



Australian Council of Deans of Education Incorporated

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Response to the Commonwealth Review of Teaching and Teacher Education

Authorised by:
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Preamble

'It's amazing how many people teach these days', I said. 'There is a teacher for every person. Everyone I know is either a teacher or a student. What do you think it means?'

(from Don DeLillo, *White Noise*)

The following submission needs to be viewed in context. Elsewhere, the Australian Council of Deans of Education has argued that nations will in future be measured not by their fixed assets, but by the skills and knowledge of their workforce (ACDE 2001). In *New Learning: A Charter for Australian Education* (ACDE 2001), the Council claimed that lifelong and lifewide learning will be the reality for most, and that the majority of future workers will be knowledge workers in the broad sense. Tracing the shifting cultural, commercial and technological conditions of the twenty-first century, *New Learning* argued the need for greater investment in education, and greater recognition of the role of educators in society. Within this new environment, the Council contended that the role of educators will need to be reconceptualised, that teacher education will need to broaden its focus, and that teaching itself will become recognised as perhaps the central profession of the knowledge economy.

The following recommendations in the Council's submission to the Review arise out of a broad ACDE vision, which recognises education as the key to economic prosperity, social cohesion and the promise of democracy. In the knowledge economy, effective learners will be imbued not only with a specific skills set, but with a range of attitudes and values which reflect an emphasis on teamwork, flexibility and diversity. In this context, teacher education programs will need to promote both autonomous and collaborative learning, and to prepare future teachers for learning experiences throughout and across their lives. Teaching 'should be designed for what it is – a highly flexible and in-demand set of human attributes transferable right across the knowledge economy' (ACDE 2001; 112).

Within this submission, questions of supply, remuneration, new pedagogical understandings of teaching, and professional standards are all addressed, and two case studies of innovative teacher education practice are provided for consideration. Many of these views are developed further in *New Learning*, in *Teacher supply and demand to 2005: Projections and context* (Preston 2000), in *Preparing a profession* (ACDE 1998), in numerous ACDE submissions to the 2002 Higher Education Review (available at acde.edu.au), and in Lovat (forthcoming). Beneath the particular concerns addressed here lies an unwavering Council belief that flexibility, lifelong learning, and the centrality of educators to the knowledge economy must all be promoted.

Supply and Demand

It was the Australian Council of Deans of Education, through a succession of analytic reports by Barbara Preston, the latest of which is in Preston (2000), which first brought the issue of teacher supply and demand in Australia before a seemingly unaware public, including government and employing systems. Many of the projections made in the mid-to-late 1990s that supply would dry up in differently configured ways across states and territories, as well as teaching specializations, have come to be realized, and now there is a broad acknowledgment of the problem. More recently, MCEETYA has taken up the issue with some urgency, undertaking its own analysis and discussing mechanisms by which the federal funding arm might more strategically target the teacher supply needs of the states and territories. At the centre of this issue lies the universities of Australia and their relative commitment to teacher education. It is widely estimated that there is only a portion of the places available for teacher education that were present in the total binary system of the 1980s. The NSW MACQT report (1999) on the impact of commonwealth policy on teacher education estimated the figure at about 2/3, and this may be one of the better figures around the country. This factor may well be relevant to the current Higher Education Review, and particularly to the current funding arrangements which determine university places free of serious discussion or targeting relative to supply needs generally in the community.

With the unified national system (1989), came a more competitive drive, for perceived status in some instances and better funding in others, that drove many universities to turn their backs on teacher education in favour of other areas. While the status of teacher education is now much higher, in the early 1990s, it was seen often to be associated with the former college system rather than having the more explicit connection with the university culture of medicine, law, engineering, etc. For some institutions, this alone was sufficient for the drive away from teacher education. Even where this was not a factor, most universities have struggled one way or another to maintain teacher education because of the shrinkage of federal funding, at one end, and the inordinate cost, especially of practicum, at the other end. With regard to this latter point, a national award dictates that teachers be paid for the supervision of student teachers on practicum. Even without the shrinkage of funding, this always made teacher education more expensive than most other areas in the university profile, this being especially the case because of the relatively low level of funding determined by the so-called DEET weights of 1988. However, with the value of federal funding failing to keep up with escalating costs throughout the 1990s, and then with the deliberate withdrawal of 6% of overall funding from 1996 to 1999, the cost of teacher education is barely able to be sustained and will reach crisis proportions over the next few years without some further injection of funding. This is likely to exacerbate the problems of teacher supply, especially as our already inadequate supply is seen as a prime target by USA, UK and Hong Kong recruiting agencies.

Recommendation 1: That mechanisms be found which ensure that effective conversation is held between the higher education funding arm of government, universities in their planning profiles, teacher employing systems, and industrial bodies in order to ensure adequacy of training places and mechanisms to address the targets identified in current shortage projections.

Remuneration

Granted the demonstrated shortage of available supply into the complex and highly skilled profession identified above, there is a real problem with remuneration levels in Australia. Of all of the attractions for new teachers to succumb to the wiles of international recruiting agencies, remuneration is the most attractive. However, as *New Learning: A Charter for Australian Education* outlined, Australian teachers and academics earn significantly less than professionals who require similar levels of training, such as doctors and lawyers, yet their work is just as professionally challenging, and equally important in social and economic terms. If education is to perform effectively the tasks which it is assigned in the 'knowledge economy', teachers need to be paid much higher salaries and offered a level of parity with other comparable professions (ACDE 2001: 112).

Overseas comparisons are also instructive. In the USA, UK and Hong Kong, a first year Australian teacher can receive the salary that would eventually come after 8 to 10 years of teaching in this country. Together with incentives associated with rental assistance and other conditions, this has seen thousands of vitally needed teachers, especially in some of our neediest subject areas, committing at least the first 5 or 6 years of their career to a foreign teaching authority. While their experience will likely recoil to the Australian system at some stage, this trend is clearly exacerbating the current shortage of adequate supply, and as clearly the major impact is in the areas of science, mathematics and technology education.

If starting salaries are a problem, salaries in the incremental years and especially beyond the top of the scale are more so, and the dominant Australian salary structures are often archaic in form. Within the Australian context, first year salaries are reasonably competitive with those of other professions like medicine, law and engineering. Within a few short years, however, these latter salaries pull away at a great rate and, beyond the normal 8 to 10 years of an incremental scale for teachers, other professions' salaries multiply at a rate teachers could only dream about. This leaves the teacher ten years out, often in only the early 30s, in what can seem like a 'dead end', with only the possibility of an administrative post to turn to. In Australia, about 70% of the teachers who started at the beginning of the scale have left the profession by the time or soon after they reach this point. This, again, is a major factor in the current shortage of supply, especially in the key areas of science, mathematics and technology where the potential to elevate wages beyond the levels offered by teaching is significantly higher than in most other teaching areas.

As with the issue of standards, the question of remuneration is connected to the status of teaching as a profession. Several points need to be made in this regard. As Vinson has outlined (2002), contemporary teachers have a diverse range of demands placed on them, and generally require a whole range of skills such as counselling and dealing with violent behaviour. These increasing demands, when coupled with a perceived lack of resources and inadequate working environment, can act as a disincentive for younger teachers in particular. A range of improved teacher support mechanisms and resources are required to supplement remuneration increases, to ensure that the profession of teaching is properly valued. In considering these improvements, the status of teaching needs to be seen ultimately in similar terms to professions such as medicine, and policy must aim to raise respect for, and the perceived importance of, teaching in the wider community.

Non-monetary rewards play an important role here: as New Learning highlights, the salary gap between teaching and other professions may eventually be reduced, but ultimately it may never be closed. Non-monetary rewards, then, should be tailored to meet the uniquely demanding needs of teachers' professional and personal development. Sabbaticals, time-off with pay to participate in courses, and encouragement for teacher exchange with other countries for which the cost of travel and expenses were covered, could serve this purpose well (ACDE 2001: 112).

Recommendation 2: That the federal funding arm, federal representatives of employer groups and federal representatives of industrial bodies collaborate with a view to enhancing the attraction and retention power of salary and other conditions of teachers, especially in areas of identified shortage.

New Pedagogical Understandings for Teaching and Teacher Education

Much of the twentieth century world of social science research has impacted on conceptions of teaching. Not least was the work of developmental and learning theories which illustrated well the complexities of learning and just what a highly crafted activity effective teaching was. Similarly, growing understandings of societies helped the educational world to understand the social impact of schooling and increased the sense of complexity in teaching in the modern school. These theories both confounded any conception of teaching as a simple craft and, at the same time, through the complexities of human development which were identified and the clearly implied difficulty of dealing with these effectively, began to develop in the minds of the profession the conception of teaching as an art and a science of some fortitude. It was the art and the science which emanated from such theories that first began to provide a true theory base for the work of the profession.

The effect was to strengthen the view that teaching was not an incidental craft to follow naturally from mastery of subject content, but a highly complex blend of theoretical understanding and practical skill. The result was to fortify the notion of teacher as a highly developed autonomous professional, with a requisite professional knowledge base and practitioner skills which could stand alongside the equivalent in medicine, law and engineering. Such conceptions of teaching were perhaps expressed first in Australia by the Tasmanian report, *The School in Society* (1968). It outlined effectively the autonomous diagnostic and therapeutic skills of teaching in a way that compared them with those of other professions of significance. It was probably not incidental that it was in the wake of explicit conceptions of teaching of this sort that teacher salaries rose substantially and teacher education programs moved from patterns of one and two years of training to three and four years as the norm.

In keeping with this enhanced understanding of the profession, there has been a spate of reviews and reports in the past quarter century about how best to train teachers towards proficiency in this complex profession. Beginning with Auchmuty (1980) and Correy (1980) and peaking in recent years with ACDE (1998), Ramsey (2000) and Vinson (2002), each has struggled, and/or will struggle, with the complexity of the teaching task and with identifying optimal ways in which teacher education might prepare for this task. ACDE provided arguably the most comprehensive statement of the breadth of the challenges before the teacher, and therefore of the standards and guidelines which should determine the shape and form of teacher education, with a particularly challenging notion of '*pedagogical content knowledge*' as denoting one important component of the distinctive knowledge base of teaching.

Pedagogical content knowledge was expounded by Lee Shulman in 'Knowledge and Teaching: Foundations of the New Reform', where the concept was defined as 'that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding' (1987: 8). The term attempts to conjoin the strands of effective teaching, namely, mastery of a body of content and mastery of effective pedagogy. Effective teaching can emanate neither from sheer knowledge of a subject nor from sheer teaching craft. It dispels two of the unhelpful myths that have plagued the teaching profession's development: first, that good teaching follows naturally from subject mastery; and, second, that a good teacher can teach anything at all. *Pedagogical content knowledge*

asserts that knowing what and knowing how are inseparable in the business of effective teaching. The notion is echoed in the USA National Board of Professional Teaching Standards (1999) report. One of the five propositions of Accomplished Teaching is that “Teachers know their subjects and how to teach those subjects to students”. In the words that elaborate this proposition, it is said:

Accomplished teachers have a rich understanding of the subjects they teach and appreciate how knowledge in their subject is created, organized, linked to other disciplines and applied to real-world settings. While faithfully representing the collective wisdom of our culture and upholding the value of disciplinary knowledge, they also develop the critical and analytical capacities of their students.

Accomplished teachers command specialized knowledge of how to convey and reveal subject matter to students. They have a ‘pedagogical content knowledge’ command of a wide repertoire of teaching strategies that enable them to organize, adapt, and present the curriculum in ways that take due account of the specific contexts within which they teach and their students learn. They are aware of the preconceptions and background knowledge that students typically bring to each subject and of strategies and instructional materials that can be of assistance. They understand where

difficulties are likely to arise and modify their practice accordingly. Their instructional repertoire allows them to create multiple paths to the subjects they teach, and they are adept at teaching students how to pose and solve their own problems.

The earlier social science research, especially of educational psychology and sociology of education, provided important insights about the contexts of teaching. With the notion of *pedagogical content knowledge*, as defined by ACDE and the NBPTS, however, we come to see that the scope of educational research has broadened to deal with the very nature of teaching itself. This is not just educational research but more properly termed ‘teaching research’, and it is to be found most sharply in what is broadly referred to as the ‘new pedagogies research’ of the past decade or so. With this research, the theory base of teaching has undergone arguably its most elaborate period of development with extensive longitudinal work on the effects of teachers and teaching on student achievement and success. In many ways, this research represents the synthesis of earlier psychosocial and sociocultural work, with a particularly penetrating focus on the notion of pedagogy, both in terms of principle and practice. Each has attempted to identify just what it is about the art and science of teaching that makes a difference in the intellectual and social development of students.

Newmann’s (1996) work developed the concept of ‘authentic pedagogy’, Darling Hammond’s (1997) work the notion of ‘quality pedagogy’ and Education Queensland’s School Reform Longitudinal Study (QSRLS, 1999) the notion of ‘productive pedagogies’, all in their own way identifying the essential blend of knowledge and skills required for effective teaching. In each case, the focus has been on the distinctive knowledge base of teaching and, in each case, the acid test has been about demonstrated student achievement as a result of this knowledge base being implemented effectively. In the Productive Pedagogies schema, for instance, the essential conjunction of content and pedagogical mastery clearly underpins the four dimensions which guide the process, namely ‘Intellectual Quality’, ‘Relevance’, ‘Supportive Classroom Environment’, and ‘Recognition of Difference’. Just as clearly, and

as importantly, the dimensions can be seen to be built largely on the research understandings, old and new, which have been gained over 100 years of educational research. The important and distinctive contribution of this new pedagogical research, however, is in the demonstrated truth that student achievement can only be enhanced when the nature of the pedagogy required is targeted with precision and implemented with rigour, and with assessment for outcomes that is in tune with the entire process. Structural reform of learning contexts (including presumably in teacher education) achieves little or nothing if not accompanied by this 'pedagogical reform'.

In NSW, the Quality Teacher Program (2000) submission, titled *Pedagogy for the Future*, outlined contextual challenges which face schools and teachers today, identifies 'new' and 'effective' pedagogies designed to meet these challenges, and specifies implications for teacher education. Reflecting reliance on the 50 years of educational research referred to above, including the more recent spate of work on pedagogy and its effects, the two key implications for teacher education are spelled out as: (1) the quality of student learning outcomes is directly dependent on the quality of the teacher; and (2) the essential components of effective teaching are command of subject, and knowledge of and capacity to implement effective pedagogical practices. The submission identifies as part of its new and effective pedagogies those which could only result from universities and schools working together on pedagogic issues in schools. The theme of the research and applied dimensions of the profession working more closely together, including in the business of teacher education, is implied in all of the projects which focus on the new pedagogy. The report asserts:

.. the quality of student learning outcomes is directly dependent on the quality of the teacher; and, the essential components of effective teaching are command of subject, and knowledge of and capacity to implement effective pedagogical practices.

Recommendation 3: That effective dialogue be initiated at the federal level to ensure that vital new knowledge and understanding about pedagogy, and the related skills of teachers, be placed at the centre of Australian school and teacher education curricula.

Professional Standards

The combined ACE, ACSA & AARE National Discussion Paper (2000) titled, *Standards of Professional Practice for Accomplished Teaching in Australian Classrooms*, begins with Ingvarson's 1998 challenge:

... the (teaching) profession has yet to build its own infrastructure for defining high quality teaching standards, promoting development towards those standards and providing recognition for those who reach them; in other words, teaching has yet to build a professional development system based on profession-defined teaching standards.

Beyond the combined paper noted above, there have been Standards papers released, internationally, by the OECD (1994), the USA National Board of Professional Teaching Standards (1999) and the Ontario College of Teachers (1999), and, nationally, by the NSW Ministerial Advisory Committee on the Quality of Teaching (1997), the Australian Council of Deans of Education (1998), the NSW Department of Education and Training (1998), and the Australian Science Teachers Association (2000), to name but a few. Among these papers, lies a predictable consistency in the issues raised and the attempted categories and definitions.

The combined ACE/ACSA/AARE paper attempts to pull the strands together with the fundamental question: *What constitutes accomplished teaching?* and, in light of the answer, which standards precisely would most adequately define and protect the essential character of teaching? It also attempts to advocate for the need for standards by addressing explicitly the link between standards and the notion of 'profession' as commonly understood, by clarifying just why it is that the teaching profession requires explicit standards, and by identifying the benefits to be derived for all stakeholders, teachers and prospective teachers, systems, students, teacher educators and the community. The paper is at pains to ensure that the premises and principles around which these standards might be based include: 'ownership' of such standards by the profession as a whole; the avowed belief that accomplished teachers make a difference; firm grounding in an accurate and comprehensive understanding of the complex nature of teachers' work; conformity with the reality that teaching incorporates a career-long continuum; and, sufficient flexibility to allow for celebration of individuality.

Concern with standards leads naturally to thoughts of regulation, both of entry and career development. It is not surprising, therefore, to find an increasing tendency for teaching legislatures to establish bodies which have as their prime duty the guardianship of entry to the profession and career development within it. In Australia, the forebear of these was the Queensland Board of Teacher Registration. Its duties include the provision of accreditation for teacher education courses and the setting up and quality assurance of processes for individual teacher registration. In Victoria, an Institute for Teaching has recently been established, with similar duties, and, in NSW, an Interim Committee has been established with the brief to advise the Minister on the setting up of its own Institute for Teachers, such as recommended by the Ramsey Review of Teacher Education (2000).

Recommendation 4: That a standards framework for teaching be developed at the national level, and that allied mechanisms at state and territory level towards teacher registration and training accreditation be recognized formally at the national level. ACDE (1998) provides a mechanism for a form of national recognition of teacher education standards that recognizes the reality of State/Territory legislation and registration.

Innovative Teacher Education Practice

CASE STUDY A: Re-training (University of Newcastle)

The program to re-train displaced industry workers as schoolteachers was established in 1997 by the then Faculty of Education at The University of Newcastle in consultation with BHP and the Department of Education and Training. The program fitted the category of employer funded undergraduate, and saw BHP contributing a fee to cover student tuition for the duration of the re-training program. The program made strong use of the provision for *recognition of previous learning (RPL)*, wherein previously obtained trade qualifications, extensive in-house training (provided in most cases by BHP), work history and experience were valued and recognized as a basis for entry. This portfolio of education, skills and training also provided the basis on which to build the re-training program. In areas such as the understanding of metals and workshop practices, RPL enabled the University to reduce the number of discipline subjects to be studied and thereby reduce substantially the normal period of study required for a teaching award. For degree qualified employees, the program was offered as a two-year part time study program while still employed at BHP. The award on graduation was a regular Diploma in Education (normally one year full-time). For trade and Associate Diploma qualified staff, the program was offered as 2 years of part time study while still employed at BHP followed by 1 year of full time study after closure. The award on graduation was a Bachelor of Education (normally four years full-time).

Another innovation not normally associated with retraining programs of this kind was achieved through the acceptance of prior learning by the future employer prior to the commencement of training or employment. This innovation allowed the future employer to offer guaranteed positions upon successful completion of the university study. Guaranteed positions were offered to those BHP employees who were willing to commit to teach in at least one of four hard- to- staff teaching areas in NSW. BHP staff who committed to teaching at the cessation of their employment also received some financial support from the DET as their future employer in the final full-time year of study.

From the outset, it was clear that some BHP staff were going to take longer than others to consider their options at closure. For this reason, it was decided that any program offered would need to provide *flexible entry points*. The University has also been able to extend the main BHP re-training program, with the agreement of the DET, to include unemployed trade persons more generally in the Newcastle Region. The Faculty offered a mid-1998 entry program for 22 unemployed or soon-to-be-retrenched individuals. These students undertook a full-time program similar to the main BHP program but were liable for their own HECS fees.

A further innovation was demonstrated in the *site-based* nature of the course. Teaching occurred in two sites in addition to teaching at the University itself. Teaching at the first site, the BHP plant, had the effect of reducing the time away from the plant and thereby the amount of time to be made up by each employee. The second location for teaching was the school (or TAFE) context wherever possible. This allowed for closer connection between the content being taught and the context where it was to be applied. It also had the effect of

increasing the rate of professionalization into a new career as BHP staff were working with practising teachers in the future professional context. In addition, BHP staff were placed in working groups for more formal study subjects. This had the effect of providing a psychological and consultative support network across the plant. This appeared to have been very successful with many employees, meeting and making contact with others in their group outside of formal contact hours. Many employees entering this re-training program had not been involved in extended periods of formal study for many years, let alone tertiary study. A program which focused on academic study skills was offered at BHP in the weeks prior to the commencement of the semester in order to assist the transition back into study.

The *relationship* between the three institutions involved in the re-training project grew as the program developed. On all occasions, when discussions were held with BHP employees, representatives of all three institutions were present to provide information. The relationship between the three parties was formalized with a Memorandum of Understanding between The University of Newcastle and BHP Rod Bar and Wire, and between The University and the NSW Department of Education and Training. The University, as the provider, became the hub of the activity with the current employer, on the one hand, and the future employer, on the other hand. Another form of assistance and collaboration between BHP and the University occurred when the University arranged an on-site careers/course advisor from the University's Careers and Student Employment section to work one or two days a week at BHP to assist the many staff who, despite the strong strategic support, consultation and assessment provided by BHP, were still unsure about potential career-change scenarios.

The program underwent *evaluation* employing both qualitative and quantitative measures. Quantitative indicators included: comparison of retention rates; proportion of higher level results compared with other students; and, success rates in field experience. Qualitative indicators centred mainly on the students' reflective journals and consultation/support meetings.

Comparison of retention rates indicated a 98% retention against a general figure across programs of 72%. In Semester 1 of the first year, the distribution of results showed that, while they constituted only 7% of the total cohort in the first core Education subject, the re-trainees achieved 18% of the High Distinctions and 10% of the Distinctions. In Semester 2, with a similar constitution of the total cohort in the second core Education subject, they achieved 24% of the High Distinctions and 7.5% of the Distinctions. All students who attended a field experience placement during 1998 received a grade of 'Ungraded Pass'. In the Practicum report's three major competencies (*Planning & Managing the Teaching & Learning Process; Communicating Interacting and Working with students and Others; Reflecting Evaluating & Planning for Continuous Improvement*) and their 34 subcompetencies, only 3 students out of 43 were reported as having competencies rated as 'beginning', with all others achieving much higher ratings than similar students on their first field experience. Comments made by cooperating teachers included: 'willingness to become involved in a new career of teaching'; 'with his industry experience and management skills will make a great contribution'; 'would be an excellent teacher if employed immediately'; 'with his breadth of experience in industry he has the ability to think and act with independence'.

Throughout their first year, re-trainees were required to maintain a learning journal, in order to facilitate reflection on their own learning experiences and the relationship between

university studies and their observations and experiences in the school. These journals formed powerful learning tools, especially in relation to the re-trainees' views about the teaching context and their observations and experiences in the schools. Comments in the journals included: 'being involved in lessons and working alongside teachers made me more aware of the need for effective communication'; 'visiting the school and being involved in the classroom has helped increase my university learning of what it is to be an effective teacher'; 'I felt confident I could communicate with students because I had a well planned lesson and I understood the process of learning from my studies in EDTE111'; 'by reflecting back at University on what I had seen at the school I was better able to understand the observation and the learning at the university'.

The project went on to win a *two national* awards, including a 1998 inaugural award of the Business Higher Education Round Table (BHERT). This was for an outstanding achievement in collaboration between universities and industry in the area of education and training. The script which accompanied the award read in part: *This is an exemplary project which deals creatively with some of the major problems caused by industrial re-structuring.* The same program won a 1999 National Teaching Award in the institutional category.

The so-called 'BHP Re-training Program' illustrates well the potential for traditional structures of professional development, re-training and new career employment to be adjusted to serve a new and identified need in society. The most pleasing aspect of the project was in the demonstration that innovation could be had within the context of the most quality assured teacher training available in the country, namely a regular University-based teacher education set of awards. The project is more fully described in Lovat et al. (in press).

CASE STUDY B: Knowledge Building Communities (University of Wollongong)

In 1997, after a searching series of discussions on the topic “*Alternate Modes of Program Delivery for The Pre-Service Primary Course*”, the Faculty of Education supported a proposal to design a research project which would “*investigate, as a pilot, an alternative approach to initial teacher education through:*

- implementation and evaluation of an inquiry and problem-solving approach such as that used in medicine and the health sciences;
- greater integration of the practical field-based component of the teacher education program with the theoretical.

This project was informed by a wide ranging review of relevant literature (Kiggins, 1997). As a consequence of this review the Faculty concluded that it needed to begin a process of challenging, and subsequently changing, the traditional paradigm of pre-service teacher education to which it had been wedded since the inception of pre-service teacher education at Wollongong University. The Faculty designed a project which would produce at least the following changes:

- A shift in the mode of program delivery from the traditional ‘campus-based-lecture-tutorial’ mode to a ‘*problem based-learning-within-a-school-site*’ mode;
- A shift from the traditional *clinical supervision* model of practice teaching to a *problem-based- action-research-mentoring* model that brought the relationship between the specialised knowledge in Education courses and the nature and culture of schools and how they ‘do business’, closer together;
- A shift in the traditional roles and responsibilities of the major stake holding groups in teacher development, namely, the professional employing authorities, (e.g. NSW DET, local non-government school systems), the university, local schools, and the Teacher’s Unions (NSWTF), so that a new form of ‘School-based Learning’ might be developed.

The Faculty argued that if these three processes were set in motion, an important by-product would be the opportunity to identify and explore the logistical, cultural, and political barriers to effecting change in both the teaching/learning culture of undergraduate teacher education (in the Wollongong context), and the traditional mindset and culture associated with practice-teaching/ the practicum (in the Wollongong context.)

In 1997 the faculty agreed to support the proposal “*in principle*” provided that any structural and/or procedural changes that were set in place: were resource-neutral; maintained academic standards, and met professional standards of competency; maintained equity of workload , assessment procedures, with respect to students/staff locked into the mainstream program (“*in the pipeline*”).

This “in principle” support was followed by two years of formal and informal meetings with the major stake-holding groups, including senior management within the NSW DET

Directorates, local superintendents, principals, whole-school staffs, individual teachers, faculty committees and diverse university power brokers, and teacher unions. In these two years different formal committees, working parties, reference groups, met, negotiated, discussed, for an estimated total of between 1200 & 1500 hours.

By the beginning of the 1999 academic year a pilot program had been designed, and a pilot cohort group invited to test the KBC-Mentoring model

What Is A Knowledge-Building Community?

Kiggins (2001) defines a Knowledge Building Community as ‘a “community” of individuals who are dedicated to sharing and advancing the knowledge of the collective.’ According to Hewitt et al (1995), what is defining about a Knowledge Building Community is ‘a commitment among its members to invest its resources in the collective pursuit of understanding’. While the concept of ‘learning communities’ has been around since Dewey’s time, generally it has been restricted predominantly to school settings. The Faculty of Education at Wollongong decided to see whether these principles could be applied at the pre-service teacher ed. level.

University of Wollongong’s Version of A Knowledge Building Community

The Knowledge Building Community is a teaching model specifically designed to deal with the issue of contextualising the delivery of instruction. One of its important tenets is that instruction should be linked as closely as possible to the contexts and settings to which it applies in the real world. Wollongong’s KBC-Mentoring program is based on the creation of learning environments that *support* the continuous social construction of knowledge *through* the constant construction, de-construction, and reconstruction and sharing of meanings, *so that* the community’s knowledge needs are advanced and maintained.

In the University of Wollongong’s KBC these principles were applied through the creation of a setting that provided opportunities to engage in three modes of learning: Community learning (CL); School-based learning (SBL); Problem-based learning (PBL).

Community Learning (CL)

This mode of learning constitutes a major shift from traditional teacher education models. It necessitates the development of a “*community of learners*”. In Wollongong’s case this community was made up of three distinct groups: pre-service teacher-education students; school-based teachers; and faculty lecturers who acted as facilitators on campus.

It was the expectation that this community would establish a sense of trust and caring for other community members as they studied and learned collaboratively.

School-based learning (SBL)

Part of Wollongong’s KBC concept is the strong conviction that schools are more than

buildings and people. Rather they are ecological settings in which individual cultures have evolved in response to the needs and purposes of the individuals who regularly enter them (Barker, 1967). This component of the KBC structure aimed to develop a more than rudimentary understanding of school-based culture. It also aimed to heighten awareness and

familiarity of how schools "do business", to reduce the *"reality shock"* that beginning teachers' experience when they begin their careers, and finally, to increase preservice teachers' understandings of teachers' "real" roles in both classrooms and schools.

Problem-based learning (PBL)

Current theory asserts that PBL encourages and motivates students to *'learn to learn'* (Duch, 1995). Furthermore this theory argues that PBL challenges students to *"take charge of their education"* (Duch, 1995).

The motivation to become efficient Problem-Based Learners was created by:

- abolishing the traditional lecture, tutorial, exam and the power relationships which typically accompany them;
- changing the lecturer's role from *"expert-who-transmits-facts-to-novices"* to that of *"co-learner"*, i.e. one who actively facilitates AND participates in, the learning and knowledge-building of the community.

The Evolution of Wollongong's KBC Project. 1999-2002

UOW's program has been evolving for almost 4 years now. Although some of the original organizational and procedural ideals which were put in place 1999 have had to be changed, the underlying constructivist rationale and philosophy has remained firmly in place.

The current, 2002 KBC model is best described as *"negotiated-evaluation- of-a-non-negotiable-curriculum-based-on-a-constructivist-model of-learning-and-knowledge-building"*.

This over-nominalised phrase captures the essence of UOW's KBC program in 2002. While the program is still delivered along the original guidelines of the KBC ideals (i.e. CL, SBL, and PBL), a significant addition has been the addition of what we call, *"the four pillars of professional wisdom"* which now frame and guide the KBC learning process.

Since 2001 KBC model the students have been given the responsibility of negotiating their assessment tasks. These assessment tasks must be based on collaborative analysis of the non-negotiable curriculum i.e. the subject outcomes which mainstream students are expected to acquire. The students then undertake negotiations with the teaching staffs of the school where they are Teacher-Associates to ensure that the tasks they have devised are appropriate and achievable in their particular SBL setting.

These four 'pillars' of UOW's KBC are: taking responsibility for own learning; learning through professional collaboration; identifying and resolving professional problems; becoming a reflective practitioner.

When the expectation that all members of the KBC had to acquire skill in using, and demonstrate conceptual understanding of these four 'pillars' is made explicit, it sets in train a range of complex interactions within any particular knowledge-building community. These interactions in turn serve to drive and guide the community. One important thing these pillars provides is a *set of structures, processes, and a form of discourse*, for constructing and completing the assessment tasks.

Some Results Emerging From The Program's On-going Evaluation

UOW's KBC program has been operating for four years now. The pioneer group graduated in December 2001. This cohort's results were very affirming.

- Of the original 24 who began in 1999, 18 graduated (6 dropped out during or after Session 1 on realising that teaching was not a profession they felt committed to);
- Of this 18, seventeen (17) graduated with High Distinction;
- Of this 18, six (6) re-enrolled as fulltime 4th year B.Ed students (Therefore they didn't sit for the DET's "targeted graduate" interviews);
- Of this 6, four (4) were admitted to the Honours program;
- Of the four admitted to the Honours program two shared the prestigious D'Souza award (\$5,000) for "*excellence in academic achievement over the previous three years*";
- Of the 12 who were interviewed, six (6), or 50% were targeted by DET. This compared favourably with the usual 20% success rate in the annual "target-interview event";
- The Dean's List for outstanding academic achievement across the Faculty for 2001 contained a total of 18 names from the primary program, the early childhood program and the physical education program. Of this 18 five were KBC students. This means that fewer than 10% of the Faculty's total student body accounted for over 30% of the total population of students achieving "Dean's List" status.

The general consensus from all of the stakeholders who have been involved from the very beginning, (students, lecturing staff and schools) is that the program has both tangible and intangible benefits that make it preferable to the traditional mainstream mode of delivery. The tangible benefits include:

- Students who develop the skills, knowledge, and understandings of effective teaching to a much higher degree, in a much shorter time;
- Students who are perceived by experienced teachers to be more committed, enthusiastic, confident professionals, than mainstream students in the same cohort;
- Students who are perceived by other mainstream lecturers to be more skilled at identifying and resolving professional problem, who are more effective and productive team members, who are more autonomous learners and more reflective than most mainstream peers;
- A much stronger partnership between the University, the local schools, the major employing authority, and the teachers' union.

The less tangible but equally important benefits include a subtle but significant change of the culture of the practicum experience for the schools involved. This shift is essentially from a "Clinical-supervision-one-classroom-teacher-to-one-student" model to a "Mentoring-whole-

school-participates" model. One unexpected spin-off of this change is the perception of teachers at the KBC schools of their own professional growth as they responded to the many probing questions about the rationale for the many school and classroom practices which KBC students continually asked as they sought data from their research tasks. In a recent paper, Marks (2001), reporting on this aspect of his school's involvement in UOW's KBC program writes:

Research strongly supports the conclusion that reflection does enhance teaching and learning. In our school experience since 1999, reflective practices amongst the staff have developed:

1) as a result of taking on mentoring roles for the KBC program; and

2) as a result of collegial management and supervisory styles becoming the philosophical base of our school.

In essence the KBC program operated as the vehicle for the implementation of reflection through the mentoring role. . . (Marks 2001, p9)

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