schools should also manage what are sometimes difficult and traumatic learning transitions: from home to school; from early to middle to later years of schooling; and from school to vocational and higher education. These learning transitions need to be recognised and planned for in a more collaborative way.
- *Involving Retired People.* Retired people should get more involved in schooling. Perhaps this might be voluntary. Or perhaps it might involve nominal payment, blurring another of the old distinctions between working and non-working life. Not only would this relieve the stresses and strains of a sector which is rapidly growing in significance and social responsibility. It would also make schools a site of learning for retired people, learning collaboratively with young people many of the things they themselves will need to know for the last thirty, perhaps forty years of their lives. Involving retired people in schools would very much be a matter of establishing a two-way learning relationship.
- *Schools as Focal Points for Social Action.* Instead of being a relatively closed, institutionally isolated system, schools should assume a fluid and more broadly encompassing role of social responsibility. For instance, substance abuse is best tackled through a series of intertwining relationships involving schools, police, health providers, community organisations and families.
- *Deinstitutionalisation.* Schools need to be deinstitutionalised. This does not mean deinstitutionalisation in the sense of privatisation—losing your school in the same way that you have lost your post office and your bank. It means that, instead of being institutions with rigid and formal boundaries, they need to be re-energised as centres of community. Instead of being places which mainly impart knowledge and set tests, schools will be centres at the heart of powerful networks of community service, which take on community problem solving, and which are safe havens, meeting places for diverse groups, and places of community trust. In an organisational sense, this will involve establishing close and lasting relationships with other service providers and community groups.

Future schooling will involve new locations, new relationships and new accountability measures. Work must be done not only on improving the ‘basics’—reducing staff/student ratios and improving school infrastructure. It must also extend to reconceptualising the school as a place of community building and sociability.

To develop this new school environment, serious effort needs to be put into experimenting with alternative structures and learning arrangements. For each of the following areas of experimentation, five pilot schools should be funded, representing different locations and community demographics. Each of these pilot projects should have two components: a planning, action and implementation component; and a research and reflection component which draws conclusions about the generalisability of the models and approaches developed in the pilot.

Action: Five pilot schools develop experimental approaches in each of the following areas (a total of forty schools):

1. The 12 by 7 School.
2. Home Learning and Parenting Skills.
3. Socially Responsible Work.
4. Developing Cross-Institutional Links.
5. Transitions: Bridging the Gaps Between Levels of Learning.
6. Involving Retired People.
7. The School as a Focal Point for Social Action.
8. De-institutionalising the School.

Teacher preparation, professional learning and development in a culture of innovation

Student achievement depends on a variety of factors both within and outside of schools, including the attitudes of family, peers and community, and access to educational resources. Within schools, however, the quality of teaching is the single most important factor influencing student achievement. More than the curriculum, more than infrastructure, and more than notebook computers, it is teaching which determines student achievement in the classroom. Teachers must be encouraged to refine their skills, supported once they enter the profession, rewarded upon attaining postgraduate qualifications, given time to learn with their colleagues, and provided opportunities for international and other exchanges. Without this commitment to quality teaching, all other commitments are necessarily flawed.

The Council believes that teacher education will in future focus more on the overall aim of reflective practice. Clearly, this does not simply mean spending more time in schools. The recent *Crossroads* Ministerial discussion paper emphasises that ‘we need a system that produces graduates who can think critically and have adaptable skill sets as well as technical expertise (Nelson, 2002: 14).’ However, as Alan Reid explains, the mere allocation of more time for initial teachers to be trained in schools “simply reproduces the status quo and reinforces the idea that teachers are technicians” (2001). Instead, Reid advocates a model based on inquiry into educational practice, which would involve project work and greater collaborative learning between students, teachers and academics (2001).

Carpenter et al (2003) have argued that recent research suggests that ‘the enhancement of school student’s learning is the most powerful stimulus for committed practice’. They maintain the centrality of the social practices of classrooms and the outcomes of these practices to teacher learning, and claim that ‘this knowledge demands that teacher education reforms to respond to the learning needs of schools students as its primary concern (2003). None of these findings refute the value of initial teachers taking classes in designated schools, but they do suggest a need to reconceptualise the practicum and teacher education more broadly. Professional practice must be at the heart of teacher education, and theory and practice must be seen as mutually informing. Enriching professional practice must be further facilitated by the expansion of mentoring and team teaching and the allocation of time for collegial discussion and feedback. All are vital to the goals of collaborative and flexible learning. Project orientated tasks, which both reflect and promote the importance of teamwork and collaborative scholarship, also need greater recognition in teacher education programs. Collaborative projects also need to be seen in the context of changing school and university environments. In the knowledge economy, schools and universities themselves will be much better integrated as the exigencies of lifelong and lifewide learning are better understood (Dusseldorp Skills Forum, 1999). Not only will greater links be sought between schools and communities, universities, businesses and government, but the education institutions themselves will be reconceptualised as parts of a broader learning environment (Kirby, 2000:98). Rather

than being added on to an existing scaffold, local and regional collaboration will in fact come to redefine the very nature of schools and their orientation to society.

Developing links between schools and faculties/schools of education

In its submissions to the Crossroads review, ACDE maintained the importance of developing learning communities and cross-institutional links (2002). Within Australia, learning communities vary widely in their composition, depth and outlook, but most are developed in an ad hoc fashion. Imaginative cross-institutional links need to be supported, whether through specific Commonwealth funding for course provision of direct service to communities, as the La Trobe University, Bendigo, Regional Advisory Board argues (2002: 1), through a scheme similar to the University for Industry in the UK (see ACDE 2002c), or through promoting learning communities, as this section has outlined. Improving relationships between schools and faculties/schools of education is particularly important, and cannot be left to the vagaries of circumstance and geography.

Lovat (forthcoming) argues that relationships between faculties of education and schools could be greatly improved. The paper draws on the Ramsey Review of Teacher Education in NSW, which argued that “universities and schools must build a relationship of shared responsibility for professional experience” (2000, 63). Models of teacher education should be developed jointly between schools and universities which place professional experience at the centre:

To achieve improved links between schools and universities, teacher preparation must be characterised more strongly by the centrality of professional experience. To do so, the universities and employers will have to develop new structures of teacher education in which university teacher educators are able to engage with schools and the work of the teaching profession, just as much as schools and teachers are able to engage teaching as a profession, giving teacher education the highest priority in their strategic planning, funding and reporting. Models of teacher education are needed in which accredited practicing teachers are able to exercise responsibility for the professional growth of aspiring and new teachers. Teacher education in New South Wales must be reconnected with schools and other educational settings (Ramsey 2000, 38)

Establishing strong functional relationships between universities and schools is also central to a recently initiated project by the United States-based Carnegie Corporation. *Teachers for a New Era* is designed ‘to stimulate construction of excellent teacher education programs at selected colleges and universities’. Along with other funders, the Carnegie Corporation wants teacher education institutions to implement innovative and experimental teacher education programs that require significant change in allocation of resources, academic organization, internal accountability and the development of relationships with practicing schools (Carnegie Corporation 2002, Summary). According to the chair of the Corporation’s Education Division and architect of the new initiative, ‘Education should be understood as an academically taught clinical

practice profession, requiring close cooperation between colleges of education and actual practicing schools' (cited in deCoursy Hinds 2002, 3).

The establishment of close functional relationships between faculties of education and schools constitutes a central dimension of the Carnegie project, relationships which could be actualised by developing residency and internship programs for student teachers like those undertaken by medical graduates. Under such an arrangement beginning teachers in their first and second years would be provided with a range of supports, including regular contact with faculty academics in relevant teaching methods as well as in pedagogy. The Carnegie initiative raises some interesting possibilities for innovative teacher education in Australia. The initial ACDE submission to the Review of Teaching and Teacher Education (2002) also highlighted innovative teacher education practice at Wollongong and Newcastle universities, such as the *Knowledge Building Communities* (KBC) project. Initiated by the Faculty of Education at Wollongong University, KBC focuses on greater integration of the practical field-based component of the teacher education program with the theoretical and much stronger partnerships between the University, schools, government and teachers' union.

Strong functional relationships between schools and faculties of education should also be reflected in reciprocal personnel flows, whereby experienced school teachers are appointed to faculty positions, perhaps as adjunct professors or academics of one kind or another, to serve as coaches and mentors for their graduates and to inject valuable school-based knowledge, experience and skills into teacher education programs. *Teachers for a New Era* advocates such initiatives. It urges that participating education colleges recognise 'experienced teachers as faculty colleagues along with teacher educators in higher education' (Carnegie Corporation 2002, Prospectus). The same arrangement could also take place in reverse, whereby education academics are seconded to work inside schools, alongside teachers during the initial years of their first school appointment, perhaps as part of a residency/internship program. Indeed, the Ramsey Review made a similar recommendation that 'universities and other potential providers of teacher education expand significantly the number of conjoint appointments' (2000, 64).

Professional development

The Council maintains that for innovative learning to occur, the continuous and substantial professional development of teachers is required. Educators need ongoing experience in understanding and using the new technologies in ways that genuinely enhance learning, and opportunities to share innovative learning experiences with other teachers. The sharing of experience should occur both within schools, through team teaching and mentoring practice; among schools, through the facilitation of international exchanges and learning communities; and between schools among educators. Encapsulated in any vision for continuous teacher education should be the receipt of non-monetary awards. Paid sabbaticals (full-time or part-time), including study tours, structured community-based learning, and teacher exchange with other countries in the world in which travel and other expenses are supported would all be worthy pursuits. At a relatively small cost, this would expand the global horizons of education, bringing many

international teachers to work on exchange in Australian schools, as well as providing invaluable international experiences for Australian teachers. Secondments of teachers into community organisations, businesses and government in order to broaden their experience base and to expand the school's networks would also break down the arbitrary boundaries separating education and various other social institutions (ACDE 2001). While this important task remains largely neglected in Australia, there is some tentative progress being shown in England and other nations, where sabbaticals, secondments and international exchanges are already being promoted. The need for both greater creativity and resources here is pressing, and we are unlikely to keep the finest teachers in the profession without more commitment to programs of reskilling and professional development (Kalantzis and Harvey 2002).

Finally, it is widely recognised that graduate studies for teachers represent a major form of professional development, particularly for those who have the potential to be leaders in schools. Such studies are a means by which teachers can keep abreast of developments in their respective fields and be cognisant of advancements in pedagogical methods. Moreover, when graduate teacher education students embark upon studies which include a significant research component, particularly research projects directly related to school-based issues, valuable knowledge is transferred and used at the school level to resolve problems and induce change. Current policy settings, however, do not provide incentives for teachers to take up graduate studies. The advent of up-front fee-paying course work masters programs acts as a considerable disincentive and removes from the profession and schools valuable skills and knowledge. Despite the need for teachers with graduate-level competencies, the evidence is that education systems as employers neither provide an adequate system of incentives (such as paid time off to do courses – part time or full time) nor encourage teachers to undertake graduate studies (see ACDE 2001, Phelan 2000, 197-198; Ramsey 2000, 82).

Pre service education and ongoing professional development need to be reconsidered in the light of changing expectations to manage higher order diversity, local and international, and the expansion of e-learning and life long and life wide orientations to knowledge and learning (ACDE 2002B). Fundamentally, teacher education needs to be seen as ongoing process. Just as students will need to continue learning long after they have left school, teachers will also need to refine their skills throughout their careers. To this end, the provision of continuing professional development will be crucial.

Obstacles to innovation

The submission by the Queensland Deans of Education Forum (QDEF) highlights a number of key impediments to innovation. The QDEF submission specifically addresses the question of developing professional standards for graduates, which in turn affects the accreditation of programs. ACDE concurs that regulatory authorities can act as a disincentive to the development of innovative programs where: program inputs are privileged over outputs; an authoritarian approach is applied; decisions are not transparent and preliminary processes are not collegial; overly rigid rules prevent bold initiatives being taken. Both in the development of professional standards for graduates, and in the assessment of academic programs, it is important that the emphasis be placed on outputs. Rather than listing a multitude of required inputs to teacher education programs, the QDEF submission maintains that professional standards should focus on the desired learning outcomes of graduates. This emphasis in turn has ‘the potential to free up preservice teacher education institutions to structure their programs in innovative ways, and recognize that just as individual learners have many learning approaches and styles, so too there are many effective pathways that can lead to becoming a teacher’ (2003). The submission also highlights the need for prospective courses to be examined throughout different stages of their development, and produced through an inherently collegial process.

ACDE endorses this view, and believes that a culture of innovation requires greater collaboration with, and flexibility of, the relevant state and territory regulatory authorities. Further obstacles to innovation highlighted by QDEF are also worth restating here, namely: the speed of institutional change processes; the dominance of taken-for-granted institutional practice; an overemphasis on curriculum content coverage; and a lack of attention to global perspectives. To these may be added the problem of limited educational research, which the Council has raised in previous submissions to the Commonwealth government. In *The Impact of Educational Research* (2000), Tom Phelan gathered results from five distinct though related studies on education research. His report found ‘compelling evidence that Australian educational research is respected internationally and makes a difference in the worlds of schools, and policy development’ (Phelan 2000: 4). Phelan also found, however, that research ‘accounts for less than one per cent of the total personnel resources devoted to education and training in Australia. Of these resources, university-based research accounts for about 90 per cent’ (Phelan 2000: 5). Research into innovation and effective pedagogy depends on proactive government policies, and the impact of public investment on this research is both measurable and substantial.

ACDE has elsewhere argued the need for curriculum to be revised radically in light of the knowledge economy, for international exchanges and experience to be promoted, and for greater flexibility in the composition of courses. The case studies which follow provide some examples of the way these obstacles may be, and are being, addressed by individual institutions, but systemic change at state and federal levels is also required. Individual examples of innovative practice can always be found, but for a national culture of

innovation to be fostered, institutional and regulatory frameworks must be supportive of flexibility, change, and often radical vision.

Case Studies

Individual schools and faculties of education, and state Deans' bodies, have made individual submissions to the discussion paper in which a wealth of innovative practice is documented. The following case studies, therefore, are intended to be neither definitive nor exhaustive. They do, however, illuminate some of the ways in which contemporary teacher education reflects the principles of this submission. These case studies address particular obstacles to innovation within schools, acknowledge the role of educators as central to innovation, highlight the positive impact of greater institutional links, and emphasise how innovation within teacher education is clearly linked to building a culture of innovation within schools.

University of Sydney

Two particular initiatives at the University of Sydney are noteworthy in promoting a culture of innovation in schools. The first initiative relates specifically to the development of better partnerships between universities, systems and schools, which the Council has argued is crucial to building a sustained culture of innovation. An example of these types of partnerships is the University's two conjoint appointments with Oatley Senior College in Sydney which has been operating for 18 months. The lecturers involved in this partnership have focused on enrichment of pre-service teacher training; professional development of in-service teacher education; developing and teaching new curriculum; and researching school-university partnerships. Many schools have approached the Faculty to establish partnerships of this nature. Schools seeking such alliances require programs to maintain and re-energise their existing and experienced staff; to help unqualified staff gain the education required to work effectively in these curriculum areas; and to establish links to joint communities of practice in Science and Mathematics disciplines and education.

To help meet this need and to stimulate and further the close links between its programs and schools, the Faculty of Education and Social Work at the University of Sydney has established a Division of Professional Experiences, Partnerships and Development (DPEPD). Among other partnerships which the DPEPD is engaged are two exciting new programs designed to assist teachers, schools and pre-service teachers to embed ICT in their planning and teaching (see the National History Teachers Project (<http://www.edfac.usyd.edu.au/projects/NSWhistory>) and information about the Mercy College Technology in Teaching initiative (<http://alex.edfac.usyd.edu.au/home/Mercy%20College%20site/index.html>)).

The second initiative relates to the centrality of professional practice in teacher education, and addresses the potential benefits of internships. Feedback about a University of Sydney initiative to include internships toward the end of its teacher education courses suggests that it is an important agent of change in schools. The program is designed to ease the transition from student to teacher (and alleviate the high attrition rate of beginning teachers) by giving students partial responsibilities as a teacher for a school

term. A mentor teacher supports each student and is given some free time to engage in professional development activities organised by the Faculty. Particularly in the important new curriculum areas of multiliteracies and ICT in the classroom, experienced teachers often learn from student-teachers, who in turn are assisted to develop their teaching skills and to learn about more traditional curriculum areas from the mentor-teachers. This integration of pre-service teacher education and professional development for experienced teachers (or the participation in school-university partnerships) is potentially of great importance in modernising school cultures. However, to date such programs are largely unfunded and rely on contributions from faculties of education to the school sector. The University of Sydney would like to expand these programs but will find it difficult to do so without additional resources.

Victoria University

The Bachelor of Education at Victoria University is framed as 'practical social science', in which the learning of school students is taken as the central issue for teacher education and student teachers. The following analysis is taken from Carpenter et al (2003). The B.Ed. is interpreted as action research, reflective practice, teacher as researcher, social philosophy or practical theorising. As such, teaching in the course requires teacher educators to make explicit links between student teachers' experiences in partnerships and the development of understanding in classes through the completion of assessment tasks. In addition, teacher educators, even when directly proposing curriculum methodology and teaching strategies, locate their own classroom practice within a spirit of mutual respect, inquiry and research.

Four principal and related developments have enabled the School of Education to rapidly expand partnerships with schools:

1. reconstruction of the pre-service teacher education program with the explicit intention of enhancing the learning of school students;
2. encouraging schools to develop curriculum and change initiatives which enable student teachers to work closely with teachers and school students. The curriculum initiative provides the practical experience for student teachers to inquire into the personalised and localised practices and discourses of teaching in schools, in collaborative reflection with teachers and teacher educators;
3. exploring strategies by which student teachers report to the university the content of school-based inquiry and reflection as the description, interpretation and theorising of practice;
4. revising the trajectory of teaching at university to enable the student teachers' descriptions, interpretations and theorising of practice to initiate inquiry into formal education theory, which is the basis of the critique, change and improvement of practice.

As at the University of Sydney, the emphasis on partnerships does not treat practice and theory as a divide, but focuses on the holistic development of experience, inquiry, understanding and knowledge as the basis for further research and learning. The two

essential sites of the partnerships initiate learning which is distinctive but connected. At the school, both local and personal interpretation of student needs translates into a rich experience which in turn forms the basis for collaborative inquiry and action. At the University, the mosaic of experiences of many student teachers and teacher educators (often school based teachers too) enables critique, exchange and generalising the broad understanding of the domain of teachers' knowledge and judgement.

One particularly innovative aspect of the B.Ed. program involves the presentation of portfolios in roundtables, as an integral component of practice-theory dialogue. Portfolios have helped extend the explicit connection of practice-theory as student teachers present and discuss the evidence of partnership based learning, utilising roundtable technology (Western Melbourne Roundtable 1997). When used in roundtables these folios of practice can become a vehicle for discussion between university colleagues and students. The professional teaching portfolios constructed and presented in Year 4 graduating teachers to demonstrate competence for entry to the profession. This process of constructing and presenting portfolios exemplifies Retallick and Groundwater-Smith's observation that:

'The acquisition of professional knowledge is not merely a matter of gaining information. It is also to do with the transformation of that information into personal knowledge via dialogue and debate, through trialing and reflection and by hypothesising and researching in publicly accountable ways.'
(Retallick and Hill 1994: 12)

Partnerships and the examination of practice-based portfolios in supporting critical and collegial reflection by all partners in teacher education, open up the possibility of rich mentoring relationships between teachers and student teachers.

Practitioner mentoring provides opportunity for reciprocal learning in an open, honest and supportive environment. This inquiry has particular significance if the mentor can see how it might lead to better classroom practice and improved student learning. In the Bachelor of Education, regular weekly and longer continuous periods of time in schools supports mentoring relationships between school and university colleagues based on the shared longer term commitment to school student learning. In the UK mentoring has been argued as enhancing competence, reflective practice and critical inquiry of student teachers (Calderhead and Shorrock 1997), but these simple goals belie the complexity of the relationship. Student teachers seek a collegial relationships which goes beyond critical observation of teaching.

'A mentor can be removed from the classroom experiences; nurtures and builds on a student teacher's experiences; supplies support on a range of issues not just those related to the classroom; a person you can air different issues confidentially; is involved with ongoing discussions and exploration of issues; is independent to any appraisal or assessment process; a mentor focuses on the holistic long term development of the teacher within the school environment.'
(Year 3 Student Teachers)

The student teacher's perceptions clearly demonstrate the range of roles the mentor is expected to play. A striking insight is that the student teacher is proposing a distinction between the assessment and appraisal within supervised teaching practice and the open and reflective nature of mentoring. Mentoring is multi-dimensional, often presented in the literature as a continuum ranging from: critical friendship to respectful leadership based on individual expertise and experience (Anderson 1995); carer, to guide, and challenger (Edwards and Collison 1996); or an interaction between the mentor and mentee characterised as basic to developed, and extended (Burtroyd 1995). Within Project Partnerships, mentoring is demonstrating the potential and opportunity for a critical analysis of practice and the environment for a critically reflexive discourse as a basis for professional learning.

RMIT University

The redesigned B.Ed. at RMIT University revolves around professional practice. A primary aim of the program is to reconceptualise the practicum. Rather than viewing practice simply as the implementation of theory learnt previously, the program takes the experience of practice as essential both to informing theory and to reflexivity. With the establishment of ongoing practice throughout the program, teachers within the B.Ed. are able to use their classroom experiences to further inform their theoretical knowledge and to reflect and improve upon their practice. Indeed, the embedded nature of professional practice 'ensures that in the final year of the program students are engaged in research about their practice which may lead to higher degree study and resonate with the lifelong/lifewide learning ethos' (RMIT 2003: 14). Students undergo at least 180 days of practice (double that required for accreditation) on a continuing basis eg one day a week for an eleven week period. This element of continuity also contributes to a smoother transition to the teaching profession. Graduates will already have undergone sustained reflection on their professional practice by the time of entry into the workforce.

The program has also endeavoured to address the often intransigent demands of curriculum content. Traditional disciplines '...are recognised in specific courses but the content and skills inherent to each are also embedded in other courses and the connections between them in both theoretical and practical ways are emphasised' (RMIT 2003: 12). The ultimate aim of the program is to produce knowledge workers whose skills are transferable across a myriad of educational settings in the knowledge economy. Opportunities are emerging to bridge the primary/secondary divide, most evident in the current 'middle years' initiatives (years 5-9), and the RMIT program emphasises the connected nature of learning. Coursework and electives '...provide opportunities for students to acquire the knowledge and skills to teach both very young children and early adolescents' (RMIT 2003: 17), which in turn creates employability advantages for graduates.

As with the other case studies examined in this submission, the RMIT program encourages student-designed and directed learning. All students are required to develop and manage an electronic learning portfolio, in which they document and demonstrate skills, knowledge and capabilities. These capabilities are presented to both lecturers and

peers at regular intervals (RMIT 2003: 19), and can broadly be expressed along a continuum of four levels, from **emerging** to **exploring**, to **consolidating** to **transforming**. The versatility of the program allows for multiple entry and exit points: 'not all students will commence at the **emerging** level or complete every part of the program at the **transforming** level' (RMIT 2003: 20). Instead, students will be designers of their own learning experiences, and individual learning patterns, as well as prior learning, will be recognised. Beyond this, the program is ultimately focused on improving student learning. Thus, the program aims to develop graduates who in turn can promote autonomous learning in their students. This priority leads to an emphasis within the program on the teacher as '...community builder, learning researcher and investigative project leader' (RMIT 2003: 20)

By placing professional practice at the heart of the program, the RMIT B.Ed. also encourages greater partnerships among academics, mentors, school teachers and students. The role of academic staff should not be that of mere disseminators of knowledge, just as the role of students must be more than passive receptors of knowledge. The program aims to have academics regularly involved within the settings of professional practice, and to have teachers at school level maintaining strong contacts with the university. The promotion of mutually informing relationships between educational institutions requires reconceptualising the relationship between, and fundamental nature of, theoretical and practical knowledge.

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