Developing quality teaching through authentic assessment and school-university partnerships

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Quality in Teacher Education: Considering different perspectives and agendas

Proceedings of the 2007 Australian Teacher Education Association National Conference

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Editorial

The ATEA 2007 conference was held at the University of Wollongong, July 3-6. This publication contains all papers that were submitted for presentation at the conference; some presentations are not represented as papers in this publication at the author’s request. The papers are organised into collections; keynote papers, papers submitted for review and papers submitted without review.

The theme of the conference, *Quality in Teacher Education: Considering different perspectives and agendas*, provided a forum for many voices to be heard as teacher educators consider their important role in education. Through this collection, we invite you to revisit the perspectives you considered during the conference, and perhaps to seek out others in the presentations you did not attend, as you reflect on the implications of the 2007 ATEA conference agenda on your own teaching and learning.

Julie Kiggins
Lisa Kervin
Reviewed papers

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All refereed papers in this publication have been peer reviewed anonymously to comply with the verification requirements of the Department of Education, Science and Training for conference publications – full written paper refereed.

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- All author details were removed from the papers and papers were given a code before they were sent out to two reviewers.
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- Where both reviewers accepted the paper, the reports were sent to the author who then considered the feedback and prepared the paper for final publication.
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Preparing teachers to meet the educational needs of children experiencing adversity: A National Perspective

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Abstract
As part of the Professional Education Initiative, the Australian Centre for Child Protection in 2006 mapped how and when child protection is included in teacher education programs nationally. Analysis of data representing 85% of pre-registration teacher education programs offered across Australia (N = 290 surveys) suggests that the majority provide between 1 to 7 hours of explicit child protection content. The curriculum mapping exercise provides valuable insights into the delivery mode, delivery agents, and the timing and extent of child protection curriculum content. The quality of the teaching or actual content experienced by students together with the impact on their learning and future professional practice, and any associated change in epistemological knowledge and beliefs remains unclear and is the subject of further investigation. This is particularly relevant in light of international studies that suggest that a) integrated approaches in the delivery of child protection content has been linked to students’ misconceptions about the nature and impact of abuse and neglect; and b) that they often express confusion and a lack of confidence in addressing the complex and multifaceted issues associated with adversity and the educational needs of the developing child. Issues confronting higher educators include determining the most effective model for incorporating child protection content and monitoring and evaluating the knowledge base of students in what is perceived an already crowded curriculum. Our paper will further elaborate on these issues and incorporate discussions on the findings from the curriculum mapping exercise.

Introduction
Adversity is defined as an event or circumstance marked by misfortune, calamity or distress. In adopting this definition, there are few who would argue that a child or young person who is suspected of being, or has been, abused, neglected or otherwise harmed; or whose parents cannot, or are unable to provide adequate care or protection faces adversity. In Australia when a child faces such adversity they, and their families, generally come into contact with the child protection agencies in their relevant State or Territory. Adequately addressing the multitude and magnitude of child protection related issues and meeting the needs of children facing this form of adversity, however, are proving to be significant challenges for present day policy makers, educators and communities in general for several reasons.

First, across Australia the number of children living under State care and protection orders from June 1997 to June, 2006 increased from 15,718 to 27,188 representing an increase of 73% (AIHW 2007). Of these children, 76 per cent were of school age (that is, aged 5-17 years). Second, the increase in numbers in turn increases the responsibility of the State, both as guardian and primary provider of compulsory schooling and health care to ensure that these children experience valid opportunities to achieve their full social, emotional and cognitive potential. Third, the burden of this responsibility has been intensified in recent years in light of the poor educational outcomes and negative lifelong experiences reported...
in two major Federal inquiries: ‘Forgotten Australians: a report on Australians who experienced institutional or out-of-home care as children (Senate Community Affairs References Committee Secretariat, 2004) and Protecting Vulnerable Children: A National Challenge (Senate Community Affairs References Committee secretariat, 2005). As a consequence, issues concerning the education, health, and psycho-social well-being of children and young people experiencing adversity and/or placed in care are priorities being addressed across Australian through a range of Federal, State and Territory Government initiatives. Notably the federally funded Australian Centre for Child Protection was established in 2005. Based at the University of South Australia, the Centre’s Professionals Protecting Children initiative aims to support and enhance the development of professionals, including teachers, who can respond effectively, confidently and competently to the needs of children who are vulnerable or at-risk of abuse or neglect.

Although the initiative may simultaneously be considered simple and complex, we believe it is a crucial undertaking as the potential for teachers, educational institutions and governments to address and facilitate positive educational and life outcomes for vulnerable children should not be underestimated. Evidence shows, for example, that early identification and appropriate intervention combined with supportive relationships can substantially enhance the likelihood of positive outcomes for children with social, behavioural, emotional, mental health and learning issues (Farrell, 2004; NSCDC, 2004). This being said, Sinclair Taylor and Hodgkinson (2001) suggest that although child abuse is more evident in society it has slid down the agenda in education. In acknowledging that they are describing the situation in England and Wales, it nevertheless raises the question as to whether or not the situation is so different in Australia. If not, the implications for children who become vulnerable and at risk educationally because they face adversity, and in the most serious cases come into contact with child protection agencies, is significant. For regardless of the emphasis given or not given to the issue in educational circles, the mounting evidence outlining the significant disadvantage and poor educational outcomes that such children experience suggests that educational stakeholders cannot afford to ignore, dismiss or passively respond to their needs. In particular, in a society that ascribes to the right of children to access quality education it sounds a warning for organisations and individuals who have the means, position and resources to influence and implement policies that help to improve the educational outcomes of these children.

There is a further imperative for placing this issue on the agenda in the current educational climate. With (a) the move towards a national accreditation and registration system high on the agenda of educational stakeholders in Australia (AFTRAA, 2006); (b) debates about quality in teacher education; and (c) notions of school-based teacher training emerging, we suggest that this is an optimal time to challenge the perceptions, and practices associated with improving educational outcomes for children, who because of factors beyond their control, encounter obstacles that impede their efforts to achieve their educational and life potential. If we also consider that an investment in and commitment to education can help to improve and broaden life opportunities, and empower individuals while helping to break the cycle of poverty and disadvantage then addressing these issues within the teacher education programs becomes particularly important.

Child abuse and neglect: on or off the agenda in teacher education?
In order to gain a clearer understanding of the nature and extent of child protection content offered by universities across Australia, the Australian Centre for Child Protection undertook a national curriculum mapping exercise to investigate the ways in which child protection content is addressed within and across teacher education programs.
All Schools of Education were invited to participate, and respondents completed a survey that (a) ascertained how prevention, identification and response to child abuse and neglect issues and topics are addressed, and (b) scoped the facilitators and barriers to including child abuse and neglect topics and issues in future undergraduate and graduate teacher education courses. Specific details about the duration of courses and units, average enrolments, and the elective or core status were recorded. Additionally, participants were asked to indicate the time allocated to child protection content within the course or unit, if the issues were addressed within a discrete or integrated program, and if any risk factors or proactive strategies associated with child abuse and neglect are referred to, or discussed in depth with students within the identified qualifying program.

The return rates were strong with a total of 290 surveys from 33 universities across Australia returned for analysis thereby providing the first national perspective on child protection content in teacher education. Furthermore, as Figure 1 demonstrates, particularly high returns were recorded from South Australia, Western Australia, New South Wales and Victoria who collectively provide a significant number of the initial teacher education programs offered across Australia.

![Figure 1. Response rates for teacher education programs by state and territories](image)

With respect to discrete, or explicit, child protection content provided in teacher education, analysis revealed that 76.6 per cent of teacher education programs do not incorporate any discrete content and that consequently over 70 per cent of teacher education graduates do not engage in any discrete or formal learning about child protection. Of the 23.4 per cent of courses that do incorporate discrete child protection content it was found that 65.5 per cent allocate between 1 to 7 hours to the delivery of this discrete child protection content over the 2-4 years of teacher education.

More encouragingly, further analysis revealed that nearly half of the programs (that is, 47 per cent) reported integrating elements of child protection content into the teacher
education program. Less encouraging, however, was the finding that this dedicated content tended to represent less than 30 per cent of the overall curriculum content presented within the nominated semester/study period unit or course.

Additionally, the final section of the survey provided the opportunity for respondents to raise and discuss issues or concerns. The documented issues included concerns around time constraints in an overcrowded curriculum, dealing with inconsistent legislative and professional expectations across states and territories, the recruitment and retention of males in the teaching profession, teaching sensitive issues without adequate support, and the need for more explicit discussions of child protection and related issues. Concerns relating to ownership and responsibility for child protection content within a School or Faculty were also highlighted by respondents.

What the results of the national curriculum mapping exercise suggest is that teacher educators generally perceive the issues as important and relevant but that there is little time allocated, or support provided to them in addressing what is a complex and often controversial theme within a qualifying teacher education program. Furthermore the conclusion that child protection is sliding down the agenda in Australian teacher education cannot be drawn definitively from these results as no national baseline data exists to compare the time and content dedicated to child protection issues in current as opposed to previous courses. A conclusion that can be drawn, however, is that the majority of graduating students experience as little as one to seven hours of exposure to child protection issues before taking on the role of professional teacher in a school or pre-school, and this experience is primarily focussed on mandated identification and notification training rather than understanding the needs, and how to work effectively to improve the educational outcomes of this group of children and young people.

The learning focus: child protection or professional risk management
To date the quality of the teaching or actual content experienced by students, the subsequent learning and impact on future professional practice, and any associated change in epistemological knowledge and beliefs has not been widely investigated in Australia, and will be the subject of further investigation by the Australian Centre for Child Protection. It is contended that such investigations are called for in an Australian context given international studies that suggest –
1. integrated approaches in the delivery of child protection content have been linked to students’ misconceptions about the nature and impact of abuse and neglect on children and young people (Baginsky & Macpherson, 2005),
2. graduates often express confusion and a lack of confidence (Baginsky & Hodgkinson, 2000; Portwood, 1999; Smith, 2005) in addressing the complex and multifaceted issues associated with adversity and the educational needs of the developing child, and
3. a lack of adequate knowledge of child abuse, and perceived (or real) negative consequences, for example the fear of losing school or community support when reporting a suspicion or allegation interact to generate an unwillingness to be involved in child maltreatment issues (Hillman & Siracusa, 2001, 1995).

With an emphasis on legal liability and professional obligation permeating many overseas and Australian State and Territory programs, it is not surprising that addressing child protection issues is increasingly perceived as risky business. This trend was further highlighted by Singh and McWilliam’s (2005) Australian study, which documented teachers increasing awareness of the risk factors associated with situations occurring within a child protection context. Essentially it was found that teaching professionals
perceive the risk on two levels – (a) personal risks that can surface when involved in identifying and reporting a child protection issue, and (b) the immediate and potential risks that exist for the vulnerable and at risk child. This phenomenon can result in what has been termed a ‘risk retreat response’ in which teachers experience anxiety due to feelings of inadequacy when dealing with child protection issues often compounded by angst associated with ‘not wanting to know’ (Singh 2004) and the dilemma of deciding if an incident or indicator warrants reporting. With so many complex and challenging aspects associated with child protection it is not surprising that a priority for many teachers becomes one of risk minimisation and self-preservation rather than protecting the child. In turn, however, this behaviour has its own costs. For according to Nias (1999), the risks referred to can, and often do, impact on the emotional and mental wellbeing of teachers, and potentially contribute to and manifest a culture of fear that, in turn, engenders feelings of professional and personal inadequacy and vulnerability.

So how can initial teacher education programs prepare graduates to feel confident and competent in applying the strategies needed to maintain general personal and professional wellbeing without it becoming a barrier to active involvement in the process of addressing the needs of vulnerable and at risk children? In essence the importance of having teachers knowing and practicing safe teaching practices and procedures (McWilliam & Jones, 2004), together with a sound knowledge base and skill set that enables them to effectively respond to the needs of vulnerable and at risk children, beyond statutory reporting requirements to early and proactive intervention strategy, becomes evident. Finding the place and space for such teaching and learning within a teacher education program can, however, be a contentious issue.

We know it’s important but…
In our experience, there are few teachers who would disagree with the need to both protect, and effectively respond to the needs of children who are victims or at risk of abuse or neglect. Knowing how to respond professionally beyond reporting it to an appropriate agency, and determining who will take the responsibility for the development of these skills is more complex and challenging.

A participant in our recent Roundtable shared the following anecdote –

“In discussions with schools about this issue recently, they have reported that they believe that it is the responsibility of university educators to ensure that graduating teachers are aware of the broader impacts on learning and education of children experiencing a range of issues such as child abuse and neglect, as well as disability, grief, emotional and learning difficulties.”

Situating child protection content in initial teacher education courses, however, can be a complex task with far reaching implications for the school and university. Aside from the obvious practical concerns of finding space in an already content-rich, time-poor curriculum program, and assigning teaching and learning resources to the implementation the program, there are further challenges. For example, broadening the teaching and learning focus to one that promotes and supports scaffolded learning about inclusive and effective approaches for responding to the psycho-social and cognitive needs of at risk and vulnerable children, in addition to the explication of the roles and responsibilities associated with the statutory end of child protection may require significant resources to be assigned to staff professional development.
With regard to the importance of addressing these issues in light of the current climate and debates regarding quality teaching and teacher education, Australian teacher educators need only to look to, and learn from overseas studies. Sinclair Taylor and Hodgkinson (2001), for example, found that initial teacher training programs in England and Wales were becoming increasingly preoccupied with standards, and that subject content and technical expertise was subsequently being emphasised rather than child development, social content of learning or topics such as child protection. Investigations by Baginsky and Hodgkinson (2000) into child protection training in school–based initial teacher training contexts similarly reported that sound educational processes to address abuse and neglect were ad hoc and rare, and that most child protection content focused on standards and the legal and professional responsibilities of teachers.

Fundamentally, if we are to avoid the trend observed in overseas contexts, a paradigmatic shift is called for. Namely a shift away from the narrow perception of child protection in which notification is seen as the culmination of the process (Walsh, Farell, Schweitzer & Bridgstock, 2005) and the end of professional responsibility, to a view that addressing the complex and interactive factors that influence educational outcomes for children facing adversity is a proactive step that teachers can take in helping to improve the life outcomes of children who are vulnerable or at-risk because of abuse and neglect. Furthermore, it is contended that such a paradigm shift is urgently needed, as continuing to place the emphasis on the risk and reporting end of the spectrum can and will continue to have alarming repercussions for children who are vulnerable due to neglect and abuse. This is because the approach focuses purely on the reporting of a suspicion or evidence of child abuse and neglect rather than the identification of learning problems and the implementation of proactive early interventions that this educationally disadvantaged group of children so desperately need if they are to achieve acceptable levels of academic success in our country.

On the other hand, is the practicum, or other forms of school-based teacher education an alternative option? While acknowledging that the core focus of schools is to cater for the educational needs of students, it is also important to note that often educational settings and specifically schools provide a practical model of how the school can be a stable and positive influence for a child whose life is otherwise unstable and chaotic (Altshuler, 2003). Taking this into consideration, it stands to reason that schools have the opportunity and perhaps an obligation to be informed and proactive in child protection, and to mentor novice teachers in this regard. On this basis transferring the responsibility for exploring the complexities of working with children facing adversity to school-based, experiential programs seems a viable option. There are causes for concern, however, in adopting this course of action as the sole solution as pressures exist which may prove problematic in the long term. For example, notwithstanding the importance and expectation that schools proactively address and manage issues related to child protection, Webb and Vulliamy (2001) point to the increasing pressures placed on schools to improve overall academic results that compete with the various, and often conflicting and demanding, social expectations placed on schools. Similarly Nias (1999) discusses the notion of primary schools existing as a ‘culture of care’ in which teachers may be well positioned to address these issues, but questions if with so many competing demands, can we ensure that educators are adequately trained and prepared, and schools sufficiently resourced, to model effective educational practice within a child protection context to beginning teachers?

Furthermore, in light of the previous discussion around teacher’s vulnerability and risk management priorities with respect to child protection, we need to be mindful of the
apprehension and concerns the experienced teacher may convey to a novice teacher that could influence their future professional practice in negative ways. Similarly, issues related to identifying and monitoring (a) the graduate teaching and learning that occurs in the school context, and (b) the quality and extent of the training will rely heavily on the sound ethos of the placement school, the expertise of the mentoring teacher, and the attitudes and values of the school community. Therefore, even if this alternative proved to be adequate on some levels, issues related to consistency of modelled practice, and associated learning outcomes will pose significant challenges (Baginsky & Hodgkinson, 2000) for institutions providing initial teacher education and those seeking to accredit and register teachers in the future. Thus, before any school-based teacher education option is adopted widely we would advocate strenuous investigations to determine if graduate teachers entering the profession are, in fact, equipped with the relevant knowledge and understandings, and practical skills to effectively and proactively engage in the teaching of children facing adversity due to abuse or neglect.

Conclusions
In light of the changing social policies and contexts, there has been an increasing emphasis on the role and responsibilities of educators in relation to child protection and wellbeing at both the national and state/territory levels of government. Ensuring that child protection remains on the agenda of all educational stakeholders and policy makers is important. Equally important is the provision of opportunities for teacher educators to explore and identify best practices for embedding child protection content into the professional development of future educators if we want them to become confident and competent professionals who effectively address the educational needs of the most vulnerable and at risk children in our society.

Notwithstanding that child protection has national significance, it is contended that the way change will occur in future professional practice is through committed efforts by individual universities, schools of education, employer groups, state or territory registration and accrediting bodies and professionals to move from an identification and response paradigm to a broader notion of making a positive difference to the educational and life outcomes of these children. We acknowledge that establishing sustainable and cohesive change that supports positive educational outcomes for vulnerable and at risk children of abuse and neglect will not occur effortlessly in a climate of competing demands and pervasive perceptions of child protection as risky business.

For these reasons we do not expect any school or individual to achieve change on their own. We offer our support in exploring the pedagogies, resources and approaches that will best compliment the teaching and learning of such complex and sensitive issues in higher education contexts that facilitate active professional involvement in addressing the educational needs of children facing adversity in Australia.

1. Full details of the survey and Roundtable results have been published in the Professional Protecting Children: Teacher Education report. Contact the Australian Centre for Child Protection for a copy http://www.unisa.edu.au/childprotection/
References


Re-visioning education: In search of connectedness

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ABSTRACT:
Within current educational institutions, the ebb and flow of crisis or opportunity beckons administrators and faculty to consider perspectives and agendas of ‘what has always been done’. As one envisions education ten years from now, burgeoning questions may occur: Why in the last ten years has education not changed all that much? What is education for within a renewed view of educational practice that finds a sense of place within institutional models? Is education meant to be a mirror of culture or a compass to it?

This paper explores the input representing administration and faculty regarding the possibility of transformative education. It explores the cues of impending crisis or opportunity, and outlines the shift in educational writing and research along the way. Not only does it address the aforementioned questions, but it also raises new ones and recognizes those that are currently being cited as ‘scapegoats’ in the defense of why education is in crisis.

It is proposed that intentional interdisciplinary collaboration, a reflectively astute institutional structure and a meaningful relational design may have much to offer students in the next decade. Transformative educational practice that imparts both hope and life-giving inquiry may provoke new perspectives and agendas for educational practice, whether in light of administrative roles or faculty engagement.

Introduction:
Education is at its core a dynamic narrative that provokes robust relational enterprise. In collaboration and conversation, administration and faculty must communicate metaphorically as synergistic voices within a contemporary Shakespearean drama, in order to engage meaningful questions that will instigate inquiry about the future of educational perspectives and agendas in an effort to better serve and teach students.

This paper is a narrative representation of two such voices. One voice represents the administrative consideration of education in a way which philosopher Emmanuel Levinas would describe as the search for seeing and serving the ‘other’ in our midst. The second voice speaks as a faculty member within the organizational canopy, who once also served in larger directorial leadership. These two voices will dialogue, sometimes viewing from both perspectives, as interdisciplinary and inter-faculty awareness deems necessary. During this discourse, this paper will raise three key premises that may serve to provoke significant questions for educators today.

The first premise is that educational practice, both past and present, has not changed all that much.
It appears that the ruts of institutional schooling are wide and deep. This may be so because educators have not had the opportunity to consider the differences between education and schooling in ways regarding community and leadership suggested by Sergiovanni (1994, 2000); in ways regarding knowing and relationship suggested by Palmer (1993, 1998); in considerations as to the end of education as raised by Postman (1995); in suggestions for prioritizing our personal emphasis regarding questions of balance and rigor suggested by Britzman (2003); in examining the scholarship of teaching and the importance of balanced faculty evaluation presented by Boyer (1990); and in partaking in serious analysis regarding the analysis of the domains of scholarship suggested by Boyer as done by Braxton (2006). All of the above educators exhibit sincere concern about education, institutionally and individually. In considering the questions of these aforementioned authors, spanning nearly two decades, we may rightly inquire Why has education institutionally not changed?

**Why has education not changed?**

We hear and read with increasing frequency that post-secondary education in North America is in crisis, and that this crisis is perpetuated by the failure of universities and colleges to keep up with the technological demands of society at large, and with providing access to information. From our personal experience, the argument tends to go something like this:

The World Wide Web has demolished higher education’s monopoly of the educational market; current students coming out of high school and young adults in the marketplace are technologically sophisticated, utilitarian, comparison-shoppers who will do business with the most effective, relevant and convenient provider. Technology is no longer a “bell” or a “whistle” – such dismissive phrases betray the traditional academy’s entrenched suspicion of and general disdain for technology as anything more than an inadequate means to obtaining an education.

Post-secondary education may be in crisis, but the reasons are not based solely on an infrastructural inability to keep pace with insatiable cultural and economic demands for information and the technological means to obtain it. Contrary to popular mythology, universities and colleges have never existed primarily as a repository of information. Simply put, many current post-secondary structures are unwieldy and inefficient; teaching methods and technique are under-developed and woefully inadequate in meeting the needs of today’s learners.

In light of current institutional review and our own institutional experiences, some indicators that signal crisis or opportunity for the post-secondary educational setting from an administrative viewpoint are:

- rapid growth (or in some cases, decline) in student enrolment;
- inflexible administrative structures (fear of change, fear of losing control);
- disempowered faculty (hierarchical leadership; arrogance);
- inadequate fiscal and physical resources (the entrepreneurial is feared, prompting a closing down of possibility because we cannot move autonomously toward academic freedom);
- a meager investment in long-term organizational planning (involving all levels or sectors of the institution).

From a non-administrative position, faculty may see the signs of crisis or opportunity as highly ‘relational’ in that the indicators affect the triad of relational activity between professor and dean, professor and student, and professor and institutional system resulting in the tug of war between bureaucracy, political correctness and meaningfulness:

- Rapid growth in paper over people tasks;
- Class sizes: the ‘bigger is better’ idea in practice, albeit not in theory;
- Additional administrative tasks and structures;
- A faculty feeling of being insignificant or voiceless to administrators;
- Inadequate resources of time.
- Little or no opportunity to use gifts and skills within community;
- Being put in a box, or filling a particular job description

Faced with any or all of these indicators, an academic organization can chart one of several paths toward success. Unfortunately, “opportunity” for many post-secondary institutions has become synonymous with choosing to adopt a business model that fast-tracks a modicum of success to external stakeholders. The resulting actions usually include streamlining independent, autonomous academic units to perform their functions to the bottom line, and basing success on an ability to manage and deliver curriculum to a maximum number of clients with a minimum investment of resources.

In this paradigm, teaching is reduced to a function of content delivery within discrete units of the educational enterprise for which there is market demand, and the quantity of educational product (dissemination of information) is privileged over quality of the student’s learning experience. This conceptualization of “education as commodity enterprise” promotes a sterile approach to teaching and learning that fragments the learning community.

The Second Premise: Why do we need to consider once again what education is for?
Primarily, we need to constantly be attuned to the intent of educational enterprise as being relational, because if this is not so, we cannot identify crisis or opportunity when one or the other arise; and arise they will. Crisis in education is inevitable. Opportunity in education is a choice. For the purpose of this paper, the terms crisis and opportunity are defined as follows:

Crisis…
is the result of radical or rapid change for the sake of institutional survival. It betrays anxiety and an unwillingness to enter into a careful process of discerning future direction that does not abdicate responsibility for the educational mission.

Why, therefore, is change needed in the light of worldview perspectives that emerge within culture? Can we sense a call to make learning meaningful in personal and professional ways?
We have come to believe that the sense many universities and colleges have of being set adrift results from a weak response to external pressure – imposed or invited – from corporate constituencies, private donors, or public powers of influence such as government. These well-meaning, but often self-serving benefactors, while offering capital and endowed support always expect something quite specific in return. While it may be prudent not to bite the hand that feeds, academic culture can be bent to the whims of private or public enterprise, and segments of the learning community can mutate unwittingly to become ideological instruments. If you doubt this, consider the plethora of structures on campuses given corporate namesakes. Branding and positioning have infiltrated academic culture. Who you are named for, speaks volumes about your values.

As an educator, who like my colleague, has witnessed and responded to almost three decades of turbulent change in the classroom as a result of various forms of academic “restructuring,” I am convinced that any vision for the future of teaching and learning in higher education must transcend various educational models and trends, while being open to adaptation and critique that does not force the academy to abandon the central mission of the educational task. In this vein of thought, we can open the door to the possibility of crisis provoking opportunity in this educational time and space, regardless of present borders which may seem confining.

Opportunity…

At its heart, the post-secondary academy is a scholarly community whose mission is to engage in an ongoing discourse about the meaning of things. It is a site for the contestation of ideas, the mediation of experience, and the exploration of the unknown other. The academy exists to cultivate the life of the mind, and, in the process, to continue the paradoxical quest into the mystery of being fully human. It is a place where everyone – teacher and learner – participates in the work of interpretation of truth and reality, and in return, an understanding of the “self” and of the “other” is given focus, and people are transformed.

In discussing transformation, one must first consider the human aspects and relational borders of the people this may affect.
The times, they are a-changin…Dylan was prophetic!!

In reflecting back upon our earlier positional argument regarding the World Wide Web, what can the college or university offer students who are technological sophisticates, and who, by way of being utilitarian and entrepreneurial, place a high value on consumption and convenience in educational as well as material contexts?

These students are human beings like the rest of us, and long to interpret their own experiences and the experiences of their associates and communities against a backdrop that is becoming increasingly global. An ongoing discourse about meaning and signification is no less pertinent in this context; rather, there has perhaps been no climate like the present in which a complex of divergent discourses and ways of being in the world (multiple worldviews as opposed to a dominant worldview) should be tested and interpreted in a scholarly community. This raises the following question, which leads us to our next premise. How can change be implemented? What new questions or new paradigms need to be included in old conversations about what has worked and what could work?

The Third Premise: What should education do and be to become transformative?

The third premise proposes that intentional interdisciplinary collaboration, revised institutional structure, and meaningful relational design for life giving inquiry are significant to educational reform and worthy of educational reflection. The old paradigm of focus on new methodological techniques or processes for short term success is not enough. Perceptions of Loughran (2002) on the search for meaning in teaching and learning; Migliazzo (2002) in the faith aspects of teaching and learning; Palmer (2003) on the reflections on spirituality in teacher education; Preskill (1998) on the role of narratives and the second self; and Raths & McAninch (2003) on teacher belief and classroom performance provoke the idea that teaching for the future within the present educational climate is essential. Consideration of our language as a discipline is significant to this premise as well as topics of life purpose; (and the crisis thereof), linear expertise and emerging issues of educational significance.

Perceptions of Buford (1995) as to the role of the institution in shaping identity; Daniels (2000) regarding spiritual (worldview) assumptions in management; Hammerness (2003) investigating the role of vision in professional educators; Naugle (2004) expounding worldview, integrity and educational practice; Noddings (2003) perceiving happiness in education as a theory of care; and Sacks (2000) on espousing the need for educators to be harbingers of hope flow on to extend the first premise. Reflective reconsideration of the role of scholarship in education, and the shift of the educational texts that influence the educators who read them over a period of time raises the question: Has the meaning and thrust of education changed? Have we considered rewards rather than teaching, or pondered whether education is metaphorically becoming a mirror of culture or a compass to it?

This question invites grand conversations into aspects of authenticity, authentic self, and the ability to ask significant questions in a politically correct world. It opens for discourse
the metaphorical notion of whether educators are being programmed to become human ‘doings’ or human ‘beings’.

A transformational approach in meeting the challenges and opportunities of post-secondary education calls for a process that embraces, guides and refines the core mission of education – Palmer’s (1998) threefold mission of knowing, teaching and learning. As an enlargement of Palmer’s view, we propose that the element of being harbingers of hope be considered. In order to be successful, change must come from within the heart of the educational process, rather than be imposed from some place external to the learning community’s experience. This requires an institutional commitment to ongoing shared conversation between administration, faculty, students and external stakeholders about the educational mission. The following quote is significant:

We can challenge and change norms of [academic] discourse, but we must be able to justify any deviation from them in a public and compelling way … [Such conversation is] conducted with passion and discipline …[a] process of inquiry and dialogue…the dynamic conversation of a community that keeps testing old conclusions and coming to new ones (Palmer, 1998, p.104).

Without words such as those cited above, education becomes someone’s proclamation rather than a grand conversation about what Palmer refers to as ‘the grace of great things’.

Academic Leadership within Partnership

What are the fixed boundaries (non-negotiables) and the spaces of possibility that define academic tradition, calling it toward responsible transformation?

Introducing questions of this sort into an open conversation welcomes creative conflict, embraces ambiguity, invites honest diversity, and creates a sense of shared ownership. This is a non-linear process that requires the facilitative attention and discerning insight of academic leadership within collegial partnership – leadership that is able to connect threads of commentary and inquiry that take a community of learning to new places of response to its traditional foundations. Tyrannical positions of power and the desire to withdraw into isolation evaporate in the practice of honest, free exchange, and personal agendas are upstaged and revealed (Palmer, 1998, p.108). When communities deform the educational task, through polarized focus on radical reform, privatization, relativism or absolutism, the notion of learning as the collective gathering around “great things” disappears. When self-absorption is transcended by a passion for the subject of our discourse, and when individual scholars are drawn into a community of truth to offer unique and multiple perspectives (Palmer, 1998, pp.117, 120), there is a pedagogical power which allows everyone with memory or insight to contribute to a collective inquiry (Palmer, 1998, pp.127, 128).

It is interesting to note, that some institutional models, such as the Harvard and Oxford British ‘school’ or ‘house’ model have continued to be very strong - academically and coherently - due to limit in class size, and the establishment of sub-communities on campus that meet many of the requirements already explored. Small class sizes and communities produce a sense of place, and a common vision. When there is a common
vision as described by Postman (1995), there appears to be no need for disenfranchisement and academic life is not distracted by other factors of possible fragmentation to the same degree. Unfortunately, this is now more the exception than the norm. The push for numbers in university campus budgets has led to a burgeoning concern as fragmentation and loss of community has escalated. This brings new crisis or opportunity, and new ways of seeing and being for academic educators. Academic educators must be able to welcome and manage chaos – multiple visions, competing agendas, championed causes – this is the place where the messy “stuff” of the educational process is opened up and risked for the sake of enlargement (Palmer, 1998, p. 179).

How then, shall we proceed?

Thinking About Teaching as Embodied Research Scholarship

Academic educators need to acknowledge good teaching and scholarship as the heart and soul of the educational environment. Not technology, not “bells and whistles”, not students as consumers of information, as cited earlier in this paper.

Educators who care about good teaching must also care for the conditions that bear on the work educators do. This model of leadership demands the kind of courage that allows room for change to occur as a natural outgrowth of individual and collective response to those things that call us to an authentic sense of life and work. Educators have to invite the kind of conversation which brings faculty out of isolation into a public forum around the subjects which impassion them, allowing individuals, who think and care deeply about their work, the freedom to act toward transformative change, even within an interdisciplinary context. Such community is not easily achieved in academic life – given all that divides us. It is most likely to happen when educators call us back to the heart of teaching and learning – to the work we share, and to the shared passion behind the work (Palmer, 1998, p.161). This would result from a horizontal rather than a vertical model of practice, leadership and nurturing. Kennedy may have had a notion about this when he stated “It is time for us to reaffirm that…teaching in all its forms…is the primary task of higher education” (Kennedy cited in Boyer, 1990, p.1). Some reaffirming will promote affirmation and negate some of the ambivalence many professors feel about their roles in the North American college and university. This ambivalence is triggered by and contributes to a fragmented curriculum, where disciplines are divided along ideological and methodological lines to produce ‘experts’. Such institutional disjunction, according to Boyer (1990), revolves around questions having to do with prioritizing the functions of teaching, research and service. The prevailing reality is that, to be a scholar is to be a researcher. Boyer observes that, if the post-secondary environment is to remain vital, the work of the academy must be clarified for faculty, and its mission must embody a new vision of scholarship – one in which the “rigid categories of teaching, research, and service are broadened and more flexibly defined” (1990, p.16). Thus, the acknowledgement of and emphasis on a ‘systemworld’ is very much a part of Boyer’s framework. But Boyer also recognized that legitimacy must be brought to the full scope of academic work by granting the term ‘scholarship’… a broader, more capacious meaning. In 1990, Boyer stated that the work of the professoriate might be thought of as having four separate, yet overlapping, functions: 1) the scholarship of discovery; 2) the
scholarship of integration; 3) the scholarship of application; and 4) the scholarship of teaching (p.16). But does this fully define the ‘lifeworld’ we want to unfold?

**Looking Ahead to Transformative Education**

From here, we progress to consideration of the possibility of transformative education. We propose that **inculcating good teaching practice as scholarship in post-secondary culture is the task of integrated holistic faculty development where rank and artificial or systematic hierarchies have no place**. Redefining the mission of education restores the full scope of academic work, clarifies faculty roles, removes conflict between academic tasks, and builds connections between life and work and calls forth passion and hope. If one thinks this is irrelevant to the Canadian post-secondary context, consider the following:

> Teaching is seriously undervalued at Canadian universities, and nothing less than a total re-commitment to it is required…In order to balance the forces acting on the teaching-research equilibrium…the definition of scholarship should be stated clearly at each university and should include much more than the publication of research articles. *Commission of inquiry into Canadian Higher Education (Smith et al, 1990, p.63).*

The primary role of academic educators is the task of facilitating good teaching; and we may add, good teaching should facilitate good learning. Underlying every other responsibility from academic planning, to committee work to political lobbying, academic educators need to raise a level of awareness of good teaching as **responsible scholarship** within the collective consciousness of faculty, administration and stakeholders.

When defined as **scholarship**, teaching educates and entices future scholars, creating a common ground of intellectual commitment within the community of learning. Inspired teaching keeps the flame of scholarship alive; the teacher as mentor, pushed in new and creative directions by students, together uphold a sacred responsibility to **transform and extend** knowledge (Boyer, 1990, p.24).

An academic bias toward objectivist epistemology in scholarship and against the subjectivity of personal experience in teaching and learning has deformed the collective understanding of academics: the “self” is often separated from “world” as teachers disconnect or isolate themselves from “the … intersections of personal and public life.” (Palmer, 1998, pp. 17, 18)

**How can a transformative model of teaching and learning begin to take root within a community of scholars?**

**Summary:**

This transformation comes serendipitously in the form of a storied life. In response to our primary questions, *Why has education not changed?*; *What is education for?*; *What leads to a transformative model?* – we are hopeful. We both have experienced
institutional life that works. Whenever that has been the case, the following criteria have been present:

1. Educators have been free to take a risk, raise significant questions, and try new theories in practice (Britzman, 1998).
2. Educators have wrapped their risk taking in a joint consensus from the community in which they work (Sergiovanni, 2000).
3. Educators have been able to inspire and lead optimistically and supportively into areas of change (Sacks, 2000).
4. Educators have not believed this cannot be done – often things are not tried and then found wanting, rather than the other way around (Goleman, 2002)!
5. Educators have practised a hermeneutics of care, grace and discernment by being aware of the giftedness and potential of the other in their midst, and have created a space where talents and dreams can be utilized in meaningful and positive ways (Palmer, 2003).
6. Educators have long term vision for the greater good of the community, and think at least five years down the road to the types of students and community that will then need to be served (Sacks, 2000).
7. Educators create a sense of place within all of the unexpected conundrums of daily educational life, and see things first as possible opportunities to do things differently; only noting change as a problem when it is inevitable that it can be anything else (Goleman, 2002).

In summary, authentic, ‘meaning-full’ educators become the stories they tell as harbingers of hope, advancing the lifeworld, and the spiritual call, even within the systemworld.

Conclusions:

In exploring the notion of new questions for old answers: an inquiry into tomorrow’s borders and spaces, the question remains, why has there been so little change?

1. Why has education not changed? – Because we have not been ready to value the lifeworld over the systemworld. No one can change it but us!
2. What is education for? – to give knowledge and wisdom to citizens that is meaningful to life and learning in community.
3. What should education do? – impart a coherent world and life view; provide hope and vision and give direction to society as a compass to society and not a mirror of it;
4. What should education be? – an intentional, interdisciplinary and collaborative ‘revised/re-visioned’ life-long learning journey that provides meaning, provides a sense of place in the world, and provokes new questions for old answers in academic endeavors within the grace of great things.

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Heads up versus Heads in: Approaches to Quality in Teacher Education and Computing and Communication Technologies

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Abstract

Any consideration of quality in teacher education will either explicitly or implicitly include the role of computing and communication technologies (CCTs) both in schools as well as in teacher education programs of various kinds. This paper makes a case for a significant rethink of the way CCTs in education are understood and enacted. It argues that for twenty five years or more, we have pursued a largely “heads in” approach (Kling, 1996), paying attention to the role these technologies can play to support teaching and learning as opposed to a “heads up” approach which draws attention to the larger shifts that CCTs are driving outside schools. Quality matters for the former approach have been addressed over a long time frame with not a great deal of progress. As the pace of development and take up of more and newer CCTs increases around the world, a continuing “heads in” approach is more than likely to keep producing similar outcomes.

This paper argues that in finding a better balance between the particular applications and the much broader implications of the deployment of CCTs allows us to take the focus off the “heads in” or technology for technology’s sake approach in schools and teacher education programs and explore approaches to thinking about and working with CCTs that better reflects the changed and changing circumstances of the world.

Introduction

Any consideration of quality in teacher education will either explicitly or implicitly include the role of computing and communication technologies (CCTs) both in schools as well as in teacher education programs of various kinds. After almost thirty years of work involving CCTs and classrooms and in an era in which CCTs are increasingly deployed in most aspects of human endeavour it would seem odd if these technologies were not regarded as a normal and routine component of most educational practices. While it is the case that CCTs are now intimately associated with the ways in which teacher education organisations, schools and school systems describe contemporary teaching and learning, it is also the case that most of the ambitions for CCTs in teaching and learning have yet to be realised. While this aspect of using CCTs in schools does not typically attract a lot of attention I want to argue that if we are to pursue quality that moves beyond the largely symbolic role they currently enjoy then an examination of this and related patterns in the use and promotion of CCTs in teacher education and schools is warranted. Like all educational practices the use of CCTs have origins, beginnings and rationales as Noble (Noble, 1991) so elegantly demonstrated. In this paper I examine the
logic of the practices of using CCTs in schools and teacher education with a view to establishing a more robust basis for such practices into the future and to allow an order of quality in this aspect of teacher education that, to date, has been elusive.

The relationship between the logic for and use of CCTs in teacher education programs and in schools is vexed as will become clear in this paper and is reported in the Victorian Government enquiry into the suitability of teacher education programs (Education and Training Committee, 2005). Nevertheless, I will argue that the broad set of logics that informs practice in both settings are, more or less, identical. The articulation between both settings reflects a broad commitment in many teacher education programs to prepare students for what they are likely to encounter in schools, and, at the same time, to give them some sense of future developments.

I want to posit that the logic for using CCTs in educational practices is largely and broadly based upon a number of key assumptions which are traceable over an almost thirty year history of this work in schools and teacher education programs. I will examine these assumptions and, drawing on the history of CCTs in education, will argue that existing quality considerations have a primary focus on the how of educational practices and CCTs to the detriment of considerations of the what and the why. Not attending to these issues has placed schools and by default, teacher education, in a difficult if not impossible position with respect to expectations about the use of CCTs.

The emphasis on the how in teacher education programs and in schools highlights the importance that has been placed on finding useful things to do with CCTs in classrooms and on maintaining a perception by the public that schools and school systems have CCTs under control. This orientation produces a good deal of activity in schools which follows what is now a highly predictable pattern in which CCTs are the focus. Emphases are on the technology and its application in teaching and learning. Such an emphasis has been described by Kling (1996) as a “heads in” approach. I will argue that this particular approach to CCTs in schools has persisted for a long period and is supported by limited ways of thinking about technology generally and also change in education. Finally, drawing upon this analysis, the paper posits three markers or characteristics of quality for CCT-related practices in teacher education and in schools more generally.

**The assumptions**

I want to take each assumption in turn and map something of the dilemmas associated with each before arguing that adopting a more robust way of thinking about technology generally and about change in education provides a better basis for moving towards more achievable and sustainable notions of quality.

The first assumption is long standing and is about the importance of integrating CCTs into various classroom practices. The phrase can be found in most current and many past policy statements about the use of CCTs in education. It is peculiar to education. One does not read of aims to integrate CCTs into medicine, the law, banking, commerce, even religion. Even, prior to their extended use in other fields, the notion of having to integrate CCTs was rarely used. What does this tell us then about CCTs and formal educational
practices? That this aim has persisted over such a long time with little evidence of progress toward it being achieved ought to tell us that either education is somehow different from all other social enterprises or that something is wrong with the way this problem is understood and is being tackled.

Despite a long history of not realising the large shifts in educational practice hoped for through the use of CCTs in schools, the hoping continues, largely fed by a non-stop flow of new and more powerful CCTs. Moore’s law continues to hold true and George Gilder (2000), who was among the first to recognise the potential of optical fibre for the Internet, has argued that the capacity of fibre is likely to double every six months, a trend, he claims, is likely to continue for at least the next twenty years. His argument and that of others like Google CEO Eric Schmidt is based upon the infinite capacity of the optical fibre pipe. While there is argument over the time period for doubling, the net effect will still, nevertheless, be considerable. All of which will guarantee an almost endless supply of CCT-driven hope and hype for those who want a new CCT-based age of schooling.

And this has been the nub of the problem for educational practice and CCTs for almost the past thirty years. Each new development in CCTs conjures a new or better vision for education which is followed by a period of unrealised hopes which are soon forgotten with the appearance of yet another development.

That schools have been largely unaffected by the considerable investment in CCTs has led to various blamings. Most commonly, it is either the fault of teachers who have failed to realise the educational potential of CCTs or teacher educators who don’t prepare adequately skilled new graduates to bring about the transformation of schooling to which these technologies gesture (Education and Training Committee, 2005).

The second assumption I consider is that of improving or enhancing teaching and learning through the use of CCTs. During the earliest use of CCTs in classrooms, the claims of vendors were consistently couched in terms of improvements in learning and teaching. That these claims have been faithfully reproduced over the decades despite the extreme experimental difficulty of demonstrating the merits or otherwise of one classroom technology over another is remarkable. Lee Sproull and Sarah Kiesler (1991) however, have demonstrated that claims of improvement are typical of the claims made on behalf of the introduction of any new technology. The claims, or first order effects are “the planned efficiency gains or productivity gains that justify an investment in new technology”. They are almost invariably a fiction but a necessary one in order to secure funding and support for the acquisition and deployment of any new technology and the redeployment of resources to support its use. In the case of schools and CCTs, the new technology has to be positioned so it appears as a solution to a particular problem. If the justification for acquisition is successful, the new technology is put in place. But during the process of deployment, as Sproull and Kiesler argue, interesting things happen that bear little relationship to what was imagined, what they call second level effects, “...people pay attention to different things, have contact with different people, and depend on one another differently” (1991, 4). In the face of this, the original claims slip from view and there is little point or interest in evaluating them. Rather than improvement, things change.
This assumption, like the first has persisted over time and, as Sproull and Kiesler suggest having to make claims about first level effects is typically a necessary step in securing support for the adoption of any new technology. The problem however is that the logic of enhancing and improving then persists in so much of the writing, policy and mindsets of teachers and teacher educators. Here, how these changes are understood becomes paramount. The influence of category-based theories of change permeates much of the thinking around change in education (Bigum, 2000). As I will argue, understandings supported by such framings constrain any opportunities there are to move beyond what is a vendor legacy from the 1980’s.

The third assumption is less apparent than the first two but can be found in the practices in schools and teacher education programs. Broadly put it is that in order to prepare students for the world that all that matters is having students understand how to use particular CCTs in the context of various tasks. In teacher education this translates to having would-be teachers learn how to make use of CCTs to support particular, e.g.

Graduates should…demonstrate an awareness of a range of learning technology resources and how they can be integrated constructively and creatively with other resources to produce a challenging and rigorous curriculum (Education and Training Committee, 2005)

This focus or emphasis on the technical and local, the \textit{how}, occurs at the expense of developing broader views of the world for which students are being prepared.

There are two points to be made here. The first is that the type of technical skills which predominate in most educational settings are characteristically “schoolish”, that is they bear little resemblance to how particular CCTs are enacted in mature versions of social practice in the outside world (Lankshear & Knobel, 2000). Thus, students might construct Web pages to assemble information about an upcoming national or international sporting event, or use Microsoft’s PowerPoint to record historical data gleaned from the Web. In these kinds of activities, the focus is on the technology, less so the task. In the long tradition of enacting curricula that safely reproduce the world, tasks tend to be low risk and for which there can be right answers or judgements easily made about the correctness of the outcomes of a task. The second is that the time and effort expended on performing CCTs in classrooms draws attention from the much larger and, from an educational point of view, more significant issues that emerge from the ongoing deployment of CCTs into the world. The assumption being made here is that as long as would-be teachers and students know how to use PowerPoint or a Wiki or a spreadsheet that that is all they need to know to be equipped for the challenges of the world. While it will always be true that having some technical skills will be necessary for any individual to participate in a world increasingly making use of CCTs, it will never be sufficient.

I will briefly outline two “heads up” views to illustrate the importance of extending attention beyond the nitty gritty of hardware and software in classroom settings. Marshall Brain (2004) outlines a scenario based upon Moore’s Law to highlight the effect that the increase in computing power will have on what robots will be able to do fifteen to twenty years out. He argues that with the growth in computing capacity that the major problems
associated with robots are likely to have been solved, that is vision and speech recognition. Should this come about then, he argues, it would mean the loss of almost all of the low paid service employment. Rehearsing this scenario for the students entering school this year would mean that they would grow up and into a world with potentially huge levels of unemployment. To suggest that giving them what would be ten year old computing skills would adequately prepare them for such a circumstance underlines the importance of tempering technical skills with a capacity to think more generally about the role CCTs are playing in the shaping of the world.

The other example does not rely upon future scenarios but on reconsidering the early years of computers in schools and universities. In the late 1970s and early 1980s, if you wanted to find a computer or get access to a computer network then schools and universities were clearly places where you’d find these devices more commonly than elsewhere in a community. In these conditions, what teachers and teacher educators did to teach students and teachers about this technology made sense. It was in this period that many of the views that can be still found in schools today were formed, that is that schools are important sites for using and learning about CCTs. Since the 1980’s there has been a very large shift in the status of schools vis-à-vis their prominence in the community with respect to CCTs. They have moved from being relatively computer rich, to computer poor. That is you are more likely to find and have better access to CCTs outside of school than inside. Despite the obvious nature of this fact, schools still tend to think about these issues as if it were still the 1980’s. As I have argued (Bigum, 1997), what is important is to recognise these changes and adopt policies and practices the complement what has happened outside of school.

Rethinking technology and change

One of the characteristics of all three assumptions that I have briefly traced is that they derive from a persistent binary, that of the social on the one hand, the classroom, the teacher, the students and the technical on the other, the hardware, software, network and other communication protocols. Perspectives which focus upon either the social or the technical tend to be prone to measures of social or technical determinism. For example, the argument about the necessity to respond to changes in CCTs gestures to a technological determinism, while the assertion that good teaching is all that really matters makes the case for the importance of the social (Bigum, 1997). Ursula Franklin (1990, 15) suggests that technology is better seen as practice, formalised practice, or simply, the way things are done. Bringing together humans, language bearers and non-humans, the artefacts without language, provides a more holistic take on, for example, what happens in a classroom when CCTs are deployed. Under the logic of the social-technical binary, most accounts tend to treat either the social or the technical as context and focus upon the machines or the teaching and learning, not both together. Thinking about technology as a way of doing things also allows a broader view of what is going on when CCTs are introduced into schools and classrooms. Rather than simply seeing CCTs as technology, schooling appears as a technology, as a way of doing things. And, as I will argue, a most robust and powerful technology.
The intellectual tradition I am lightly tracing here is that associated with what is sometimes called the sociology of translation, or more commonly, actor-network theory (ANT). The work of Bruno Latour, Michel Callon, John Law, Annemarie Mol and many others represent a body of work which, among other things, does not see binaries as explanations, but rather as things to be explained. Rather than the social and the technical, practices appear as sociotechnical, as Wieber Bijker and John Law put it:

> Purely social relations are found only in the imaginations of sociologists, among baboons, or possibly, just possibly on nudist beaches; and purely technical relations are found only in the wilder reaches of science fiction. (Bijker & Law, 1992, 290)

In this frame, schools or teacher education programs are seen as an assemblage of people and things, a sociotechnical assemblage which is large (many components or actors in the jargon) and durable (many of the social practices of schooling and teacher education are supported and sustained by relatively permanent physical structures, legislation and long practised routines and protocols). In this way, a school or teacher education can be seen as a particular way of doing things, a technology. When the technology that is school is compared with the technology that is CCTs in classrooms, two things are apparent. The school is, relative to the assemblage that is associated with CCTs, large. Not only is it much larger, it is also more durable which derives from the fact that the practices of schooling are enacted over and over again each day and have been for many decades. Repeated enactment maintains the particular way of doing things by, over time, aligning resources to support the various performances that go to make up what we colloquially refer to as school. An analogy may help make the point. Imagine a plush carpet with very thick pile. Imagine walking in the same circle on that carpet, over and over so that the carpet eventually wears down and a groove appears where you have been walking. This groove is analogous to the repeated practices of schooling. If we wanted to introduce a new practice, a new way of doing things, i.e. using CCTs then the way to introduce them and be somewhat assured of success is to make the new practice fit into the groove. The example here is the ease with which teacher centred computer-supported classroom practices are able to be implemented, i.e. one teacher, one computer and a display, or perhaps more contemporarily, a teacher, an interactive white board and interactive keypads distributed through the classroom. This latter example can be seen to be a better fit than the case, for example, in which every student has a laptop, access to instant messaging and the Internet generally. In this latter scenario, the possibility for student-to-student communication and communication outside the classroom is high and while it is possible to harness this the activity to support particular pedagogies, a lot of work is entailed in keeping such an arrangement in place. This analysis suggests that CCTs have a limited role in schools, one that, if it is to survive, has to conform to the existing and more powerful patterns of schooling. The analysis also suggests that the only integration that has any expectation of long term survival is that which most closely conforms to the existing patterns of schooling.

The other key element of these considerations is that of change. As I have argued, change in terms of CCTs and education has been couched almost exclusively in terms of
improvements of teaching and student learning. Beyond that, accounts of change make use of a set of categories that derive from the diffusion of innovation theory of Everett Rogers (1962; 1983; 1995; 1971). Thus, the literature refers to, among other things, change agents, change cultures, capacities, stages of concern about change, micro and macro influences and contexts of change. This research produces categories or factors that can, at least in theory, be used to support the planning and implementation of future adoptions of CCTs or perhaps provide an explanation for the failure of a particular CCT in an educational setting. Types of adopters, types of resisters and types of change or innovation are the kinds of factors identified in research of this ilk.

Innovation diffusion theory is considered here as representative of or largely consistent with most factor or category-based research concerned with CCTs in education. Its explicit application in education has not been common but the broad approach of framing research into educational change in terms of factors or influences has been and continues to be the predominant approach to studying change. For instance, the failure of many of the large curriculum projects of the 1960s and 1970s prompted research which drew on the work of Rogers among others to identify a range of factors that could be linked to the success or failure of these projects (Huberman & Miles, 1984; Ruddock, 1973, 1990, 1991)

Category-based approaches to the study of change locate and label influences that are judged to have effects on the course of the change. Categories are decided in advance by researcher(s) and applied to research data which then constitutes the explanation for the success or failure of a particular change. The key point about this approach to the study of change is that success or failure of an innovation is explained in terms of influences whose characteristics have been judged retrospectively using pre-existing categories. For instance, category-based analyses find that some changes fail because of inherent flaws or succeed because the change agents ‘got it right’ or were successful because a particular change agent proved to be highly effective. That an change had flaws or that the change agents managed to get it right are things that are determined after the event. The attributes of the change or the skills of the change agents are things that are, in innovation diffusion terms, predetermined but not evident until all of the influences impinging on a change have been mapped. In a sense, the attempt to bring the change forward is the means by which these characteristics are revealed. In its pursuit of a more predictive model of change, innovation diffusion further seeks to identify predictive characteristics of the categorised elements of a potential change, that is the attributes of early adopters, of change agents and so on. Like most category-based forms of analysis the pursuit of fundamental properties, much like the quest for the ultimate particle in physics, can become one that is never ending. Thus innovation diffusion and related category-based approaches tend to category proliferation. When faced with features of the adoption of rejection of a change that can’t be accommodated by the theory, the corrective measure is to add more categories or category types. This has effectively been the mode of development of innovation diffusion theory since the 60’s.

Thus, from an innovation diffusion stand point, the development and implementation of CCTs in schools is framed in terms of the factors like those briefly described above. Such an approach has its appeal, particularly to administrators in that, at least theoretically,
factors can be identified and presumably managed. But in the end, at least according to diffusion innovation, success will only come with the right combination of brilliant implementer/developers (teachers/technical support), clever adopters (students) and the most compelling technology (a contemporary CCT). The only problem for administrators being that judgements about brilliance, cleverness and being compelling can only be made after the event. While the tautology in such accounts of innovation remains a problem, a more significant issue with category-based analyses of change is their reliance on a largely unchanging and unchangeable technology. The thing, idea, artefact or practice cannot alter much from its initial conceptualisation or material form during the process of implementation. Giving technologies an independence that is virtually unable to be negotiated by human action confers a measure of technological determinism on innovation diffusion analyses. This is consistent with the maintenance of a separation between things that are social or human and things that are technical. Indeed, all category-based theories of change rely upon making distinctions or separations between things, or, as Bruno Latour suggests, of purification (Latour, 1993). The problem with making use of fixed categories for projects or innovations is that the very process of innovation is one which produces new arrangements. Forcing configurations of social and technical elements that are intended to be new and different into pre-existing categories seriously limits the reading of such change and, in particular, how such change can be supported and sustained.

On the other hand, change, from an ANT perspective is associated with the formation of an assemblage of human and non-human actors. A network or assemblage of actors arises as a result of negotiations between actors. Roles and capacities are not pre-determined but emerge as a result of negotiation, trade-off and compromises between actors. Attributes such as agency or power are seen as properties of networks or assemblages not as qualities that inhere in particular actors. As Latour (2000) argues, ANT is interested in ‘things’. Not things as non-living objects or things without language but things as quasi-objects, as heterogeneous networks or assemblies of humans and non-humans. In this way projects, innovations and change are seen in terms of a process of alliance formation or failure of negotiation and compromise.

Thus for a particular change say involving the use of CCTs in a classroom, the initial idea barely amounts to anything, it certainly does not have any inherent inertia or momentum that propels it into a school system. If it progresses at all it only does so by interesting other actors and forming an alliance with them. A teacher wanting to make use of Wiki software to record a local history project would need to assemble a broad set of allies including the Principal, technical support in the school, Wiki software, a server, communication between the server and the classroom, students, locals to be interviewed for the collection of oral histories, agreement from the system administrators that they will not, at some future time, block access to the Wiki, and so on. And once the assemblage is in place, the network has to be policed to make sure that all of the elements continue in their negotiated roles. As any teacher who has developed a CCT-based project in the classroom will attest, it is a lot of work to put it together and requires ongoing work to ensure its survival.
Towards new characteristics of quality in the use of CCTs in teacher education and schools

What then, based on what I have argued thus far, might characterise a quality approach to CCTs in teacher education and schools? There are three interlocking characteristics of policy and practice. The first would acknowledge that schools and universities are no longer key sites for either the concentration or use of CCTs. This position acknowledges the changed and changing circumstances that are at play outside formal educational settings. An accompanying acknowledgement would recognise that schools, in particular, are at their limit in terms of the use CCTs and making ambitious claims for their further deployment will only lead to a never ending series of blamings. Finally, and this is contingent upon what view is held about current forms of schooling, CCTs can either remain a focus as they always have been but re-examined in the light of the previous two considerations, or, the focus can shift to schooling in the light of a changed and changing world.

If the view that schooling as is, is the way to proceed then the use of CCTs can be re-examined in the light of the considerations above and better metrics can be developed and applied to the use of CCTs in teaching. In this circumstance, much less can be asked of schools with respect to their use of CCTs but more serious consideration given to what can be valued and why. In particular more serious recognition can be given to complementing what occurs outside school rather than operating as if external practices are of no consequence. For teacher education it means that would-be teachers need to understand the limits of the settings in which they will be working, the promotional role that is still strongly associated with these technologies in schools and the challenges of working with CCTs that more often than not have been technically constrained.

Alternatively, if the view is that schools and schooling ought not be taken for granted as is and that the massive CCT-based changes that have occurred outside schools needs to be taken into consideration, then there is a warrant for thinking about doing schools and teacher education differently. This “heads up” view takes the focus away from the technical interests in CCTs and towards the broader implications of CCT-based change. What follows is a very brief elaboration of one modest instance of pursuing this logic.

In most educational accounts of the Internet, much is made of the ready availability of information and content. Schrage (2000), however, argues that basing one’s understanding of the Internet on information misreads things:

To say that the Internet is about "information' is a bit like saying that "cooking" is about oven temperatures; it’s technically accurate but fundamentally untrue. Schrage (2000, np.)

He goes on to argue that biggest impact that digital technologies are having and will continue to have are on the relationships between people and between people and organisations. This is not a new idea that CCTs or indeed any technology can be seen in terms of the relationships they affect or mediate, the new relationships they support and the relationships they terminate. Such a shift in thinking, however does two things. It
poses two interesting questions for schools and teacher education: one about relationships and the other about the consumption of information or content. That is, what are the new kinds of relationships that schools and teacher education programs might have in a world heavily influenced by the deployment of CCTs? And, given the valuing of skills and capacities in the world beyond schools to produce, rework information and content, what role might schools and teacher education programs play in this respect. For a very small group of schools with whom I have been working and for aspects of teacher education at Deakin, these questions are being explored under the rubric of knowledge producing schools, that is schools as sites of serious, that is valuable knowledge production (Bigum, 2003, 2004; Rowan & Bigum, 2004). In this work, CCTs are never a focus and are employed to help carry out tasks that have value to a local community or group. An important aspect of this work is the drawing in of experts, where necessary, to support outcomes of the highest quality which is consistent with the curriculum analysis of Moore and Young’s (Moore & Young, 2001).

Having would-be teachers or students in schools negotiate, plan and enact tasks that they understand are real, that have value and importance to others, and, which more often than not, takes them from the conventional classroom, has a number of key outcomes: learning about CCTs, if they are deployed for the task, occurs but is not the focus; student engagement is always high; the quality of work is also necessarily high; and important contributions to the improvement or support of a school or community group occurs.

In sum, any consideration of quality in teacher education must first involve a rethinking of the role of CCTs in schools together with what is done in teacher education programs. How CCTs and change are thought about matters! The ongoing changes in the capacities and scope of CCTs will make any approach which endorses a largely technical or “heads in’ view a rerun of the past, albeit with contemporary technologies. A “heads up” view on the other hand will draw attention to more important questions about relationships, knowledge, its production and consumption and the role of schools in a world that continues to change as the deployment of CCTs continues apace. Such a view supports curriculum practices which are less about the safe reproduction of the outside world but are oriented to new kinds of knowledge relationships which invariably engender significant growth of agency in students.

References


**Footnotes**

1 I am fully aware of the popular use of IT or ICT to denote this technology. The use of the letter I for information in these acronyms is, in my view unwarranted. Gregory Bateson defined information as "the difference that makes a difference." What is information to one person may not be to another. Computers are used to do computations and to communicate.

2 Is the observation made by Gordon Moore that the number of transistors on an integrated circuit doubles every two years.

3 There are theoretically no restrictions with respect to the number of frequencies of the light used to carry data.
Seymour Papert (1972, 2) parodied the application of the scientific model to the evaluation of computer-based learning. He suggested that the failure to find significant differences in favour of computer-based approaches was like the failure of a 19th Century engineer who failed to show that engines were better than horses:

This he did by hitching a 1/8 HP motor in parallel with his four strong stallions. After a year of statistical research he announced a significant difference. However it was thought that there was a Hawthorne effect on the horses ... the purring of the motor made them pull harder.

As Latour (1991) argues: technology is society made durable.
The Ontological Turn: Reconceptualising a Teacher Education Course using a Realist Framework

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Abstract

It is a truism that teaching and teacher education in Australia and elsewhere is under increasing scrutiny and pressure. Stakeholders like governments, school systems and media commentators make their views well known within a policy framework of tightening university budgets, increasing accountability (of teachers and universities), market forces and more stringent expectations of teaching. The advent of a course review of a teacher education course at the University of Wollongong in this context has presented an opportunity to re-think some fundamental assumptions of both the existing mainstream primary teacher education course and a smaller scale alternative course run within the Faculty of Education there.

Briefly, the existing mainstream course is modeled on the general liberal arts degree structure that is widely used. The alternative mode is known as the Knowledge Building Community (or KBC). Both of these modes embody assumptions (more deliberately so in the case of the KBC) about learning, knowledge, pedagogy and other aspects of teacher education, and the KBC makes its point of difference from the mainstream in applying theories clustered around student-centred learning environments, such as problem-based learning, situated cognition, school-based learning and so on. The model arising out of the present course review critiques the positions of both these models, roughly and respectively being positivist and constructivist approaches. Instead, it posits a realist, specifically a critical realist, view of knowledge and social explanation. Here, the starting point is neither the subject (as in traditional models) nor the learner (as in constructivist models) but the learning environment (the ontology), which is defined as the circumstances that enable and constrain learning. This became a focus for reconceptualising teacher education within the constraints given above and, we will argue, for reconceptualising the work of teachers.

Introduction

This paper reports on the development of a teacher education program that marks a departure from both a traditional university liberal arts-style course and a semi-integrated student-centred learning environment-style course. The course development project has taken place in the context of pressures and influences, both internal and external to the Faculty, that have emerged during the life of the present program:

- research developments in education and TE education in particular, e.g. Jonassen & Land (2000a), Hoban (2005);
- the advent of the NSW Institute of Teachers (NSWIT), which has produced a set of Professional Teaching Standards to which our graduates must conform;
• the Quality Teaching initiative of the NSW Department of Education and Training (DET), the largest employer of our graduates;
• developments in the research and practice of teacher and other professional education, including the trend to four years as the standard length of program;
• the Knowledge Building Community (KBC) program within our Faculty, as an alternative to the mainstream program, and an instance of a development of teacher education practice and application of teacher education research; and
• further increase in public, political and media scrutiny of teacher education and school and university education more generally.

We will argue that this project responds to each of these pressures and offers both practical and theoretical opportunities.

The mainstream program

The majority of primary TE students in the faculty study within what has become known as the ‘mainstream’ program after the advent of the Knowledge Building Community (KBC) program. It is a three year Bachelor of Teaching program with an optional one year conversion to a Bachelor of Education qualification. The mainstream program is successful on a number of measures: the course is accredited, it handles a large intake of about 150 students per year, it is well supported by school systems and a large number of schools, and the rates of graduate satisfaction and graduate employment compare more than favourably with equivalent courses elsewhere. In the 2005 national Australian analysis of student exit surveys the faculty scored highest across the university, which itself scored highest across the nation.

Nonetheless, a number of reports and research papers present criticisms of courses like this one that resonate with feedback from faculty, students and schools. Hoban (2005a, p. 13) cites US research by Tom (1997) that lists common concerns with conventional TE programs:

• unclear program goals;
• fragmented courses which lack relevance and coherence;
• incoherence between courses from different faculties;
• discontinuities between university courses and school practice;
• unclear career path of teachers and their role in practicum supervision;
• independent department structures in faculties of education that promote a lack of collaboration;
• low status of teacher educators within a faculty of education;
• too many stakeholders involved in teacher education;
• lack of planning for implementing change strategies; and
• vulnerability of teacher education to one-off reforms.

This is consistent with recent Australian reviews. For example:

A major theme of this report … has been the need for sustained critical reflection on teaching practices by teachers, operating as professional communities and nurtured by appropriate forms of professional development. It follows that novice teachers need more than assistance with the mechanics of instruction and classroom management techniques, although the importance in this day and age of those attributes can hardly be over-stated. In addition, the teacher in preparation needs theoretical understandings (particularly those of a kind that bring into question the assumed 'commonsense' of professional and classroom practice), a range of inquiry orientations, and openness to ways of thinking about teaching, schooling and society…[T]he complaint of many novice teachers [is] that they have received little pre-service assistance with practical challenges like managing a class, understanding and managing the DET's reporting requirements, and establishing a working partnership with their students' parents. (Vinson 2002, p.98)
Consistent with this argument is Ramsey’s (2000) view that ‘compared with other professions, student teachers spend minimal amounts of time in schools and other educational settings. Also, what they do there is of doubtful value’ (p. 10). Again there is the call for a more central and authentic role for the school setting and better coordination of the whole, including content covered on campus.

While student feedback in the faculty is generally positive, where it is adverse it reflects these findings: differences in approach between the curriculum subjects were sometimes confusing, the practical application of the foundation subjects was sometimes unclear, the selection of electives was pragmatic (usually for timetable fit) rather than useful, and the practicum experiences were (are) highly variable in quality and content, and too different a culture from study on campus. While most TE students found their practicum useful (and often more so than studies on campus), they did report a variety of less than satisfactory experiences over which we have little control in the present model, such as teachers who have no programs, or omit a KLA, or make it clear they are waiting for retirement.

At the same time, there are models of TE that address such issues (for example in Hoban 2005). Hoban argues the value of a unifying framework, and suggests a meta-framework for use in planning TE courses. He synthesises TE research to argue for four types of links ‘that underpin the conceptual framework proposed for TE design’ (2005a, p. 14):

- conceptual links across the program;
- theory-practice links between school and university settings;
- social-cultural links amongst participants in the program; and
- personal links that shape the identity of teacher educators.

The KBC Program

The KBC program is a development of, or reaction to, the ‘mainstream’ program. The relationship between these two approaches is well made by Jonassen and Land’s (2000a) distinction between traditional instructional LEs (as in the Wollongong mainstream program) and student-centred LEs (as in the differentiated half of the KBC program). Student-centred LEs are probably the most vigorous recent development in LEs, and they are commonly positioned in opposition to traditional instructional LEs (Jonassen & Land 2000a; Cambourne 2002). Key markers of difference are set out in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Traditional Instructional Learning Environments</th>
<th>Student-Centred Learning Environments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>Knowledge transmission; individual; process of information reception, storage, retrieval and comparison with others</td>
<td>Meaning making; social; process of internal and social negotiation (dialogue) and shared with others</td>
</tr>
<tr>
<td>Locus of meaning</td>
<td>Heads of individuals</td>
<td>Individual and socially negotiating minds and the discourses of the community</td>
</tr>
<tr>
<td>Contributing disciplines</td>
<td>Psychology</td>
<td>Anthropology, sociology, ethnography</td>
</tr>
</tbody>
</table>
Bases for conceptions of learning

Cognitivism, behaviourism, communications theory

Social constructivism, situated learning, everyday reasoning, activity theory, ecological psychology, distributed cognitions, case-based reasoning

As tends to be the case in simple categorisations, the extent to which the traditional instruction category, roughly what Cambourne (2002) calls the ‘objectivist’ model, adequately captures the mainstream model at Wollongong is not straightforward. Likewise the designation “KBC” accounts for only half the subjects; for the other half, KBC students sit in on mainstream classes, so the designation “student-centred” applies only to the differentiated half of the KBC program, however “student-centred” that may be.

Using the KBC program as a particular instance of the student-centred LE type, a range of benefits has been identified (Kiggins 2001, Kiggins 2002, Cambourne 2002):

- increased and more structured support for student teachers (called associate teachers);
- greater trust, collaboration, ownership, responsibility for learning, links between theory and practice, understanding of the culture and operation of schools, congruence between campus and schools and generally a greater contextualisation of learning; and
- more efficient use of student time in that unnecessary duplication and assessment is removed.

Significantly, the KBC model, which replaces half of the mainstream program, is an attempt to implement a cohesive or synergistic suite of theories. The model draws on a range of more-or-less related approaches and theories, including problem-based learning (PBL), a social constructivist theory of learning, community learning, reflective practice, mentored learning, collaborative learning and situation-based learning. At least for the specifically KBC-cohort subjects this contrasts strongly with the more liberal arts structure of the mainstream model, where subjects have a greater capacity to reflect the particular enthusiasms of the teaching staff. Anecdotal evidence from staff in schools and school systems is that KBC students are impressively able to articulate an educational agenda in discussions and practice. Importantly, these successes mean that there is valuable corporate knowledge within the faculty.

However, the cost/benefit ratio is unclear. There has been no external evaluation of the program. There are two discourses about the KBC operating in the Faculty, for and against, which rarely engage with each other (although the present writing team is one such combination). The opposing discourse in the Faculty has two foci. One is comparison: the KBC model operates within a resource envelope (funding, rooming and staffing) not available to the rest of the Faculty, and a parameter of the development project is that it should not cost more than the existing mainstream program. The second focus is the possibility of other alternatives to the mainstream program. The present paper responds to both.

Developing some principles

We take the title and content of Brian Cambourne’s 2002 ATEA roundtable discussion paper (Trying to change pre-service teacher education: nibbling around the edges vs. going the whole hog) to be a challenge to teacher educators in a position
such as our present one, contemplating their TE courses. In that spirit, we take up the challenge.

We take whatever successes are due to the KBC program to arise from one or more of at least these six factors:

1. it is an example of going the whole hog, not nibbling around the edges;
2. there is, to a much greater degree than in the mainstream program, a cohesiveness and consistency from its theoretical framework through to its implementation;
3. its theoretical framework and processes of implementation have practical application, (i.e. they have resulted in some successes and improvements);
4. it is strongly supported by the Faculty, its students, the university, schools, school systems, teacher unions and, importantly, a senior academic who is a strong and skilled advocate;
5. it has been conceptualised and implemented by a small and essentially like-minded team; and
6. it has enabled the development of particular relations – student-student, student-lecturer, student-mentor, student-learning environment, and faculty-school. These relations are a key factor in enabling certain types of learning.

Accordingly, we have applied these in thinking through the development of the model considered here.

1776 words

The model (2450 words)

This model is by no means the only model that could be developed using a realist framework, i.e. acceptance of a realist analysis does not commit one to this model.

1. A whole-of-course approach: ‘going the whole hog rather than nibbling around the edges’

This model has a whole-of-course or degree-level focus, not a subject-level or strand-level focus, as in the present liberal arts degree structure. It is designed to be cost neutral when compared with the present mainstream course. The main initial cost increase arises from the increased time in schools, as supervision/mentoring costs. However, it makes savings by offering fewer electives. The structure as set out in Appendix 1 is cheaper than the existing mainstream course and markedly cheaper than if run as a KBC program. Savings made are planned to be returned to the course as discussed below.

The general philosophy is that the Learning Environment (LE) is central, and that for the most part students are never more than half a week away from being in a school-based LE.

It is a four-year (eight semester) course. (See Appendix 2) This brings the undergraduate course (three plus optional one years) into line with the existing general standard and meets the expected required standard. It enables the course to use a greater variety of learning environments while remaining within the existing organisational structure (set credit points for example) of the university. Each semester comprises a suite of subjects that is written with the other subjects for that semester in mind. This is to facilitate where possible a homogeneous, rather than a segmented, experience for students in their learning, in the manner of the KBC model.
This is but one indication of a course (degree)-level orientation rather than a subject-level orientation as in the mainstream course at present. The four years (eight semesters) have a 2+2 arrangement, somewhat analogous to junior secondary students choosing at their second year their electives for the following two years. During semester 4 (in the subject Professional Development 1) students are assessed in some way yet to be devised and agreed. On this basis, students may be directed to particular electives to further develop areas in which they have inadequately progressed (in accordance with explicitly written course rules). Others have the option to develop areas in which they show demonstrable proficiency. Professional Studies Electives will be designed to cater for both students requiring extra time and/or remediation, and those seeking extension. That is, these subjects (as with all subjects in the course) will model what we preach in catering for diverse prior knowledge, experience and ability.

Some content is written into multiple subjects in a planned fashion, including classroom/behaviour management, cultural sensitivity, professional development and ICT education. Again, this reflects the course-based rather than subject-based level of organization. Overseas pracs (a feature of the existing course) can be taken as an alternative to the block prac scheduled for year 2.

2. Theoretical framework

The theoretical framework is based on a critical realist understanding of the social sciences. Philosophy of the natural and social sciences provides three main accounts: 

empiricism, idealism and realism. Empiricism is the view that knowledge derives from our sense experiences and is justified by introspection on those experiences. This is the view that underpins the traditional instruction LE. It implies a social ontology of sensing individuals and leads to a scepticism of an independent physical ontology. Idealism is the view that knowledge is a construction of the mind, meaning that reality comprises or depends upon minds or ideas. This is the view that underpins the student-centred LE. It implies a social ontology of interactive groups and also leads to a scepticism of an independent physical ontology.

We have shown above that there are practical benefits and deficiencies in the Wollongong mainstream and KBC models. By analogy we argue that these characteristics are indicative of the traditional instruction and student-centred models more generally. More importantly, however, we argue that there are theoretical flaws in both approaches, flaws that are addressed by the third approach in the philosophy of the sciences, realism.

Realism is the view that the objects of our knowledge, or reality, exist and act independently of our knowledge of them (see Appendix 1). Put another way, the natural and social worlds exist whether or not we have knowledge of them, even allowing that the social world is partly human dependent and has a partly linguistic character. This reality, then, enables and constrains what is possible for us to know. In contrast to both empiricism and idealism, to be is not to be known. In the natural world oceans and the fish that swim in them exist whether we have knowledge of them or not. In the social world, relations (like the landlord-tenant relation and the teacher-student relation) exist whether we have knowledge of them or not, as do social positions, social rules, the meanings of texts and the reasons and beliefs of
individuals. These natural and social objects have ways or acting or tendencies (sometimes called *causal powers* in critical realism) that can lead to events, but in the social world many different tendencies will be present at the one time, and so any particular tendency or causal power – cause – may or may not manifest as an event. In turn, any one event may or may not be observed. Thus in a recent case in NSW politics, a politician might hold racist beliefs, but they might not manifest as racist behaviour when he is sober and other beliefs act as intervening causes. In turn, even if such behaviour were to manifest, it might not necessarily be observed by anyone else. Teachers and students are causal agents, whose knowledge, skills, beliefs and reasons are causes. Texts and symbols, or more specifically their meanings, are causes: syllabus documents, programs, and the symbols on computer screens and in books. This version of realism is thus a deep realism with an ontology of causes, events and experiences. (Shallow realism is the sense that everybody is realist about something: even those who assert that everything is discourse are realist about discourse). It recognises, however, that knowledge is constructed and therefore fallible. However, not all claims to knowledge of the social and natural worlds are equal in their grasp of the underlying tendencies or ways of acting, and we can have rational grounds for choosing between knowledge claims on the basis of checking them. From this, to show that a belief is false is to criticise it, and so a social science must be critical, hence, *critical realism*. Finally, social explanation in critical realism looks neither to individually acting agents (as in objectivism) nor to the collective (as in social constructivism), but to relations: relations between positions and practices. Society (the class, the school, the community) is ‘both the ever-present condition and the continually reproduced outcome of human agency’ (Bhaskar 1989, p.34).

A (critical) realist model therefore begins not with the knowledge, as in traditional instructional LEs, or with the student, as in student-centred LEs, but with a consideration of the learning environment, which has consequent implications for the nature of knowledge, learning and teaching.

2.1 The Learning Environment (LE)

Primacy in this model is given to the Learning Environment (LE), which is defined as the conditions that enable and constrain learning. Put another way, it is the LE that determines the possibilities of knowledge. The LE therefore is not merely the context for learning. The LE comprises physical, social, psychological, curricular, pedagogical and other dimensions. It is real, open and dynamic, layered and emergent, and moral, as discussed above.

The question to be asked is: what must the LE be like to enable student teachers to learn the types of knowledge that are needed to be learned? The LEs that enable different types of knowledge will be different. Broadly, they will be *on-site* (mostly in schools), *on-campus* and *on-line*.

i. *On-site*: The course (see Appendix 1) is predicated on time being spent in schools in most weeks of the course. Time in schools is increased over the present model in three ways: in most semesters students spend one ‘immersion’ day per week in a mentoring school, the total number of practicum days is increased, and the final semester includes a five week internship. Students also
complete a required number of hours in community service that is child- or adolescent-related. The existing practice of students planning and teaching in science and creative arts in schools continues and is additional to this total. The title mentoring schools indicates a change in the way some (but by any means not all) supervising teachers (to use their current designation) will contribute to TE in the course. It also signifies a change in the relation between the Faculty and the mentoring teachers who for this exercise are working as part of the Faculty, towards the goals of the Faculty’s TE program. (See below)

ii. **On-campus:** On campus, faculty will be encouraged to construct the Learning Environment(s) to best enable the types of learnings required. We expect that, with support, this will develop over time, but the model can be commenced without this. We note that the new medical faculty building will contain a number of small rooms on the basis of the medical course being a problem-based learning environment, which is exactly the line of thinking (constructing the learning environment to enable the desired learning) we are advocating here.

iii. **On-line:** On-line Learning Environments will be used

- as virtual simulations of other Learning Environments,
- for the acquisition of subject and pedagogical knowledge,
- for the acquisition of ICT pedagogical skills,
- for the production of artefacts such as e-portfolios, and
- for on-line discussions, such as on-line mentoring.

The faculty already has the corporate knowledge that produced initiatives such as a virtual classroom and an on-line mentoring program. Longer-term planning is underway for students to each have a laptop, PDA or other ICT device to engage with their LE.

The development process includes processes of subject development and staff development that will enable the three general types of LE to be well integrated with each other – seamlessly where possible – in a planned fashion.

### 2.2 Knowledge

The model applies what could be called a realist-constructivist view, indicating its partial similarities with social constructivism, and foundation on critical realist tenets. It recognises that

- there is a natural and social reality whether or not we have knowledge of it,
- this knowledge is socially and individually constructed, and
- there are nonetheless rational grounds for choosing one knowledge claim over another.

(That is, it is (i) ontologically realist, (ii) epistemologically relativist, and (iii) judgementally rationalist). Part of the social reality at (i) is that classrooms, teacher-student relations, the meanings of curriculum documents, texts and websites, and the beliefs and reasons of students and teachers all exist whether we have knowledge of them or not. It shares (ii) but not (i) or, implicitly, (iii) with constructivist, particularly social constructivist, models of learning, teaching and curriculum. At (i) it shares transmission and behaviourist models the existence of external knowledge, where some of this is knowledge that should be learned by teachers: e.g. content knowledge that is set out in curriculum documents and possessed by teachers that should be learned.
Knowledge can be categorised in different ways, as discussed above. Some knowledge (like maths) is highly structured and tightly bounded, and even (like the set of conditions that require mandatory notification of suspected child abuse) non-negotiable. In Maton’s (2006) terms, such knowledge has a strong knowledge structure but a weak knower structure: little variation between knowers is accepted. Some knowledge (like cultural studies) is loosely structured and weakly bounded: variation is accepted, sometimes expected, between the different constructions of learners. Some knowledge is explicit, and some is tacit. Much of the practical knowledge possessed by teachers is tacit. Different types of LEs best enable the learning of these different types of knowledge.

2.3 Learning
Learning is an emergent property of the LE. It has biological, social, psychological and other dimensions that are enabled and constrained by the LE; learning cannot be reduced to merely the psychological, social or other dimensions.

The social construction of knowledge is often characterised in contrast with traditional transmission or behaviourist views of learning. This is often done by appealing to the fluidity and indeterminate nature of contextual and authentic knowledge and to justify the unpredictability of learning outcomes. A realist constructivist view, however, points also to the existence of some knowledges that are not, or are minimally, fluid and indeterminate. This would suggest that while the individual learner constructs his or her own knowledge, highly structured knowledge does not licence just any constructions of knowledge to be formed and expressed unchecked. That is, it does not necessarily and in every case mean that students negotiate their own selection of content, manner of proceeding or criteria for judgement. This is so for two reasons.

i. Some content is clearly structured, tightly bounded and even non-negotiable. This is not to legitimate a simple transmission theory of learning, but in these cases it does de-legitimate student negotiation of content and perhaps approach. Facilitation of student construction of knowledge in these cases needs to be thought through and factored into the design of subjects and the specification of content.

ii. Learning in workplace and other contexts does not always or even usually allow for negotiation of approach, rarely for negotiation of content and often or usually presumes the transmission of content. Examples are the communication of knowledge at staff meetings and many training sessions, memoranda (emails or on paper), and the introduction of curriculum and policy documents. Graduate teachers should be able to demonstrate proficiency in such contexts. A realist-constructivist view of learning acknowledges that in becoming aware of her/his construction of knowledge, the learner also needs to become appraised of criteria for, and ways of, validating their knowledge.

2.4 Teaching
This model sees teachers as a causal agent in the LE, whose beliefs, reasons, skills, knowledge and dispositions are causes (but not the only causes) of student learning. Teachers interact with other causes in the LE (like the physical setting, the social setting and the meanings in curriculum documents) to bring about learning. Different
LEs will require different teaching strategies, and changes in subject content and articulation may require changes in teaching strategies.

3 Consistency between the theoretical framework and the implementation
While a critical realist or realist constructivist framework has been used to construct the model, this does not require that all faculty become card-carrying critical realists, just as in the present model one does not have to agree with transmission theories of learning and teaching in order to deliver effective lectures. All the same, there are elements of constructivist and other models used at present that are consistent with a realist constructivist approach in teaching. The focus in this section, on the consistency between the theory and implementation, has to do instead with the follow-through from the principles and design of the course to its implementation.

3.1 Working in and with on-site LEs
LEs have a central place in this model, and the relations between on-site and other LEs are different to the relations between the campus and practicum and demonstration schools in the current model. One instance of a changed relation is that between the faculty and what in this model becomes the mentoring rather than the supervising teacher. Mentoring teachers are seen as working within our Faculty program towards Faculty ends, and to this end need to be embraced as teaching colleagues within the course. Costings show that there is scope for paying for the professional development of the mentoring teachers in the course. A second instance of a changed relation is between the school and what in this model becomes the university mentor rather than the liaison lecturer.

3.2 Staff Development
This model has staff development implications that go to the heart of its viability and success:
- for mentoring, as discussed above;
- for possible changes to the content that some staff currently teach;
- to enable the integration (to whatever extent) of subjects in each semester; and
- through advocating the course to school systems, the mentoring schools, principals and mentoring teachers.

3.3 Costings
The model makes savings over the existing program. These savings are returned to the program to workload the school visits by the University Mentors and for some teacher release or other support for in-service work with the Mentoring Teachers. This addresses two significant problems that this faculty shares with most education faculties,
1. the variable quality of supervision in schools and lack of identification of collaborating teachers with the TE course, and
2. the variable quality of and sometimes absent liaison with schools by university liaison staff, regardless of workload allocated.
Ideally, those teaching on campus in a semester would also be mentoring in schools in that semester so that they have a current appreciation of how their work on campus is being translated in TE work in schools. Initially, those with a high research output will continue that focus, but there are some who have expressed an interest in researching their area in the context of the new program. We hope the program will lend support to a group within the faculty who research their own teaching.
4 Teams
One of the factors identified above as contributing to the KBC model is that it is implemented by a small and like-minded team. By definition a small team is not possible with the mainstream course, and I do not presume to judge the like-mindedness of the faculty. However, while the course is not organised around strands, as in the present course, there is a natural opportunity for teams based on semesters. We have mentioned that subjects are intended to be developed and implemented in collaboration and consultation with staff developing and implementing other subjects in the same semester. This is highly desirable. Lack of cohesion (perceived or actual) is a recurrent theme in criticisms of TE courses, and this model has been devised as a concerted attempt to address this matter. Again, it reflects the course-level rather than subject-level focus.

5 Relations
Part of the rationale for the proposed structure is to recast a number of relations: faculty-school, student-student, student-teacher, student-tutor/lecturer, tutor/lecturer-tutor/lecturer, and student-learning environment. This will depend on a number of factors, including the degree of collaboration/integration between subjects, the nature of the LE on campus, our ability to promote the course and its approach to stakeholders in schools, and the professional development of staff. It reads as a tall order to busy people, which it is, but we would argue it applies to the effectiveness of any TE course.

3 A theoretical framework
The KBC program is grounded in constructivist, more particularly a social constructivist, theory of learning (Kiggins 2001). Social constructivism is an example of idealism: the view that knowledge is a construction of the mind. Cambourne (2002) has argued for the KBC framework by critiquing what he identified as a ‘strong objectivist’ model that underpins the learning, teaching and assessment typical of universities in general and, implicitly, the mainstream TE program in particular\(^1\). The objectivist model is an example of empiricism: the view that knowledge comes from sense experiences. The development of the KBC program in reaction to an empiricist approach is an example of a wider and well-documented trend in education work, a shift in interest from traditional instructional learning environments to student-centred learning environments (Jonassen & Land 2000b).

The juxtaposition of these two theoretical frameworks is instructive in several ways.

a. Arguing for and from a theoretical framework establishes a standard, which any other input to the current TE course should match.

\(^1\) In passing, the critique of objectivism offers a valuable insight: that the existing university environment has constraints to learning built into it. One we have mentioned – the pressure for lectures because of economic rather than educational reasons – and another is the recording by the university of assessments of learning as numbers on a 1-100 scale. These may or may not be avoidable – this is not the place to be investigating such strategies – but it is important to identify and remain aware of constraints.
b. We will argue that the objectivist (in Cambourne) or traditional instruction model (in Table 1, from Jonassen & Land) is flawed, though not quite for the same reasons given by Cambourne, but has some merit.
c. We will also argue that the general social constructivist paradigm is also flawed, but has merit.
d. We will propose a critical realist, or what could be called a realist-constructivist, alternative as a framework that addresses the flaws in both the objectivist/empiricist and constructivist/idealist approaches.

With respect to (a), this very section is a response.

At (b) a critique of empiricism/objectivism reveals both flaws and elements of value in that model for a TE course. Empiricism, in which knowledge is gained through sense experiences, addresses only the experience of events. Causation is thus seen as a regular pattern of events: causal events followed by effect events. This fails to explain why scientific experiments are intelligible. In the natural world scientific experiments are intelligible because the conditions that produce events in the closed system of an experiment must also apply in the open systems that characterise extra-experimental circumstances. That is, the causes of the events in the experiment exist both within and outside the experimental conditions; the experiment is a necessary intervention to control all causes except the one under investigation. Causes are not events, then, but the tendency or way of acting of something. There can be causes present in open systems that do not produce their effects because other causes are interfering with their action. Further, there can be events that go unexperienced. The position that there is a reality whether we have knowledge of it or not, is realism, and the differentiation of reality into causes, events and experiences is depth-realism or critical realism.

Another critique of empiricism is that it addresses only sensing individuals, yet there is strong evidence to show that learners construct their own meanings, not passively receive knowledge, and do so using communal, not isolated, resources (linguistic, conceptual and other). This is the position of social constructivism.

The caution at this point is not to throw the baby out with the bathwater. Even after allowing that learners construct their own meaning, it is nonsense to argue that there cannot be sharing and communication of meaning. All discourse is intelligible precisely because there is (however flawed) sharing and communication of meaning. Some knowledge is propositional, tightly structured and strongly bounded, and some of this type of knowledge should be learned as part of learning to be a teacher.

Cambourne’s argument is consistent with arguments used both to critique empiricist models of learning environments and to develop student centred, social constructivist learning environments (Jonassen & Land 2000), of which the KBC model is an example. His argument also alerts us to: another way of doing things, of seeing things, besides the traditional course structure; the impossibility and unreasonableness of specifying large amounts of knowledge as mandatory; and to the existence of knowledge that is not propositional, particularly the knowledge in education that is tacit, weakly bounded, fluid and contextual.
At (c), there are also problems with social constructivist models. A strict constructivism is flawed, chiefly because in holding that learners construct their own knowledge it lacks any means of deciding between different knowledges and of recognising the existence of knowledges that should be learned (see (d) below). However, there is an alternative to both these two frameworks: realism.

(d) The alternative to the empiricist and idealist traditions is realism: the view that the possibilities for knowledge are given in an external reality. The fundamental realist position is that the objects of knowledge exist independently of our knowledge of them. Before proceeding, however, it is important to note that this statement as it stands includes shallow or naïve versions of realism in the sense that in some way just about everybody is realist about something: even those who assert that everything is language are realist about the existence of language. We refer instead to deep realism, particularly here the paradigm called critical realism (Bhaskar 1996; Sayer 1992; Collier 1994; Archer, et al 1998), henceforth CR. CR asserts that

i. there is an external reality (natural and social) whether or not we have knowledge of it, but

ii. our knowledge of it is socially and individually constructed, and

iii. this knowledge can be subject to empirical check – there can be rational grounds for choosing between knowledge claims.

That is, CR asserts respectively ontological realism, epistemological relativism and judgemental rationality.

The difference at (i) is that in asserting the existence an external reality that exists whether we have knowledge of it or not, realism distinguishes between what we know and what there is. Strictly, empiricist models like behaviourism and transmission theories limit what there is (or what we can say about what there is) to what we sense. Strictly, idealist models like situated learning and social constructivism limit what there is (or what we can say about what there is) to our mental constructions. Sometimes an external reality is implied, e.g. in situated learning (surely the learning is situated in an external reality!), but at base it is not:

Although operationalized somewhat differently, constructivist learning environments share key epistemological foundations and assumptions. Constructivists view reality and meaning as personally rather than universally defined. (Land & Hannafin 2000, p. 5) Contra Land and Hannafin, for critical realists meaning is personally and socially defined, but reality is not. Reality exists whether we have knowledge of it or not. In the natural world oceans and the fish that swim in them exist whether we have knowledge of them or not. In the social world, relations (like the landlord-tenant relation and the student-teacher relation) exist whether we have knowledge of them or not, as do social positions, social rules, the meanings of texts and the reasons and beliefs of individuals. The meanings of texts to be taught in transmission theories of learning are understood in realism as part of a larger framework of social reality, some of which is set out in TE courses for students to learn.

At (ii), realism parts company with empiricism, which sees only individually sensing learners. Here, realism is similar to constructivist theories of learning and teaching:

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Some signposts to (critical) realism are given in Appendix 3 as an introduction to those unfamiliar with this approach and to underpin the following discussion.
knowledge is individually and socially constructed. This is one reason for the merit of the KBC and other constructivist models. A realist critique distinguishes the objectivist/empiricist model from Cambourne’s (2002) characterisation of it. In the simplest and strictest form of the objectivist model, objective, uncontested propositional knowledge is transmitted by the knowledgeable to the unknowledgeable by psychological/mentalistic processes. For Cambourne, it presumes the lecture + tutorial model to be ‘the best pedagogical approach’ and its purpose ‘to impart ALL [sic] the knowledge and skills they will ever need’. We would argue that the position is more pragmatic: the Faculty uses the lecture + tutorial format because it is seen as the most cost-effective method for mass education, and the purpose is instead to develop sufficient knowledge and skills to make an effective start. Also, the epistemology is not of ‘correctly structured, “true” propositional knowledge’ but variably contested knowledge within and between disciplines and subjects. On this basis, the case made against objectivism turns out to be the untenability of a strong version of empiricism that is not the situation in the Faculty (or the university). The realist critique is important because the construction of knowledge is work (Bhaskar 1997), and the relative cost of the lecture + tutorial approach has to be accounted for; it is not simply a pedagogical matter.

At (iii), though, realism parts company with idealism, particularly relativism: in principle, knowledge claims can be tested, allowing us to choose between them. Furthermore, CR is critical in that to show that a belief is false is to criticise it, and for critical realists this is a role of a social science.

Realism distinguishes between causes, events and experiences (i.e. it argues for a threefold ontology of causes, events and experiences). This leads to a different notion of cause and effect than empiricists and idealists would understand. That notion sees causality as a relationship between different events: cause and effect. Realism, however, sees a cause as the way of acting, or tendency, or causal power or liability or mechanism of an object (whether natural or social). In non-experimental conditions, i.e. in most of the natural world and all of the social world, multiple causes are operating at the same time, and therefore can be interfering with each other. This is an important difference between empiricist/idealistic models and realism, because it draws our attention to the existence of causes whether or not they result in events and to events whether or not they are observed. Gravity is acting on the roof above you, for example, but it doesn’t fall to the ground because the walls are pushing up against it. A politician might hold racist beliefs, for example, but they might not manifest as racist behaviour when the person is sober and other beliefs act as intervening causes. In realism, there can be causes without events, and events that go unexperienced by an observer. (To explain in realism is to suggest a cause(s) and offer evidence.) Teachers and students are causal agents, whose beliefs and reasons are causes. Texts and symbols, or more specifically their meanings, are causes: syllabus documents, programs, and the symbols on computers screens and in books.

Implications of a realist framework for the present context
The realist account of knowledge, that the possibilities for knowledge are given in an external reality, means that primacy is given to the environment (the ontology). The Learning Environment (LE) is therefore not merely the location of learning, but the circumstances that enable and constrain learning. Student-centred learning
environments are an excellent case in point (although we would argue they are under-theorised):

An important feature of the KBC Project is that the KBC facilitator team must arrange a designated homeroom … This physical space plays a vital role in the establishment of the KBC. The homeroom provides stability, a sense of belonging, and a place to display work products and emphasises a point of difference from the traditional mainstream. (Kiggins 2002, p. 13)

School-based learning (SBL) is the second learning principle of the KBC project. Schools are more than just a conglomeration of buildings and people; rather they are a set of individual cultures which have evolved in response to the wider cultural values (Bullough 1987). (Kiggins 2002, p. 5)

The LE is not merely the physical location, though: it has physical, social, pedagogical and curricular dimensions.

A realist construction of the LE (Brown 2004; Brown, in preparation) suggests that the LE is real, open and dynamic, layered and emergent, and moral.

- The LE is real in that it comprises such things as material (tangible) objects, relations between actors/positions, the beliefs and reasons of actors, and meanings of texts, that exist whether we have knowledge of them or not.
- The LE, like any social system, is an open system with multiple causes existing that may be interfering with the action of each other. (Remember that a cause is not an event but the tendency or way of acting of something.) Thus there can be causes existing whether or not they result in an event. Likewise there can be events whether or not they are experienced. With multiple causes operating in an open system, events can be unpredictable and the system not only changes but changes often in ways that are difficult or impossible to predict accurately.
- The LE is layered and emergent. It comprises different layers or levels of organization, e.g. the physical, chemical, biological, social. Each of these layers has properties that arise from the organization of that layer and that cannot be reduced to the properties of lower layers, e.g. you cannot explain social phenomena simply in terms of biology, or the biological in terms of the chemical. Equally, you cannot predict the properties of the higher level from the properties of the lower level. E.g. you cannot predict the social from the biological, although biological causes (like fatigue) can affect the social. The properties at the higher level are said therefore to be emergent. Learning is an emergent property of the LE, and is not simply explained by the biology of the learner or the sociology of the group.
- The LE is moral, in that it reflects the values decisions of the actors and others.

Social explanation in realism looks neither to individually acting agents (as in objectivism) nor to society/the collective (as in social constructivism), but relations: relations between positions and practices. Society (the class, the school, the community) is ‘both the ever-present condition and the continually reproduced outcome of human agency’ (Bhaskar). Thus one characteristic of the Learning Environment (and school culture and the community) is that it changes, and though these changes are the outcome of human agency, it can change in unpredictable ways.
Given that the LE enables and constrains learning, the question arises: what must the Learning Environment be like to enable the kind of learnings required by student teachers? From this, the question naturally follows: what kinds of knowledges, skills, attitudes and values are required to be learned by student teachers?

Much, but not all, knowledge is propositional knowledge, and forms part of what Archer (1998) has called the Cultural System and Popper has called the Third World, whose content and meanings exist whether or not we have knowledge of them. Some of this is highly structured and tightly bounded: the ‘established body of … propositional knowledge’ (Cambourne 2002) at the heart of the objectivist model. Maton (2006, in press) Other knowledge, like tacit knowledge, is typically weakly structured and loosely bounded. This is at the heart of what is often proposed in social constructionist, social reconstructionist or reconceptualist approaches, in which ‘school settings are seen as uncertain, dynamic and problematic … [and] the knowledge to be learned is uncertain and constructed by the student interacting with the environment rather than by passive reception’ (Grow-Maienza 1996, p. 512). Maton has developed Bernstein’s approach to show how knowledge and knowers can be coded using concepts of knowledge structures and knower structures:

The notion of legitimation codes is based on the simple idea that actors are not only positioned in both a structure of knowledge and in a structure of knowers but also establish in their symbolic practices different forms of relations to these two structures. One can thereby analytically distinguish between an *epistemic relation* (ER) to the knowledge structure and a *social relation* (SR) to the knower structure. Each of these relations can exhibit relatively stronger (+) or weaker (-) classification and framing. Varying their strengths for each relation independently generates four principal codes: ER+/-, SR+/- ... In other words, actors may emphasise the knowledge structure, the knower structure, neither or both as the basis of distinctiveness, authority and status; conversely, their identity, relations and consciousness is shaped in different ways by these two kinds of structures. These legitimation codes represent different ‘settings’ of the epistemic device, the means whereby intellectual and educational fields are maintained, reproduced, transformed and changed (Moore & Maton 2001). Whoever controls the epistemic device possesses the means to set the shape of the field in their favour, making what characterises their own practices (in terms of legitimation codes) the basis of status and achievement in the field. (Maton 2006, in press)

This allows us to code LEs: LEs specialise both types of knowledge and of knowers. The traditional instruction and student-centred LEs each have their insights, but both miss the point. A realist model will identify and code the different types of knowledge to be learned, and provide the LEs to best enable that learning. This is why schools have science labs and art studios.

A starting point in identifying knowledge content is the statement of Professional Teaching Standards (NSWIT 2004) to which our graduates must conform:

**Professional Knowledge**
1. Teachers know their subject content and how to teach that content to their students.
2. Teachers know their students and how their students learn.

**Professional Practice**
3. Teachers plan, assess and report for effective learning.
4. Teachers communicate effectively with their students.
5. Teachers create and maintain safe and challenging learning environments through the use of effective classroom management skills.

**Professional Commitment**
6. Teachers continually improve their professional knowledge and practice.

7. Teachers are actively engaged members of their profession and the wider community.

This framework of standards is a real part of the Cultural System of NSW education whether we have knowledge of it or not, and must be addressed. We might also identify other learnings. For example there is a large range of statements of teaching competencies in Australia at present, and elsewhere, and an even larger quantity to be found in the TE literature. In any event, to enable the learning of the seven NSW elements suggests a variety of Learning Environments.
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NSW Institute of Teachers (2004) *Professional Teaching Standards*


Appendix 1:  
Some basic tenets of Critical Realism  
(from Sayer 1992, pp. 5-6)

1. The world exists independently of our knowledge of it.
2. Our knowledge of that world is fallible and theory-laden. Concepts of truth and falsity fail to provide a coherent view of the relationship between knowledge and its object. Nevertheless knowledge is not immune to empirical check, and its effectiveness in informing and explaining successful material practice is not mere accident.
3. Knowledge develops neither wholly continuously, as the steady accumulation of facts within a stable conceptual framework, nor wholly discontinuously, through simultaneous and universal changes in concepts.
4. There is necessity in the world; objects – whether natural or social – necessarily have particular causal powers or ways of acting and particular susceptibilities.
5. The world is differentiated and stratified, consisting not only of events, but objects, including structures, which have powers and liabilities capable of generating events. These structures may be present even where, as in the social world and much of the natural world, they do not generate regular patterns of events.
6. Social phenomena such as actions, texts and institutions are concept-dependent. We therefore have not only to explain their production and material effects but to understand, read or interpret what they mean. Although they have to be interpreted by starting from the researcher’s own frames of meaning, by and large they exist regardless of the researcher’s interpretations of them. A qualified version of 1 therefore still applies to the social world. In view of 4-6, the methods of social science and natural science have both differences and similarities.
7. Science or the production of any other kind of knowledge is a social practice. For better or worse (not just worse) the conditions and social relations of the production of knowledge influence its content. Knowledge is also largely – though not exclusively – linguistic, and the nature of language and the way we communicate are not incidental to what is known and communicated. Awareness of these relationships is vital in evaluating knowledge.
8. Social science must be critical of its object. In order to be able to explain and understand social phenomena we have to evaluate them critically.
Student teachers and critical approaches to education: re-imagining the ‘other’ through a re-imagining of the Learning Environment

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Abstract:
This paper reports on a teacher education initiative that seeks a more effective approach to a commonly used treatment of education foundations, particularly the sociology and philosophy of education. The initiative takes as its starting points a critique of education foundation practices in at least two universities and the standpoint that the main rationale for including education foundations is to (morally) influence learning outcomes in schools. The ‘vehicle’ or ‘mechanism’ for this re-conceptualisation is a developing theory of the Learning Environment, used by the author and others, which takes the Learning Environment to be not simply the location of learning but the total conditions that enable and constrain learning.

Introduction
It is a commonplace that teacher education courses include the study of so-called education ‘foundations’, namely educational psychology, sociology and, less frequently, history and philosophy. This is because teacher educators and, more widely, teacher education stakeholders who contribute to and ultimately approve or ratify teacher education courses, hope to make the teachers who graduate from these courses more able. However, not all teacher education stakeholders endorse this view uncritically. A recent Australian Minister for Education reported complaints to him that (Australian) education faculties are ‘quasi-sociology faculties’ (Nelson 2005) to the claimed neglect of studies in curriculum content. This comment was made in the context of an experiment by that same minister of having grants approved by the Australian Research Council (ARC) additionally vetted by a lay committee that famously included an outspoken and conservative media commentator. While that minister’s successor has been less forthright, it is nevertheless true that the current education policy climate is not unquestioning of education practices, including teacher education practices. This holds at both Australian federal and state levels and, with only some variation, across the political divide. It is therefore prudent for teacher

Liberty is more than consumer choice; and it is also more than irony. The British Marxist philosopher, Roy Bhaskar, in a detailed critique of the liberal constructivism of Richard Rorty, notes that once we have identified the sources of injustice or cruelty or social stagnation, once we have formulated a language in which to think about them, we are bound to be involved, like it or not, in an incipient process of public change - ‘action rationally directed to transforming, dissolving or disconnecting the structures and relations which explain the experience of injustice’ (Philosophy and the Idea of Freedom, Oxford 1991, p.72). Shifts in language and explanation that arise in the wake of critical understanding are bound to make different kinds of action and therefore different kinds of decision possible. Not to act in the public sphere in consequence of such new possibilities is to make an active choice for stagnation. If ironic redescription is no more than words it is not really ironic at all; it remains dependent on the systems and power-relations it claims to challenge.

Rt Revd Rowan Williams, Archbishop of Canterbury, 2006
education academics and faculties to review the rationale, approach and overall balance of course content. This paper aims, firstly, to contribute to that process. More generally, however, it also aims to address issues of pedagogy and approach in a particular instance of content commonly addressed in foundations studies, namely equity and the sensitisation to others in society.

A description of practice
The author has been involved with the design and implementation of four foundations subjects, in four teacher education programs at two Australian universities. Subject #1, at University A, concerned the sociology of education and was part of a double degree in secondary education: an education degree studied concurrently with, usually, a science or an arts degree. As it happened, maths and science were offered on one campus, and arts – mostly English and the social sciences – on another campus. The education subjects were offered on both campuses, which is significant because it meant that the education subjects were run discretely for the sciences and arts student cohorts. The author was responsible administratively for the double degree program and so was privy to the implementation and progress of all education subjects.

Without exception, all the education teaching team reported a difference between the two student cohorts. All found the arts students, on the whole, to be more receptive to their education content than the maths/science students, on the whole. This receptiveness was not only in the sense of comprehending the concepts more readily and more deeply, but also in the sense of finding the arguments more convincing and acceptable. Indeed, the two sociology lecturers reported, with different year cohorts, resistance and even antagonism on the part of significant portions of maths/science groups. None was reported among the arts groups with the exception of a small number of students who described themselves as having strong religious (Christian and Muslim) and/or cultural beliefs (students from several non English-speaking cultures). These exceptional arts students objected to the study of homophobia and the argument against discrimination on the basis of sexual preference. They did not raise their objections with the lecturers or tutors because of a claimed fear of “discrimination” (their term) or recrimination (my term) but formed delegations to see the author as the administrative head. The more widespread resistance in the maths/science cohort partly arose from a generally held pedagogical view in that group that maths or science education entailed the transmission of content, and that matters of psychology or sociology were not central, and even marginal. Beyond this, though, there was also an element of resistance to critiques of stereotyping, sometimes in written assignments and most certainly in discussions in and out of class. One could not be confident that the exposure to sociological concepts in particular was going to have an effect in the classroom. The implication for the program was that the rationale for the pedagogy and possibly the subject content was not being met. Several of the teaching team considered this to be worthy of more detailed study, but regrettably it did not fit with the research agenda of any of the team and the opportunity for a more systematic study passed.

Subject #2, at University B, is a foundations subject in an undergraduate primary teacher education program, which largely comprises sociology with some basic educational philosophy and history. While some students do impressive work in this subject, a significant number report the subject as difficult and too theoretical. As
with subject #1, a small number of students also reject or resist some of the central concepts concerning equity. Also again, this may be done wittingly, as in discussions with or emails to the author, or unwittingly, as when the written language in assignments differs from the language in conversations. Students expressed frustration at having to write or say “what they want” (their term, meaning what the teaching staff want) for fear of being marked down (my term).

Subject #3, at University B, is a foundations subject in a graduate entry, end-on primary and secondary teacher education program. Essentially, it is a subject in the sociology of education, small components of educational philosophy and history having been phased out for mainly staffing reasons. In terms of student response it is an interesting amalgam of subjects #1 and #2. In general, the comments for subject #2 apply, but there is a possible correlation of resistance with the maths/science/technology-trained students. Without a systematic survey it is not possible to substantiate this suspicion, because there is a single, mixed cohort of students, and the suspicion could simply be the expectation of the author based on the experience of subject #1. Unlike the research circumstances of subject #1, however, this situation is planned as part of the author’s research agenda and will be the subject of a forthcoming study. In the meantime, the author had the opportunity to develop and teach a fourth subject, subject #4, which is taken by secondary maths and science teacher education students on at separate campus. This has afforded an opportunity to re-imagine the treatment of concepts of equity.

Subject #4, at University B, is a critical take on the curriculum, offered to final year students in a four-year secondary maths education and science education program. The cohort is similar to the maths/science students in subject #1, who are not mixed with arts graduates. The central theme of the subject is the discrepancy between the formal, or written, curriculum, and the experienced or enacted curriculum, what causes such discrepancies and what can be done about them. The concept of equity is central because such discrepancies are almost invariably inequitable. The evaluation of the initial implementation in 2006 was critical of both the rationale for the subject not being met, and the approach taken. I turn now to these matters.

A response
I take the primary rationale for including the concept of equity in teacher education courses to be to morally influence learning outcomes in schools. I do not use the term morally lightly. I recognise that in some academic circles it is unfashionable to speak of morality and ethics, which are presumed to be mired in ethnocentrism. Such a position presumes the truth or superiority of one’s own sense of morality, as one might suspect an Anglo-centrism or Christian-centrism in the present paper from the use of the opening quote.

As the oft-rehearsed postmodernist narrative goes, contemporary life is coped with under conditions of globalisation and radical pluralism. Not only do we encounter varying and competing conceptions of the grounds of moral authority to be embedded within incommensurable ethical, religious and metaphysical worldviews, but we also find radically different understandings of the meaning and pursuit of truth and rightness, rationality, and justification. On such premises, there is no universally binding ‘transcendent good’ that is able to serve justifiably as the necessary, trans-cultural epistemic ground of moral authority and rationality.

Okshevsky 2005, p. 175
However, this is confused in several senses. Firstly it confuses the difficulty of disentangling cultural mores from particular values positions with the reality that, like it or not, values positions are real: people take values positions whether or not you or I are aware of them, let alone agree with them. Moreover, the position that it is wrong to speak of values positions is itself a values position. Secondly, it invokes the classic fact/value dichotomy in western philosophy, which holds that one cannot derive an ought from an is. As the introductory quote points out, the philosopher Bhaskar has argued that, on the contrary, once we are confronted with the facts of an injustice we can either act on it or not, but to decide not to act is to decide on stagnation. That is, an is leads to an ought one way or the other. A moral position is an ought or a should. Thirdly, it does not account for other paradigms and disciplines. There is in philosophy of education a strong tradition of discourse concerning moral education that addresses the postmodern critique among other things. Fourthly, it confuses epistemic relativism – the position that knowledge is constructed and relative to historical and cultural contexts – with judgemental relativism – the position that because knowledge is relative, we are fundamentally unable to judge between knowledge claims. This is a position of postmodernism and poststructuralism. This position has been subjected to strong criticism from the philosophy of social science, in particular the emerging position of critical realism, to which I shall return.

Each of these confusions can be answered. On the first count, the (often tacit) moral position in a rationale for studying equity in a teacher education course is that equitable learning outcomes are a good thing and should be promoted. A position of social justice is that it is a good thing, deserving of encouragement, to identify and redress inequitable learning outcomes, such as those based on race, religion, sexual preference, politics, social class, and economic circumstance. On the second count, i.e. Bhaskar’s point, once we are aware of an injustice we are obliged to redress it in some way, acknowledging that the language in which we formulate this response is culturally embedded. Not to act in this way is to act for the status quo.

On the third count, the postmodernist/poststructuralist hegemony in educational sociology does not recognise its own limitations and that fruitful work in this area is being done in philosophy of education. The philosophy of education is rich in examples that resonate with the observations of the subjects discussed here. Some examples will suffice. Suzanne Rosenblith (2005) discusses what she calls the ‘pluralist predicament’, which is the difficulty of reconciling a commitment to liberal education goals like critical rationality (using reason and evidence), individual autonomy and tolerance of diverse views, with religious pluralism that avoids questions of reason and evidence. Barbara Houston (2003) explores what she calls the ‘moral lethargy of decent people’. Haithe Anderson (2004, p. 107) critiques the idea that ‘theoretical multiculturalism per se … has direct consequences for the practices that are its subject’. The Fall 2001 edition of Educational Theory ran a symposium on the social construction of Whiteness. In it Hytten and Adkins (2001) examine the preparation of future teachers when the (US) ‘student population grows increasingly diverse, the teaching force remains predominantly white, and the achievement of minority students continues to lag significantly behind their white counterparts’ (p. 433). Warren (2001) examines what it means to be white in the context of a movement for the concept of race to be abandoned. Allen (2001) analyses the effect of the domination of White over Othered narratives of globalisation on education policy. Pak (2001) discusses the contribution of the progressive education movement
to addressing a paradox in the aims of democracy: ‘social progress in the face of regressive acts toward disenfranchised [specifically non-white] groups’ (p. 487).

On the fourth count, the philosophy of social science as both empiricism (as in positivism) and idealism (as in postmodernism and poststructuralism) has a cogent and emerging alternative in critical realism (CR). A full treatment of critical realism is beyond the scope of this paper, but I will give a brief synopsis to indicate its general position to the reader unfamiliar with critical realism\(^1\). The three pillars of critical realism are as follows:

- Social structures and relations are real in the sense that they exist whether or not we are aware of them. This is **ontological realism**.
- Our knowledge of these structures and relations is socially produced, contingent, fallible and framed in language. This is **epistemological relativism**.
- It is possible at least in principle to judge between knowledge claims about the world depending on how well they correspond with how things really are. This is **judgemental rationalism**.

It should be evident that critical realism (CR) differs from naïve realism, which although it holds that there is an external reality (like CR), it says that we have direct and unmediated access to that reality through our perceptions (unlike CR). Unlike positivism, which holds that knowledge arises from sense perceptions, and postmodernism, which holds that knowledge is a construction of the mind, CR holds that, while sense perceptions and mental constructions contribute to knowledge, the possibilities for knowledge are enabled and constrained by the natural and social worlds. The natural and social worlds comprise causes (mechanisms and structures which have tendencies to act in certain ways), events and experiences. Examples of causes are atomic structure in physics or gendered relations in society, which may or may not result in events like electric current flow in physics or a sexist remark in society, which may or may not be experienced (as, for example, an electric shock or offence). Except in the experimental conditions of the natural sciences, there are multiple causes operating at the one time, which may interfere and interact with one another. Thus in non-experimental conditions, which include the entire social world, a particular causal mechanism may or may not lead to an event. In turn, events may or may not be experienced by an observer. Thus CR rejects the model of explanation in positivism, which is that an event is explained when it can be deduced from initial conditions and a natural law (defined as a pattern of events). It also rejects the model of explanation in postmodernism/poststructuralism, which is a social (and therefore fallible) exchange that resolves puzzlement. An explanation in CR is a socially produced (and therefore fallible) account of the way a generative mechanism or tendency produces an event (Bhaskar 1981, p. 141). Despite this terse summation of CR, a critical realist account is a plausible alternative in the philosophy of social science, and was employed to underpin and frame a response to the evaluation of subject #4.

Arising from the use of CR as the theoretical framework is a developing theory of the Learning Environment (Brown, Konza & Kiggins 2006). It is based on the mode of question on which a CR understanding of the world is based: what must the (natural

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\(^1\) The reader seeking a comprehensive treatment is referred to Sayer (1992), Sayer (2000) and Archer *et al* (1998).
or social) world be like in order for knowledge of it to be possible? The world is such that it enables the acquisition of the knowledge that we have of it. Similarly, it can be argued that the Learning Environment enables and constrains learning (the acquisition of knowledge). The Learning Environment is therefore construed as more than merely the location of learning. It has multiple dimensions: physical (space, time, temperature, light), biological (e.g. health, hunger, restfulness, etc), psychological (e.g. aptitude, motivation, ability), sociocultural (e.g. social class, culture, group dynamics) and curricular (particular meanings). Briefly, the Learning Environment is argued (Brown 2004) that the LE is real, open and dynamic, layered and emergent, and moral.

- The LE is real in that it comprises things that exist whether we have knowledge of them or not, like material (tangible) objects, relations between actors/positions, the beliefs and reasons of actors, and meanings of texts.
- The LE, like any social system, is an open system with multiple causes existing that may be interfering with the action of each other. (Remember, a cause is not an event but the tendency or way of acting of something.) Thus there can be causes existing whether or not they result in an event. Likewise there can be events whether or not they are experienced. With multiple causes operating in an open system, events can be unpredictable and the system not only changes but changes often in ways that are difficult or impossible to predict accurately.
- The LE is layered, in that it comprises different layers or levels of organization, e.g. the physical, chemical, biological, social. Each of these layers has properties that arise from the organization of that layer and that cannot be reduced to the properties of lower layers, e.g. you cannot explain social phenomena simply in terms of biology, or the biological in terms of the chemical. Equally, you cannot predict the properties of the higher level from the properties of the lower level. The properties at the higher level are said therefore to be emergent. Learning is an emergent property of the LE, and is not simply explained by the biology of the learner or the sociology of the group.
- The LE is moral, in that it reflects the values decisions of the actors and others. Particularly in the example of teaching for ethical outcomes, this reflects an unavoidably moral decision: it is a decision about what should be done.

I return to the rationale for these subjects, which is to morally influence the learning outcomes in schools. The questions for the teacher educator are how to make the student teacher aware of an inequity, how to provide her with skills to redress it, and how to engender the disposition to act. From the rationale and aims of the subject, the Learning Environment should be constructed in such a way as to enable certain learnings, including removing the constraints on desired learning, and constraining other learning. Now, the reader may immediately object that engendering a disposition to act smacks of indoctrination, not education. It is true that conditioning for a Pavlovian response would be indoctrination. We must return to the rationale for equity in teacher education. One of the lecturers in subject #1 was explicit in setting rigorous assignments; rigour in sociology could not be compromised and the cognitive load was high. The predictable result was a higher than usual number of student appeals and many complaints to the administrative head about irrelevancy. This might be tenable in a liberal arts degree, but surely the point of addressing
sociological concepts in a single subject of a teacher education program is to lead, however indirectly, to more equitable educational outcomes in schools (both as places of learning and as workplaces). This was the rationale for that and indeed all four subjects. We had to agree to disagree that to alienate prospective teachers from the very concepts thought worthy to present to them was self-defeating. To make this transition is to act, and to develop a disposition to do so in a non-Pavlovian fashion is to develop a reasoned argument. This is the strategy behind subject #4.

A critical realist perspective leads us to ask, what are the generative mechanisms, or structures or tendencies that led to the unfavourable outcomes? I suggest four. (1) is a sexist, racist, homophobic or other discriminatory attitude that some students display, but which CR suggests may be held by others even though not expressed in class. Some of the students in subjects #1, 2 and 3 who complained were clearly affronted by sexism, racism, homophobia and the like being raised, and took it as a criticism of their own and possibly their family’s position. (2) is a set of beliefs, implicit or not, held by at least some maths and science students that are realist and empiricist (realist, though not critical realist, meaning a presumption of an external reality, and empiricist in the sense of scientism and preference for quantifiable data). These beliefs are displayed when these students read much of the humanities (including sociological) literature that is not based on experimental procedure, uses small sample sizes and is hermeneutic in approach. It does not appear ‘scientific’ and there are comments that indicate that these students find this research genre plausible only reluctantly if at all. (3), mentioned earlier, is an assumption by at least some of these students in favour of a transmission mode of teaching and learning, meaning that time not spent towards learning about the transmission of content is viewed as less useful. (4) is the ability of these students to frame an argument, both verbally and in writing. While some of these students write and argue quite well, the standard is generally below that of the arts students and in some cases quite poor.

The present implementation of subject #4, which is the second iteration, is trialling strategies designed to address each of these four suggested causes. That is, the aim is to enable certain learning, including removing constraints on desired learning. For (1), students were provided with a reference list of articles available in the library from the maths education, science education and curriculum literatures, not from foundations literatures like the sociology or philosophy of education. These were selected because they reported on studies of children learning in schools in the disciplines these students are training to teach. These have been used with much greater acceptance than previously, being as they are based on a timeworn education maxim: start with the known and then move to the unknown. These articles seem to be viewed more credibly. Some of the articles were chosen because they also illustrated the relative effectiveness of different pedagogical strategies, which is a response to (3). Class activities relevant to (1) include the students learning content unknown to them but being specifically relevant to particular cultural or social groups, e.g. knowledge that is commonly known to Aboriginal groups but not to white groups. The class is debriefed with a discussion after the activity. (2) has been more perplexing, because these students have already completed a subject on research methods in education. For some students it seems to have had little effect on a bias towards quantitative and experimental or quasi-experimental approaches. The list of readings will be augmented next time to include a planned variety of research styles. Liaison with the research methods lecturer might enable a stronger focus on non-experimental
research. For (4) I have engaged the services of the unit in the university that provides student assistance in writing. This has been most successful. The writing tutor has joined the class in the weeks when each assessment task begins. She methodically deconstructs the task with the students and provides writing strategies. Based on just this first attempt, the quality of argument and expression has been markedly improved over the previous year and similar cohorts. We are continuing this as a permanent feature. The sum of these strategies has been an overall improvement in the quality of submitted work and class discussion. This is supported by comments in discussions with students, although of course they have no means of comparing their experience of the subject with previously used strategies.

More is planned for next time. Kathy Hytten (2007), in discussing the contribution of philosophy to teaching social justice, argues we need to think of new possibilities: To inspire students both to think critically and to assume the moral agency necessary to cultivate more humane and more democratic social and political relationships, we need to use and invent new forms of pedagogical engagement, which ideally can also serve as models for new forms of social engagement. These can only be developed as we experiment with different methods and with multiple ways of seeing and engaging the world around us in educational spaces. (Hytten 2007, p. 446)

Hytten argues that stories, poems, parables, autobiographies, pictures, photographs and videos are often more evocative than arguments. Such a strategy was used in subject #3, which set the making of a collage as an assessment task. The quality was variable, which is no sin, but the only students to complain were technology and maths students. Follow up is planned to determine the extent of any correlation between achievement and area of specialism. The use of these media to convey impressions of inequity or as sensitisation is well known to the mass media, of course, but their use in this particular educational setting needs to be well thought through to avoid being construed as marginal. Hytten also suggests performance, such as role-plays and game playing. Again, this is planned for trial when suitably high quality and relevant material is developed for problematising the curriculum. A full evaluation of this subject will include a comparison with the equivalent cohort in subject #3, to see if the new approach in #4 has made a difference, and student evaluations at its conclusion. The real test would be to study the students once they graduate and commence teaching.

There can be no illusions about the intransigence of the problem being confronted; the extensive literatures in sociology and philosophy of education and the ongoing need for sociological work in the community attest to that. Nonetheless there is a strong prima facie case that students with a maths/science/technology background, as a whole, tend to respond differently to, and engage more reluctantly with, sociological concepts when compared with their arts peers. The project described in this paper shows promise in tailoring an education experience, through modifying the learning environment, to the aim of creating more equitable learning outcomes in schools. Further research, as indicated above, will clarify the extent of any success to that end.
Reference List:


Problematising the ICT Movement:
Learning for Which Future?

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**Abstract**
This paper reports the main findings of a critical analysis of educational computing policy for New Zealand schools 1960-2004. It describes the major themes, patterns and ideas that have helped structure the government’s approach to educational computing policies over this time and locates the current ICT movement in a wider social, economic and political context. In attempting to problematise educational policy, and the place of ICT in teacher education, it illustrates some of the contradictions and uncertainties in the discourse associated with the growth of e-learning in schools. Overall, the paper discusses the influence of Third Way politics on the so-called Digital Age and asks learning through ICT for which future?

**Introduction**
In 1971, Christ’s College became the first New Zealand school to own and install a computer (Ramsey, 1975). The PDP 8e processor from the Digital Equipment Corporation came with “4k of core memory, together with an ASR 33 teletype and paper-tape reader and punch”. Once upgraded to 8k of core memory, the PDP 8e cost Christ’s College around $8,000 (NZ).

There was no intention to use the PDP 8e to change the nature of learning at Christ’s College. Neither did the PDP 8e’s introduction make significant headlines in the Christchurch newspapers of the time. Instead, this ‘computer’ joined the five electronic calculators in the mathematics laboratory, where it was apparently well-utilised, by predominantly senior students, on mathematics and computer programming problems.

Christ’s College’s own celebratory historian, ex-deputy principal Don Hamilton, was reticent about this important first step in New Zealand’s educational computing while offering a laconic insight into the technological future of Christ’s College:

*From that modest beginning the computer empire began an expansion that will never end (Hamilton, 1996, p.694).*

As a Christ’s College staff member, Hamilton had the benefit of closely observing 25 years worth of technology come and go from the campus, and while not an important aspect of his history of Christ’s College, he does find space to mention two other revealing events involving computers at the school.

The first of these was the development of Christ’s College’s Macintosh network in 1993. According to Hamilton, it was the largest such network in the country at the time and cost $500,000 (NZ). The second event, was in 1985, and involved a boy who had received “three strokes from a master for …instructing a computer to perform an indecent act, of which it was physically incapable” (Hamilton, 1996, p.694).
In many ways, Christ’s College is unlike most Australian and New Zealand schools. Its reverence to the English public school system and its traditional level of examination success, help mark Christ’s College out as something of an ‘elite school’. Despite, and perhaps because of, such differentiating qualities, these glimpses of computer education at Christ’s College offer an excellent starting point for this study. For instance, Christ’s College spent a great deal of money on computers, an issue of relevance to almost all schools.

The financial burden brought by computer technology, coupled with the fact that computers have become linked closely to the world of business and finance, has made the economic aspects of computers an ongoing issue. Hamilton’s observation about the expansion of computers at Christ’s College also introduces the ideas about the growth of computer technology in education. Computers have become an increasingly common aspect of modern schooling.

Computers have also been accompanied by revolutionary promises about potential improvements in learning and teaching. In this manner, computers have become one of the ‘big things’ in education, and, as the laconic tone of Hamilton implies, this growing popularity seems to be an inevitable aspect of the future. The tale of the unfortunate boy in 1985 also helps to emphasise that the use of computers is linked to the surrounding socio-political context. The behaviour of the boy, and his punishment, reflect a dynamic between his own background, the teacher and the norms of the school. Understanding such dynamics requires a critical appreciation of the wider educational context. Presumably, the computer did not singularly make this particular boy misbehave—although it did provide him with a medium for a new form of rebellion.

This paper seeks to critically understand the wider socio-political context of educational computing. It seeks to uncover the important ideas, discourses and rationales around educational computing policy. The term ‘educational computing policy’ is used in the broadest sense and covers early initiatives from the 1960s to recent policies designed for the 21st century learner. A central tenet of this paper is an understanding of the policy process as part of a dynamic and competitive environment involving a complex mix of values, political events, and competing points of view. In simple terms, this research attempts to get ‘under the surface’ of education policy. It is an approach which eschews the received versions of the past, or the acceptance of political rationales at face value, and presents a history of educational computing policy that can help explain ‘why’ and ‘how’ certain policies developed and not just ‘what’ has constituted these policies.

**Research Questions**

With this intention, the following research questions were developed.

1. What have been the New Zealand government’s significant educational computing policies for schools between 1960 and 2004?

2. What ideologies, discourses and rationales have helped structure the New Zealand government’s approach to educational computing policies between 1960-2004?

3. What, if any, are the major themes, patterns or ideas to emerge from a critical analysis of the history of the educational computing policies for New Zealand schools?
4. What can a focus on New Zealand’s educational computer policies for schools tell us about the development of educational policy?

These questions provided a basis for analysing the forces that have created and altered the educational computing policy landscape. They provided a fluid analytical framework for the historical analysis and a way of shaping the research in terms of the literature on education, educational computing, and the policy formation process.

Scope of the Study
The study adopts both a chronological and thematic structure. It tells the story of five chronological periods or chapters in the policies and discourses within the history of New Zealand’s educational computing policy. These chapters provide a structure for an in-depth analysis of the main themes across the policy discourse. In uncovering these themes a variety of archival material and primary data sources were used:

- Cabinet Papers
- Policy Documents
- National Archive Material
- Documents through Official Information Act
- Newsletters, Newspapers and Professional Journals

Although most of the sources are specific to the New Zealand context, the major findings and themes across each chapter have relevance to educational computing policy in Australia and beyond. For example, the recent Pedagogy Strategy: Learning in an Online World (MCEETYA, 2005) is evidence of the extent of policy borrowing between countries. In the backdrop of this wider policy context, this section outlines the following main chapters before moving on to discuss the major findings and themes:

- From ‘new maths’ to first contact (1960-1979)
- Thinking big – The Consultative Committee and the Poly computer (1980-1984)
- The CCDU and the fourth Labour government (1984 -1990)
- Tomorrow’s Schools, ITAG and the development of the first ICT strategy (1990-1998)

Because many readers will lack the contextual knowledge associated with New Zealand educational policy, the paper does not cover in-depth each of these periods. Rather it attempts to stretch out the broader context of each chapter and focus on the bigger picture lessons and insights.

1. From ‘new maths’ to first contact (1960-1979)

The first chapter describes a number of directly and indirectly relevant policy events including the installation of the first ever computer in New Zealand—the Treasury’s IBM 650. The dominant policy and pedagogical principles between 1960 and 1979 were those connected with a liberal-progressive approach. Liberal-progressive ideas have their origins in the work of Dewey among others. The development of the ‘new maths’ movement during this period offers a useful introduction to the ideological context entered into by educational computing. New maths was an innovation with links back to the anxiety in the United States over the Russian launch of the Sputnik satellite. At the time new maths was being introduced, New Zealand was beginning to face its own anxieties with oil shocks and Britain’s admission to the European Union in 1973.
market, casting doubt on the future success of the New Zealand economy. The development of economic and/or vocational skills-based ideas around both new maths, and later computers, provides a point of comparison for later approaches drawing on a skills-based educational philosophy aimed at overcoming economic uncertainties—an approach that has become more dominant over time, for both education and educational computing policy.

In the 1960s and 1970s, New Zealand education policy enjoyed a liberal-progressive hegemony, with education policy, if not practice, being consistently focussed around the relatively enlightened goals of personal development ‘to the fullest extent’. Interestingly, in the 1960s and 1970s, educators and policy makers could be quite restrained about the benefits that a predominantly computer programming approach could bring to the education system. As the example of Richard Spence (1970) from the New Zealand Computer Society demonstrates, concern for the liberal-progressive nature of education was still paramount:

[Enlightened attitudes to education] contribute to, and derive from, a generally held belief that the purpose of New Zealand secondary education is broad personal development for effective citizenship.


During the 1960s and 1970s, there was only limited political and bureaucratic interest in the use of computers in schooling. A greater political enthusiasm for computers emerged at the beginning of the 1980s, with the proliferation of micro-computers, and when Minister of Education, Merv Wellington, became involved with the development of the homegrown Poly computer. The Poly computer saga provides some of the most compelling discussion points for the themes of this research. The Poly project was dominated by ‘export’ rationales and an overtly political process. It drew upon considerable optimism about not just what the Poly could achieve in the classroom–but also in the educational computing market.

Although this chapter is the shortest time period of the research, in no way does it imply that this the period was somehow lacking. The events around the Poly computer provide a complex policy case study. From a period of relative in-action during the 1970s, the Education Department, and the Honourable Merv Wellington as Minister of Education, stood at the centre of the National government’s early 1980s attempt to have New Zealand become a leader in the global educational computer market. At one point, it was intended that every secondary school was to have a suite of homegrown computers and the Poly was to be the centre of a comprehensive policy approach to computers in New Zealand schools. However, this was to be a policy story with an unfortunate ending. In a context where rival educational computing companies actively, and even illegally, worked against the Poly, the initiative did not win financial and political support and subsequently failed to make a significant impact on the New Zealand educational computing market.

In retrospect, the events of this time make the government’s initial support for the Poly appear to be somewhat ambitious. From one point of view, it now seems unlikely that a New Zealand company, supported by the government, would ever be able to compete with the newly emerging giants of the field based in North America and the United Kingdom. However, a retrospective view of the Poly’s story risks unfairly judging the participants by the standards of another day. The early 1980s were a time of large public works programmes as epitomised by the ‘Think Big’ projects. At the time, the prospect of New Zealand being able to produce a

1 The name ‘Poly’ is derived from the word ‘Poly-technic’. The Poly was first designed and constructed at Wellington polytechnic.
niche educational computer, in a multi-billion dollar overseas market, may have deserved the risks involved. This entrepreneurial thinking, fuelled by prospect of export markets for the Poly, and the growing expectations of New Zealand parents and schools, outweighed any informed educational rationale and helped propel the Poly policy all the way to the decision-making table of the Cabinet.


By 1984, the Poly project had come and gone. By the end of its reign, National had introduced a few recommendations from the Consultative Committee and the new Labour government continued to support these, including the Computer Courseware Development Unit (CCDU). This chapter discusses the policy context around this unit. Under Labour, this small unit began as an operational hub for extolling and coordinating predominantly secondary school educational computing. Its function, secondary-focus and name changed over time, and by 1987 it became known as the Computer Education Development Unit (CEDU). The CCDU/CEDU altered to provide a greater emphasis on the use of computers as ‘tools’ as opposed to computers as tutors and tutees (Taylor, 1980). Connected to the tools approach was also a sense of the great potential offered by computers in education, and the tendency for the CEDU, at least in its newsletters, to be enthusiastic and optimistic about computers.

The years from 1987 to 1990 were important times for all education policy. It was during this time that the re-elected Labour government made an ideological shift in education, which oversaw a significant change to the educational policy context. Up until 1987 liberal-progressive approaches had been the dominant government approach to education policy, but with the publication of the Treasury’s educational treatise Government Management Volume II: Education issues the fourth Labour government became involved with a Treasury-led, ‘new right’ or ‘neo-liberal’ push for education policy to better align with economic policy and a market approach (Olssen & Morris Matthews, 1997). This movement was a turning point for subsequent educational policy as the Treasury influenced Tomorrow’s Schools (Department of Education, 1989) process disestablished the Department of Education, and its many operational divisions to make way for the new Ministry of Education.

4. Tomorrow’s Schools, ITAG and the development of the first ICT strategy (1990-1998)

The onset of Tomorrow’s Schools and the dramatic end of the Fourth Labour government bring chapter three to a close. Under Tomorrow’s Schools, the Ministry of Education was essentially to be a policy ministry with schools as the basic unit of educational administration. Operational areas such as the CEDU were considered superfluous under this arrangement, as indeed was a centrally coordinated approach to educational computing policy. Despite the recommendations of the 1990 Sallis report (Consultative Committee on Information Technology in the School Curriculum, 1990), the government’s approach to educational technology was based around allowing schools to make their own decisions about the role of computers in the classroom.

This period is the longest chapter of the research. It draws upon the discussion of the wider context of educational computing to examine how the government’s non-interventionist thinking around educational computing policy changed from 1993 following the work of the Information Technology Advisory Group (ITAG). ITAG was a group initially set up to advise the Minister for Information Technology. It was based around several big business leaders and an essentially economic vision for computers in schools. One of the core problems for ITAG involved finding an affordable solution to improving the numbers and use of computers in schools, which could take account of the autonomy of schools via the Tomorrow’s School
initiative. The ITAG approach did not promote a return to a liberal-progressive notion of education, and rather intensified the economic and instrumental connections between education, technology and the economy. With the Honourable Maurice Williamson, the Minister for Information Technology advocating a powerful role for technology in the future of education, a cost-effective mechanism was eventually developed (one that did not require the government to purchase hardware), and the government’s first Information and Communications Technology (ICT) strategy was launched in 1998 (Ministry of Education, 1998).


The effects of this first strategy, and the development and implementation of the second ICT strategy, are discussed in the final chronological chapter of this research. By the time of the second ICT strategy (Ministry of Education, 2002), the government was deeply and financially committed to computers in schools. The education policy Ministry of 1990 had now become the chief driver of educational computing, with considerable operational processes and links underway. Economic rationales around the educational computing policy context had enshrined the importance of ICT for schools and for the development of the knowledge economy. The rhetoric around educational computing policies had developed to be one based on ‘investment’ in line with the demands of the ‘global economy’.

After two decades of neo-liberal influence in education, the new Third Way politics found support by much of the popular pedagogical discussion around computers. The second ICT strategy shows a strong alignment and sense of consensus between the educational and the economic rationales for computers in schools. Much of this consensus is based around a somewhat unspecified and psychological notion of ‘teaching and learning’. In its clearest description, this emphasis on learning and teaching links back to how schooling might be carried out rather than what might constitute ‘education’. That is to say, it shows a technical (psychological) emphasis on how schooling could take place within a framework which is primarily economic. In a clear delineation, educational computing policy in 2004 has continued earlier trends to primarily deliver marketable skills and along with ICT, meet the needs of the knowledge economy. Arguably, while the second ICT strategy demonstrated some small rhetorical returns to liberal-progressive ideas, the 2002-2004 policy approach to educational computing enshrined and continued the economic approach to education.

Major Findings and Themes
This section reflects on the overall trajectory of educational computing policy for New Zealand schools. It synthesizes the lessons and insights of this historical account under the following major themes:

- the connections between economics, finance and educational computing;
- the politicisation of the future around new technology and education;
- the optimistic estimations of what new technology can contribute to education;
- the movement away from explicit philosophical, ethical or moral approaches to education, and education with computers, and a move towards the psychological aspects of ‘teaching and learning’;
- the paucity of critical pedagogical ideas and approaches in educational computing policy.

Economics, finance and educational computing
In the early 1980s, the New Zealand government’s interest in the Poly computer was inspired by the worsening economic position. At this time a number of teachers were keen to see the government support the computer-based learning that was already underway in secondary schools. Although it is difficult to argue about the extent to which educators themselves used economic rationales to inform their teaching objectives, the economic rationale of policymakers were seemingly shared by some educators, as this excerpt from the Post-Primary Teacher’s Association implies:

It is being argued that the new technology offers New Zealand the opportunity to escape from its economic difficulties and that the resources of a well educated population with a relatively low professional salary structure could exploit the international market for computer software with considerable advantage to New Zealand’s balance of payments.

Investment in secondary education to equip young people to handle the new technology is therefore an investment in the country’s resources. The long-term advantages will justify the additional expenditure on education (NZPPTA Annual Conference, 1981, section 9).

From 1987 onwards, economically-inspired points of view about educational computing intensified, and the policy context became subject to technocratic, new right or neo-liberal, views of education (Fitzsimmons, Peters & Roberts, 1999). These views were shaped by the market logic of economists who sought to establish education as a commodity or private good, rather than an investment in the public good of the whole community (Grace, 1990).

Politicisation of the future

As can be seen in the examples from the previous section, policy discussion concerning the economic and educational utility of computers in the classroom frequently includes some reference to the future. The future offers those seeking political support for a particular policy with an area rich in possibilities and uncertainties. On the one hand, ‘the future’ provides a focus point for discussing the positive benefits or potential of educational computing and on the other hand, there is always the potential for being left behind. This example of why classrooms need to equip children for the future comes from the President of the Wellington Chamber of Commerce:

You know what is required to develop and mould your students to suit the ‘customers’ (future employers)... We must indeed have computers in classrooms today so we’ll have the skills we will need tomorrow (Waters, 1991).

Using conceptions of the future to justify the investment in ICT is an old tactic. Such ideas inspired the 1980s and 1990s advertising campaigns inviting parents and community members to collect supermarket vouchers towards their children’s school acquiring new computer equipment. The logic of such a position is unmistakeable: adopt technological skills, instead of traditional skills, or risk your future. The power of the social and economic justification regarding the need for future computer skills, and therefore, computers in schools, resides in the public and political fear and caution provoked about the economic insecurity inherent in the market-driven technological future. It is the type of logic which is effective on parents and appealing to business people and politicians. Irrespective of political orientation, people cannot afford to miss ‘the next big thing’.
Of course, there is little appreciation that ‘the next big thing’ might create a future worse than the one we have today. The future is being constructed in a certain kind of way that usually ignores the troubled reality of the present and alternative views of the future. There has been little or no concern for questions such as: Whose conception of the future is being put forward? Who is promoting it and for what purpose?

Optimistic estimations

The above optimism for educational computing is based upon a ‘technocentric’ belief that computers can act as a ‘catalyst’, ‘facilitator’, or overwhelming cause for educational improvement (Stratford & Brown, 2002). In some respects, this optimism can be seen to have increased over time, as computer technology has improved and as schools have more readily purchased ICT. Observe, for instance, in 1982, when the Consultative Committee on Computers in Schools set out its optimism in terms of the assistance that computers offered in the classroom:

The computer is also a powerful tool by which students and teachers may be encouraged to enquire, to respond creatively and inventively and a means by which they may gain personal satisfaction through learning and accomplishment. The machine appears to have almost unlimited potential to stimulate the imagination and to act as a device to foster enquiry, investigation, exploration, discovery and research (Department of Education, 1982, p.12).

It is useful to place the transformational claims of educational computing against the research findings, which suggest that the rewards have failed to materialise. For instance, in 2000 research led by Capper, Bowen-Clewley and Harris (2000) suggested that New Zealand’s educational computing was far from innovative in practice with most educators taking a skills-based, rather than informed pedagogical approach. In a similar vein, the Education Review Office (2001) found that New Zealand schools generally reported that the introduction of computers to the classroom appeared to support only those learning outcomes associated directly with computer skills. Throughout the study, there is a dearth of research showing fundamental changes to teachers’ pedagogy as an outcome of the investment in educational computing.

From an ethical and sociological to psychological approach

In New Zealand, Liberal-progressive thought has been concerned with the development of a broad general education, egalitarianism and equality of opportunity (Olssen & Morris Matthews, 1997). The rhetoric of this position is well known to those familiar with the work of Clarence Beeby and Peter Fraser:

The government’s objective, broadly expressed, is that every person, whatever his level of academic ability, whether he be rich or poor, whether he live in town or country, has a right, as a citizen, to a free education of the kind to which he is best fitted, and to the fullest extent of his powers (Fraser, 1939; cited in Commission on Education in New Zealand, 1962, p.11).

The extent to which this philosophical vision for New Zealand education was ever realised is a moot point. What is clear however, is the degree to which support for Fraser’s vision has diminished from 1960 to 2004. Over time, the liberal-progressive philosophical framework for
education has been replaced with an economic or busnocratic approach to education policy. Although instrumental approaches to education were present throughout this period, the turning point was in 1987 when the policy of *Tomorrows Schools* became an element of economic policy and the explicit links to citizenship, fairness and individual development were extensively mitigated.

Post-1987 the dominance of busnocratic ideas was supported by the increasing importance placed upon psychological approaches to teaching and learning. While economics has fulfilled the primary rationales for why education policy is important, psychological approaches have provided much of the technical language of how schooling should be undertaken. Since the seminal work of Papert (1980), the so-called new ways of learning have been closely linked to educational computing policy. Psychological, especially constructivist, approaches have become an assumed form of ‘common sense’ pedagogy; the norm and a rallying point for teaching and learning. This is particularly evident on the ‘talk circuit’ as the following example illustrates from the Navcon2K2 conference:

> The design and construction of effective, technology-rich learning environments requires a sound pedagogical framework that is constructivist and is mediated by a teacher who is equipped with clearly defined learning outcomes (cited in Brown, 2003, p.38).

Indeed, support for a constructivist, single metaphor approach to learning was explicit in the call for papers:

> The Navcon2K2 Conference Committee will consider all submissions and determine which submissions will be included in the programme based on the following criteria:

- Congruence with conference themes
- Delivery that models constructivist views of learning
- The need to avoid repetition and duplication
- Balance across strands and session types (cited in Brown, 2003, p.38)

While constructivist approaches have much to offer education, it is important that this term is put into perspective. Constructivism, in its generalised form, suggests that learning is best when learners are actively involved in constructing their own knowledge. This point of view can be defended but there is much more to the story about constructivism that needs to be explained. Phillips (1995) notes that there are many blends of constructivism and this approach is too often understood and implemented in simplistic ways. Indeed, competing perspectives can be hidden under the guise of constructivism and some new ideas have been introduced with limited critique because they have been labelled constructivist.

Importantly, this study suggests the new ways of learning have become a discourse of persuasion where the dominant ethical and moral perspectives have shifted from Dewey’s original liberal-progressive ideas about education towards a sociology of schooling that is chiefly busnocratic. Put another way, the traditional of ethical pedagogy for critical citizenship has been replaced by a new kind of enterprise pedagogy for economic gain.
Paucity of critical pedagogical ideas

This last theme provides something of a concluding overview for the above themes. As the preceding discussion notes, New Zealand’s educational computing policy context has tended towards economic, optimistic, and futuristic notions of education with computers. While the above themes have provided an insight into what has occurred from 1960 to 2004, this theme provides an additional perspective, and characterises the tendency towards economic, optimistic, and futuristic rationales in terms of a potentially important intellectual omission. This omission is based on liberal-progressive ideas and approaches, which posit education as a humanistic, self-actualising and democratic process. In other words, there is a notable absence of intellectual debate around the role of educational computing in helping to produce critical consumers and critical citizens for the future.

Conclusion

This historical analysis has provided an interesting case study of education policy development. The process for constructing policy can be imagined as a discursive battleground. It reflects a battle inasmuch as certain points of views about education have had more success than others in the influence and construction of the dominant policy language. Whilst these discourses have altered, ebbed and flowed in different degrees, and in a complex manner, they have, nevertheless, competed, combined and dynamically worked together (and against one another) to construct the policy points of view. At different times since 1960 quite different political points of view have shifted and competed for position in the decision making processes. In many ways, the most powerful ideas to surface have not always been the most enlightened or progressive, as illustrated by the opening example from Christ’s College. This example makes an interesting parallel with the current hub of educational computing activities in Christchurch and the city’s economic aspirations as New Zealand’s IT capital. As education and economic policy has become increasingly intertwined over three decades of change, educational computing policy is, arguably, more lacking of a sense of ‘education’ in 2004 than it had in the early days of the micro-computer. To rediscover this sense of direction teacher educators need to remember that there is a crucial difference between ‘education in change’ as opposed to ‘education for change’.

References


Individual Learning Plans. A Quality Teacher Initiative
What Happens When Teachers Shape Their Own Professional Learning?

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Abstract:
This symposium will report on a project that was developed in response to an invitation from the Parramatta Catholic Education Office (CEO) for the School of Education, University of Western Sydney to provide consultancy services to four schools in the diocese. The project was funded through the Australian Government Quality Teacher Programme (AGQTP) and administered by the Focus on Learning Grants Program of the Catholic Education Office, Parramatta. The purpose of the consultancy was to support teachers in the development of Individual Professional Learning Plans. Four schools were identified by the CEO to be involved in the AGQTP funded projects and the project began in June 2006 and is continuing in 2007. UWS is project managing all four projects and reporting to the CEO at agreed points in the project. Two of the projects are being facilitated by staff from Charles Sturt University. Academic partners across the two universities were selected because of their expertise in specific research areas and matched to the professional learning requirements of each of the schools. Each of the individual school projects had a specific focus. The project at Gilroy College, Castle Hill has involved working with a small group of staff developing Individual Learning Plans in a Quality Teaching context. The Patrician Brothers, Blacktown project involved working with a small group of staff developing Individual teacher Learning Plans to develop teacher competency and competence in the utilisation of ICT. The two academic partners from CSU are involved in working with two primary schools, specifically Holy Family, Luddenham and Holy Cross Glenwood. The focus of the Individual Learning Plans at Holy Family has been through authentic assessment while the focus at Holy Cross has taken a Quality Teaching focus.

Introduction
This paper reports on the first stages of a project with school staff in a CEO High School in Sydney. The project involved the teachers self-nominating to be part of a group who would support each other while they formed their own professional independent Learning Plans. Research by Meiers and Ingvarson (2005) under the Australian Government Quality Teaching program (AGQTP), established a number of key elements operating in professional learning.

The project was developed in response to an invitation from a regional Catholic Education Office (CEO) for the School of Education, University of Western Sydney to provide consultancy services to a College in the diocese. The project was funded
through the Australian Government Quality Teacher Programme (AGQTP) and administered by the Focus on Learning Grants Program of the Catholic Education Office, Parramatta. The purpose of the consultancy was to support teachers in the development of Individual Professional Learning Plans. Other countries (e.g. Canada in its Ontario English Catholic Teachers Association - OECTA) have put Teacher Learning Plans in place as part of a vision of authentic professional learning. The process is self-directed and voluntary, with teachers establishing and pursuing their own goals for their professional learning and growth (www.oecta.on.ca).

From August to November 2006, three academics from UWS met with the eight staff members from the secondary College, discussing options, suggesting connections between staff and debating how the proposed plans articulated with the school’s goals. This paper, working with a small group of staff developing Individual Learning Plans in a Quality Teaching context, reports on the short term outcomes and flags the potential developments for the teachers, their students and the school environment.

**Effective Professional Learning**

Research by Meiers and Ingvarson (2005) under the Australian Government Quality Teaching program (AGQTP), established that four elements operate in the professional learning process:

- Teacher professional development
- Changes in professional knowledge
- Changes in teaching practices
- Impact on student achievement

These elements are multi-faceted, and the links between them are also complex and recursive (Meiers & Ingvarson, 2005, p.14).

The research literature on educational effectiveness clearly identified the connections between quality teachers and their professional development. The main message was that ‘opportunity to learn’ features in the programs had significant effects on the extent to which the programs had an impact on teacher knowledge, practice, efficacy and student learning outcomes. Follow-up, content focus and active learning were all directly related to the level of impact on teachers’ knowledge. The level of active learning was also directly related to impact on teachers’ practice and efficacy. The qualitative evidence of teacher’ reports of changes in their students’ learning provided some indicative evidence of the kinds of impact of professional development. Consequently, the research claimed that opportunity to learn features have significant indirect effects on practice, student learning outcomes and teacher efficacy.

This US research cited design principles for effective professional development, formed in the US National Partnership for Excellence and Accountability in Teaching (available at www.npeat.org cited in Meiers and Ingvarson, 2005). Foremost among these nine principles is that content of professional development should focus on what students are to learn and how to address the different problems students may have in learning the material; and that professional development should involve teachers in the identification of what they need to learn and the development of the learning experiences in which they will be involved. It is also acknowledged that professional development should be organized around collaborative problem solving. Without collaborative problem solving, individual change is possible but school change is not.
The essential consideration underlying these principles is that professional development should be ongoing and that the design of professional development must provide time to apply new ideas and, sometimes must draw on additional outside expertise for real change and continuous improvement.

Researchers Lieberman and Grolnick (1996) investigated 16 professional networks during processes of educational reform. They identified five organizational themes in common in these networks: 1) they had a goal around which the group formed; 2) they were groups in which there was emotional and psychological support; 3) they made “time to talk” among their activities; 4) they practised facilitative leadership, establishing connections, brokering opportunities, finding places to meet; and 5) they had to balance the expectations of funding authorities to assess productivity. Lieberman and Grolnick argue that:

Learning in networks can be powerful but it is often indirect – a result of new commitments, friendships, the exposure to new ideas, contacts with and observations of others’ work… [This] presents a measurement and evaluation problem that has not yet been solved in ways that … confirm the concrete experiences of those who view the networks as the most appropriate forms of professional growth and learning (Lieberman & Grolnick, 1996, p 26).

Nicoll (2006) provides historical perspectives on educational flexibility in the broad context of lifelong learning. Her critique of the literature and policies takes in flexibility in the provision or delivery of learning (for example, e-learning and intensive courses) as well as parent selection of schools that demonstrate and implement curriculum innovation (p 25). In synergy with this, many researchers of teachers’ professional learning discuss self-determination and autonomy as key aspects of professionalism (Campbell, McNamara & Gilroy, 2004, p 23 citing Woods, 1994; Day 1999; Elliott, 1999).

Individual Learning Plans, as described by Yale University (2003) return to the teacher the opportunity to determine the content and purpose of their professional learning. Nevertheless, the context of these plans needs to be collegial and supportive. Wenger’s (1998) theorising of communities of practice brings another dimension to effective professional learning. Wenger maintains a community of practice ‘a special type of community’ (p 72) has as its first characteristic ‘the mutual engagement of participants’ (p 73). He argues that engagement does not entail homogeneity but rather is ‘as much a matter of diversity as it is a matter of homogeneity’ (p 75). He further describes such mutual engagement as an ideal context for ‘leading-edge learning’ (p 214).

Nevertheless Wilson and Berne (2000) make it clear that professional learning has some boundaries that need to be crossed. They argue that teachers want to access and discuss innovative classroom practices and evaluate assumptions:

Teachers enjoy talk about materials relevant to their work, be that subject matter or theories of student learning. Teachers embrace opportunities to be intellectuals. Yet they bring little by way of experience to professional conversations. The norms of schools have taught them to be polite and nonjudgmental, and the privacy of teaching has obstructed the development of critical dialogue about practice...(p 186).
Outline of Processes Undertaken in planning and implementation stages

This project is about discovering how a teacher’s Individual Learning Plan might not only benefit the development of the teacher but also the community in which they teach – including staff, students and families.

Initial meetings to discuss the project, occurring over the time frame of a month, were held at the College with the academic partners and the key personnel at the school. The purpose of these meetings was to establish ‘shared meanings’ of the nature of the project and the supporting role of the academic partners. Roseberry and Warren (1998) found that research work in schools, documenting and analysing what teachers learn, involves establishing shared meanings. They argue:

The construction of a shared meaning does not happen in an orderly, linear progression, from implicit to explicit meaning. Rather it has a more mobile, mutable, improvisational character as meanings are taken up and elaborated by different participants, each of whom draws on past as well as “almost accepted” perspectives in the conversation. In this way, the meaning of “hypothesis”, “experiment” and “control” are in motion for all participants – researchers as well as teachers as they begin to formulate a shared understanding (pp 10-11).

Following the initial meetings, a whole school workshop was undertaken where principles and models of effective school-based professional learning were discussed. The Department of Education in Victoria is working on similar models (DET Victoria, 2005). The purpose of the meeting with the school in this study was to develop understandings of the term “individual Learning Plans” and provide motivation for staff to become involved in the project. Individual Learning Plans were explained in terms of self-identifying an area of professional learning for each teacher and then developing a plan to implement the ideas. These plans were discussed as identifying the teacher’s professional growth outcomes, with a proposed action plan and time lines for achieving those plans (www.oecta.on.ca). At this meeting with staff responded to invitations to map plans on a gallery of display boards around the room. The four questions for discussion were:

a) What are individual Learning Plans?
b) What is their purpose?
c) Why do I need one?
d) How do I prepare one?

The responses from the teachers were synthesized in a discussion led by the academic partners. Undertaking this process with the staff enabled the academics to identify the staff’s understanding of the concept of individual Learning Plans. The academic partners were able to further elaborate on the ideas and in this way a shared understanding of individual Learning Plans was established.

Staff self-identified their interest to be involved in the project and a further workshop was organized for these teachers. The workshop was intended to provide opportunities for the teachers to identify areas of professional learning needs and ways in which goals could be set to meet these needs. A total of seven teachers and the Deputy Principal chose to be part of the project. Two further meetings were held with the self-identified staff and academic partners to clarify direction for individual plans. Discussion followed on the development of a pro-forma for recording of their plans. Participation of the project team members in learning opportunities supported by the
academic partner/s including providing release from daily duties to participate in
group and individual tasks, stage meetings, mentoring, conferences and courses
formed part of the initial implementation of the project.

Each of the teachers at the College brainstormed future directions for professional
growth. In doing so, they re-discovered the possibilities of cross-curricular initiatives
and collaborative development. Each of the teachers expressed some uncertainty
about how professional learning might be managed at the same time as fulfilling their
work as teachers; but they were committed to productive change. The teachers
involved in the project were the Deputy Principal, two maths teachers, a PD/H/PE
teacher, a visual arts and ESL teacher, a language teacher and a counsellor. The plans
were situated around the New South Wales Institute of Teachers Framework with two
of the eight teachers specifically focusing their plans relative to the levels of
competence of the Teaching Framework.

The format for the physical component of the individual Learning Plans was not
prescribed by the academics working with the teachers at the College. Initially a
planning pro-forma was used to promote discussion. Examples of Learning Plans
were then given to the teachers (see example of Yale University website in
references). These examples of Learning Plans provided a scaffold for the
development of the teachers own format. This format was based on the teachers’
needs and their personal preference for documenting their professional learning.
Providing the opportunity for the teachers to develop their own plan format allowed
the group to have discussions collaboratively and further develop group and team
cohesion.

Perspective of the researchers
Schonn (1987) famously reminded researchers of the choices between solving
problems according to prevailing standards of rigor and descending to the ‘swampy’
zones of practice with seemingly nonrigorous enquiry (p 3). In this project, the
researchers see themselves as facilitators of ‘independent and inter-dependent
learning’ (Taylor, 1997 p 76). While the researchers collect field notes, conduct focus
groups and record emerging trends in teacher conversations, they also grapple with
analyzing the nature of the teachers’ learning. Wilson and Berne (2000) confirm that
researchers who study a phenomenon while they (or others) try to build it experience
particular problems. They explain: “One’s attention must be bifocal, creating
meaningful professional learning and doing rigorous research.” (p 198) Questions
arise about “analytical approaches that are rigorous yet respect the complexity of the

Interim Evaluation by College Staff Involved in the Project
Some staff showed interest in being involved in the project at the whole school staff
meeting. The staff members who self-nominated to participate in the project have
been highly motivated and enthusiastic. To sustain this initial interest it has been
important to work within the areas of the staff members’ needs. There was no pre-
determined model that was used but the process undertaken with the staff was based
on principles of effective school based professional learning as discussed at the first
meeting with the whole staff. A new Principal has been appointed to the College this
year and the project has had to be delayed for several months until the priorities of the
school and individual staff are negotiated with the new leader of the school. To date the feedback from the participating staff and deputy principal has been very positive and their have been some energized discussions.

At a very busy time at the end of the school year in December 2006 the staff who were involved in the project were asked to provide feedback on the project using an electronic questionnaire (Researcher-devised Feedback Template, 2006). Of the eight participants, five returned the questionnaires, all of whom are eager to continue with the project. Whereas it is understood that there were problems with the project, these were accepted by the participants as being due to the project commencing so late in the school year. All the participants noted that their expected outcomes, basically the development and strengthening of a focus on future directions, were either met or were being met. The chance for professional dialogue was stressed as a major positive outcome, the sense of collegiality coming through as a core component of the project.

**Shaping teachers’ professional learning: initial analysis of outcomes in 2007**

The relationship of the Individual Learning Plans to the Quality Teaching Framework was presented in early meetings and reinforced as the teachers began to identify their chosen plans. Two of the teachers were from the maths faculty in the school. They had reached different stages in their careers. One, ‘Adrienne’ was an experienced teacher of 13 years. The other ‘Ros’ was a valued senior member of staff, nearing the end of her teaching days. Both were keen to explore innovative pedagogy for mathematics and were seeking guidance about ways to do that. When it was suggested to them, during the course of meetings and phone calls in September 2006, that they might benefit from attending the Mathematical Association of Victoria (MAV) conference in Melbourne they jumped at the opportunity. In this, they were supported by System funding through the Australian Government Quality Teaching Project (AGQTP).

There is certainly a difference between school-based professional learning and opportunities to learn outside the school setting: “Essentially, what such professional development appears to be doing … is to engage teachers as learners in the area that their students learn in but at a level that is more suited to their own learning.” (Wilson & Berne, 2000, p 194) The Maths conference offered the teachers a ‘critical mass’ of teachers seeking the specific challenges of their discipline and the innovative pedagogies associated with it. Pfeiffer and Feathertson (n.d. c. 1997) recorded changes in the discourse of teachers and noted that teacher talk had evolved into pushing each other towards “enacting the vision to which they were now personally and professionally committed.” (p 18).

Neither ‘Adrienne’ nor ‘Ros’ had previously attended the MAV conference. They busily searched the website to prepare themselves for papers and presentations that would be made. As a pair they were able to decide to attend different presentations and then compare notes in the evening. They were therefore engaged in defining specific areas and skills they wanted to develop as well as learning activities to complete (as discussed in Yale University library: The Learning Plan, 2003). The dual purpose of attending the conference was to examine ways in which technology can enhance teaching in maths, as a tool for learning and to work on developing strategies towards a ‘thinking curriculum’.
There are certain themes that Lieberman and Grolnick (1996) found to be common among learning professionals. One such theme is an outcome to be observed in the behaviour of the two teachers ‘Adrienne’ and ‘Ros’. It is the giving and receiving of **emotional and psychological support**. Another way of expressing this is collegial collaboration, expressed here in the selecting, decision-making and sharing processes of their session attendance and the discussions afterwards.

Both teachers came away from the conference feeling invigorated and wanting to implement many of the ideas they had seen in action (personal interview, April 11, 2007). They nevertheless took the time to prioritise what they wanted to attempt first, at the commencement of 2007. The Catholic Education Office (CEO) is currently engaged in developing shared learning through its C-net. It therefore followed logically that Adrienne and Ros would become involved in inviting people from the CEO to speak to the staff about this learning management system, a type of e-learning. There are professional readings on site and staff are connected so that conversations they have encourage a community of practice and reflection.

This behaviour is also among Lieberman and Grolnick’s (1996) themes and is concerned with **facilitative leadership**. Having experienced a range of ideas they saw the benefits of sharing the experience and brokering opportunities for the whole staff to interact with a new learning management system. Moreover, it is exemplifying Wenger’s idea of a community (1998) with the mutual engagement of participants. In a further step, Adrienne enrolled in an e-learning professional development during first term. By taking this step, she saw her role as making a link with her staff and the broader community. The initial eight staff members who self-selected have met during the first term and opened their discussion of the C-net to interested people; and they were delighted to have different teachers come along, interested in developing on-line components to topics and courses. A small ripple had taken place. Another one emerged when a worksheet template for modifying work for students with special needs, developed as a result of an example demonstrated at the conference, was passed to a subject co-ordinators’ meeting and from there, more broadly to the staff. With the staff, they are passing on some of the books they acquired at the conference. They accept the fact that it is hard to find the time to ‘make things happen’. A third ripple appeared when Ros created a topic with journal writing as an assessment, towards students developing their thinking about mathematics. All the maths staff wanted to know how the students reacted and what Ros felt about the evidence of learning.

When Adrienne used the technology herself, she reported on using it in various ways depending on the level of the students. With Year 7, she set them the task of finding out an interesting maths fact on the net. She also encouraged students to share their learning in Powerpoint presentations. It was with her Year 12s that she saw great benefits as the students used the discussion board to help each other with problem-solving. Ros and Adrienne plan to put together a unit of work using Bloom’s taxonomy in maths. They are conscious of the fact that students need to be stretched whenever questions and problems call for them to extrapolate from one learning experience to another. This kind of reflection, that is focused on the needs of students, is the driving force behind teachers continuing to engage with professional learning.
These beginnings by two of the teachers in this professional learning project confirm key points in research by Meiers and Ingvarson (2005) under the Australian Government Quality Teaching program (AGQTP) about professional learning. Foremost among these principles is that content of professional development (PD) should focus on what students are to learn and how to address the different problems students may have in learning the material; and that professional development should involve teachers in the identification of what they need to learn and the development of the learning experiences in which they will be involved. It also acknowledged that professional development should be organised around collaborative problem solving, as without that, individual change is possible but school change is not. The design of professional development must provide time to apply new ideas and, sometimes must draw on additional outside expertise for real change and continuous improvement. These two teachers, first at the conference and then back with their staff, demonstrated the impact of collaboration on their peers. It is as yet early days to report on significant changes in students’ learning. Nevertheless, it seems that there are very promising signs of change.

Interim findings from the project
The practice of self-selection by teachers to participate in the projects was important in developing the commitment and motivation required as a member of the project team. By using the Quality Teaching Framework as the means for the teachers to scaffold and develop their Individual Learning Plans a better engagement with and understanding of the framework was achieved by the teachers. Processes used by the academic partners to bring about increased understanding of the Quality Teaching Framework included collaborative strategies, reflective practices, ownership of the product, that is, the learning plan through engagement and choice throughout the processes. The use of collaborative practices in the development of the Learning Plans has been noted as providing opportunities for communities of practice to be formed and developed.

The project team reported on the benefit to their professional learning through the provision of funding to enable teacher release time to participate in meetings, workshops and conferences. As well, the Academic partners it was noted by the teachers, provided the knowledge, guidance and support necessary to develop and implement the professional learning processes for them.

Conclusion
In this project the principles and practices of effective professional learning for teachers was used to scaffold the learning of teachers in the development of their Individual Learning Plans. The opportunity to learn for these teachers became evident by using professional learning strategies that focussed on the identification of what they wanted to learn, scaffolded by collaborative learning with their colleagues. Not only was it important to identify the learning needs of the teachers it was evident that the process needed to be on-going, supported by time for the teachers to develop and apply new learning. It was also apparent that there is a need to drive professional learning and sometimes this is best achieved through outside expertise such as through an academic partner.

Three significant areas for future directions of the project have been identified by the teachers and the academic partners, these being that:
• the academic partners continue to work with the teachers on the refinement and implementation of their Individual Learning Plans;

• the teachers share their knowledge and skills with other teachers in the school and beyond the school and;

• the school further develops a culture of professional learning within the school by providing opportunities for other teachers to become involved in developing their Individual Learning Plans.
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Can we improve it? Pre-service teacher education, minimising the negative issues of beginning teachers

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Abstract
This research investigating pre-service teacher education contributes to the growing body of evidence that identifies common themes, or issues of beginning teachers in local, national and international settings. The approaches taken by education systems and institutions delivering teacher education will be examined with a particular emphasis on personal development programs.

Identifying some of the common themes, or issues of beginning teachers suggests that particular factors contribute to the low retention of beginning teachers. Awareness of these may allow teacher educators, school communities and educational authorities to address relevant issues both in pre service teacher education and the ongoing support of beginning teachers. The use of Glasser’s Choice Theory (1998) will be discussed in light of the identified need to create and sustain a cohesive and unified approach in preparing teachers for the demands of teaching in schools that seek to manage the impact of continual social change in the twenty first century and the implications associated with ‘Generation Y’.

Introducing the investigation
For Pre Service Teacher Education (PSTE) to be effective in the twenty first century true partnerships are required between universities and schools and pre-service teachers require real choices in what they do, how they are educated and where they are placed, both in PSTE and in first appointments. It is our firm belief that pre service teacher education in the developed world should remain within universities, operated in conjunction with and in partnership with schools and educational authorities.

This paper seeks to highlight, through the examination of international, national and local research findings, some of the issues surrounding beginning teachers in a range of educational communities. The following themes will be highlighted in this paper.

 seekers of new teachers in their early years of teaching
The significant importance of a changed psychology in teacher education, which recognises the importance of ‘Choice Theory’ in the education and development of pre service teachers

The current lack of, yet the need for ‘Personal Development’ to be embedded within all pre service teacher education programs

The need for true partnerships between schools, universities and educational authorities

The need for the recognition of the ‘Profession of Teaching’

Directions for the future within pre service teacher education

**Pre service teacher education and quality education**

The discussion that follows is focused primarily on teacher education because the authors recognise that there is a direct link between what occurs in pre-service teacher education (PSTE) programs, the reality of a quality education for the young and the retention of beginning teachers. Darling-Hammond, 2006, as cited by Liston, Whitcomb, & Borko, (2006) makes the claim that although it is expected that first years teachers will encounter some difficulties, there is emerging evidence that those prepared in powerful teacher education programs seem to manage the vicissitudes more adeptly than others (Liston, Whitcomb, & Borko, 2006). Although it is anticipated that pre-service programs do prepare teacher candidates to be quality teachers, no PSTE program can ever be expected to provide everything that a teacher may require, or meet all the expectations of prospective employers.

Perhaps the “The Big Picture” story presented so well by Liston et al (2006) does indeed ring true for many new teachers of the new generation as they try to survive their first few years of teaching. Although the story of each new teacher is different the following seems to capture the essence of the story told by any teacher in any country of the western world.

Their stories tell of the challenges experienced as they come to understand the depth and texture of their students’ lives and their unique development needs. They work to develop humane, yet efficient routines to manage the daily business of classroom and school life. They struggle to design engaging curriculum and to build knowledge of rigorous and fair standards of work. They fend off fatigue, seeking to balance career demands with activities and connections that rejuvenate. They grapple with the absurdities and paradoxes of school bureaucracies, choosing when to critique and resist the ill-framed policies and practices. They stumble in some interactions with colleagues, administrators and parents. They wonder why their trying work and hard-won accomplishments are viewed with such low regard by the general public (p. 351).

The Auchmuty report (1980) presents the idea that “Teacher education is a continuous process of personal and professional development” (1980, p. xxi) which makes it clear that Teacher Education is not complete upon graduation and that there may well be ongoing struggles in the early years of teaching. A similar stance was presented in the Ebbeck report (1990) which stated that whilst it recognised the many dilemmas facing teaching education it suggested that it was important to recognise that the pre service teacher could not be expected to do everything that schools might expect of a fully qualified professional teacher. The report also suggested that it was appropriate to have modified approaches to the design of pre-service teacher courses with the aim of achieving a sounder academic education and longer and more realistic practical teaching experience. This line of thinking is also consistent with the Feiman’s-Nemser’s (2001) notion of a professional learning continuum. Her continuum, as cited by (Liston, Whitcomb, & Borko, 2006) delineates the central tasks of learning to teach in the pre-service, induction and continued professional development phases (2006, p. 352). In spite of a history of this kind of thinking, which we claim is relevant to teacher education in the UK, Australia and the USA, little seems to have been achieved in re-thinking effective teacher education for this age.
Current Practices in Teacher Education

The question then becomes - how can beginning teachers know how to deal with all these personal, professional, social and cultural issues, as presented above by Liston et al (2006) if they do not know how to conduct themselves in the world with others, build relationships, manage conflict and communicate effectively? Where do they learn these skills, gain this knowledge and acquire this disposition? It is our belief that teacher education programs have important work to do in facilitating the growth in the personal development of future teachers.

In Australia there is still no national system of teacher education and teacher education is delivered in thirty-eight different institutions. Although the Deans of Education have an association representing Teacher Education, i.e. the ACDE, each institution implements teacher education differently because there is no national model of teacher education. In the USA the Alliance for Excellent Education 2004, as cited by Liston et al (2006) reveal that the estimated cost for teacher turnover in the USA is 2.6 billion dollars a year. One might also consider the current situation in the UK where, according to education recruiter ‘Select Education’, the number of non-qualified teachers working in UK schools has increased by almost 500% since 1997. These figures are based on figures recently released by the DfES (2007). According to the Victorian Institute of Teaching (VIT) there are 4000 unqualified persons teaching in Victorian school system (VIT, 2007). This data indicates that poor retention of teachers and the use of unqualified persons - because there are no qualified persons to use - are major issues in the educational systems of the Western world. It is also of interest to note that there are now different pathways being implemented in both the USA and the UK to address the issue of retention and the lack of sufficient qualified teachers. Both of these counties are engaged in rethinking how teacher education can be conducted, where it can be conducted and for what specific purpose. Both the ‘Teach USA’ program and the UK-based ‘Teach First’ program are co-ordinated and run in conjunction with universities. Their specific purpose is to prepare a cohort of teachers to do particular work for a specific period of time - such as teach in an urban area, which is hard to staff. This kind of thinking contrasts with the notion that a teacher, teaches for life.

Although such specific purpose programs are not yet operating in Australia it may not be long before they are - or will Australia, in light of the latest federal review of teacher education – “Top of the Class” (Canberra, 2007) become refocused on the need for a different, national and unified system of teacher education. The Australasian Forum of Teacher Registration and Accreditation Authorities (AFTRAA) and Teaching Australia are currently working towards a nationally accredited teacher education program, which will take some time to reach completion - and will significantly change the way that teacher education occurs in Australia. Perhaps in reconsidering teacher education the above mentioned institutions could take into account two essential things, which in the opinion of the authors will improve the quality of teacher education programs and in turn improve the quality of beginning teachers entering the profession. The first of these is a new emphasis placed on the importance of Glasser’s (1998) “Choice theory” as a changed psychology, or way of looking at themselves and the world in which they live. This change in approach to education is already successfully improving schools in both Ireland and the USA. Secondly, which directly links into the changed psychology, is the inclusion of personal development in all pre service teacher education programs. For significant change to occur within education in the western world, teacher education needs to change.

The potential benefits of Glasser’s work both in education and pre service teacher education

The authors believe that Glasser’s (1998) Choice theory affords a new lens through which to examine and support education, pre-service teacher education and in-service teacher education in Australia, the United Kingdom and the United States. Central to this new perspective is the importance that Glasser (1998) places on the development and maintenance of relationships - between individuals, between groups and between the state and its citizens. Glasser strongly
suggests that the fundamental problems, especially in the societies of developed countries, can be seen as issues of poorly developed and poorly maintained relationships which are focused on control by some individuals - over other individuals, over groups and over citizens. Negative behaviours by some individuals - towards other individuals, would seem to be one of the major causes of breakdown in relationships. Glasser (2005) contends that the negative behaviours, which break down relationships, are the seven deadly habits of: criticizing, blaming, complaining, nagging, threatening, punishing and rewarding (to control). The use of these habits, which he believes have no place in education, lead in a negative spiral downwards and to the breakdown of relationships at every level. However, the use of Glasser’s (2005) positive habits, in contrast to the negative habits, is referred to as the connecting habits. These are: caring, listening, supporting, contributing, encouraging, trusting and befriending. These connecting habits build relationships and are less controlling of others. They are more democratic and can be viewed as a process of journeying together with other people. This ‘journeying together’ becomes a learning experience with others and contrasts with the notion of learning as something being 'done to you' by someone else (being taught by a teacher) or, something ‘that you do’ to others (I teach others). For this to occur in education a major shift in power would be required at the teacher/learner level, the teacher/school level and the school/system level.

For this to occur teachers would need to understand student’s basic needs and be able to refocus their students to take responsibility for their own internally motivated behaviour. Often the challenge for teachers (teacher educators) is understanding which particular needs, at a point in time, are dominating the life of their/student. It is the basic needs of survival, love and belonging, freedom, power and fun - genetically coded, that builds an individuals “Quality World Picture” (QWP), which is “what we want the most” (Glasser, 1998). In an attempt to gain more effective control humans behave in the world to get the picture that they want at a particular time. People who feel happy about their QWP’s are in control of themselves and don’t see the need, or have the desire, to control others. The reverse is also true – those who do not feel happy about their QWP are not in control of themselves and seek to blame, criticize and control others. Guiding others in learning situations, or in counselling situations, rather than telling, directing, instructing and controlling others, is a way forward and potentially leads individuals to self evaluation, self monitoring and self control. A teacher education program focused on this notion of no external controls Glasser (2005) would appeal to Generation Y students and teachers.

It would seem to be very useful, especially in such relationship-orientated endeavours as education and teacher education that the connecting habits should become central principles upon which to operate. Furthermore if the connecting habits, which are essentially ways of behaving and working with other human beings, and ‘choice theory’ were embedded within pre-service teacher education then our total education system could be changed for the better. This new relational insight offered by Glasser, asks some fundamental questions of teachers - at the level of the individual, but it also challenges Universities engaged in pre service teacher education and indeed all providers of teacher education - at the level of the group and of government/state departments - at the level of the educational bureaucrat /politician.

Surely in education – a relationship focused service industry, the need should exist to prepare people to deal with and be able to work on developing good relationships with other people. Why is it then that personal development does not feature as an important component of teacher education? Without this kind of personal development how do pre service teachers learn how to communicate with others, manage, or deal with conflict resolution, work with others and know how to get along with others in the world. Indeed how do they learn to deal with the following, which we have identified as major requirements of beginning teachers?

When we examine what a modern teacher does we identify the following:

- Manages a classroom of individual students
• Facilitates the learning of students usually for a whole year
• Deals with the social welfare issues of the students and sometimes the parents
• Administers medication to the students and cares for their physical well being
• Engages in curriculum development with other staff
• Conducts information sessions for parents
• Conducts interviews with parents
• Is mandated to report harm
• Uses digital media and technologies to support learning
• Use digital means of record keeping and reporting
• Assesses students on an ongoing basis
• Plans both short term and long term
• Presents knowledge either in all curriculum areas or in specific content areas
• Works with students from a variety of social and ethic backgrounds
• Handles diversity- student disabilities
• Manages student behaviour problems /disruptive children/ADHD children etc

The above list presents only part of the picture of the professional work of a beginning teacher and suggests that new teachers require support in each of these areas. Others in the literature Zeichner (1983) and Feiman-Nemser (1990) have presented and represented the complexity of professional preparation of beginning teachers in the following way.

The Complexity of Teacher Education.

Zeichner (1983) and Feiman-Nemser (1990) identify five ‘orientations’ which they say shape the way that the professional preparation of teachers is viewed: the academic orientation; the practical orientation; the technical orientation; the personal orientation and the critical inquiry orientation.

Table 1, below, summarises this typology.

<table>
<thead>
<tr>
<th>Teacher skill</th>
<th>Teacher preparation</th>
<th>University’s role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic orientation</td>
<td>Emphasises teacher’s own subject knowledge expertise and quality of own education as a strength.</td>
<td>A sound liberal arts education is seen as essential preparation for teaching.</td>
</tr>
<tr>
<td>Practical orientation</td>
<td>Artistry and classroom technique are seen as important with the teacher as craftsperson.</td>
<td>Preparation is seen as apprenticeship.</td>
</tr>
<tr>
<td>Technical orientation</td>
<td>Linked to a behaviourist approach this orientation emphasises knowledge and behavioural skills.</td>
<td>Micro-teaching and the achievement of competences.</td>
</tr>
<tr>
<td>Personal orientation</td>
<td>Emphasises interpersonal relationships and sees learning to teach as a process of becoming.</td>
<td>Is enabled by offering a safe environment in which teachers are able to experiment and find personal strengths.</td>
</tr>
<tr>
<td>Critical inquiry orientation</td>
<td>Emphasises the teacher’s role in reducing social inequality and promoting democratic values.</td>
<td>Enables students to become aware of the social consequences of their actions and to become critical, reflective change-agents.</td>
</tr>
</tbody>
</table>

Calderhead and Shorrock (1997, p. 186) use this typology to identify five types of professional learning that are often new to pre service teachers.

- **Knowledge accumulation** – the learning of information vital to the task of teaching – about schools, children, the curriculum, procedures, strategies.
- **Performance learning** – learning to be a teacher.
- **Practical problem-solving** – learning to look for patterns and explanations and mentally rehearsing strategies in attempts to define and solve problems.
- **Learning about relationships** – negotiating and maintaining relationships in the classroom and with other teachers and parents.
- **Learning the process of assimilation** – drawing on diverse ranges of strategies, beliefs and information. Juggling different images of themselves as teachers. Searching for rationales and justifications in an attempt to develop a more coherent and comfortable understanding of teaching and of themselves as teacher.

Calderhead and Shorrock (1997) do not see these orientations as mutually exclusive and contend that “teacher education… is too complex to be characterized by anyone of these orientations alone and inevitably encapsulates aspects of them all” (p 186). Orientations to teacher education might be seen at an institutional level or at an individual level and with many individuals involved in the preparation of a beginning teacher and not least the pre service teachers themselves, the role and purpose of teacher education looks highly complex. So how do beginning teachers see their preparation and what are some of their thoughts about their future in education.

**Research on Beginning Teachers – what do they currently think of their experiences**

Recent research would indicate that something significant happens in the first three to five years in teachers’ careers to cause large numbers to want to leave the profession. A national survey of 1,351 beginning teachers conducted by the Australian Primary Principals Association in 2006 indicates that “although 93% of the survey respondents enjoy teaching, 24% indicate that they will be leaving the profession within 5 years” (p 8.)

The qualitative data in this report (APPA, 2007) indicates that beginning teachers are feeling high levels of pressure during their first years of teaching. These pressures arise as a result of several factors. “While 73% of our beginning teachers are teaching subjects that they studied at university, 27% of respondents indicate that they are teaching outside of their area of expertise. While more than 40% indicated that they take a proportion of their weekly teaching time outside of their area of expertise.” (Australian Primary Principals Association, 2006, p.29). Preparing and taking classes in unfamiliar subject areas places these teachers under additional pressure.

This same report also reveals that the respondents indicated a tension between “achieving a high quality of classroom teaching and progressing one’s career through taking on additional management and day to day administrative responsibilities. 26% indicated that they had taken on management roles within their first three years of teaching” (p 6).

These same respondents rated schools as being significantly more effective in preparing them for teaching than their universities. “Over 60% of respondents considered the preparation provided by schools to be either excellent or very good. By comparison, just over 40% of respondents indicated that their university was either excellent or very good at preparing them to teach effectively”.

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**Critical inquiry orientation**

**Emphasises the teacher’s role in reducing social inequality and promoting democratic values.**

**Enables students to become aware of the social consequences of their actions and to become critical, reflective change-agents.**

**To help students to draw on diverse strategies and personal beliefs to understand their role as a teacher.**
Ingvarson’s study (2004) with 1,147 Victorian beginning teachers in 2004 attracted more positive comments from these teachers in regard to the effectiveness of their pre-service education course. Close to 80% indicated that they would recommend their course to others and agreed that the course was either effective or very effective (p. 37).

The report on the ‘Experiences of Beginning Teachers’ by the Australian Primary Principals Association,(APPA, 2007, p. 2) reveals that schools are providing a high level of support with 89% indicating they receive good to excellent support from their colleagues. Rural and remote schools, however, are unable to provide sufficient incentives to attract these new teachers with 86% of survey respondents choosing to seek teaching appointments in urban areas.

Further to this a national survey of 1200 beginning teachers conducted by the Australian Education Union in early 2006 asked beginning teachers to identify their top four concerns in their first 3 years of teaching. These new teachers listed “workload (64%), behaviour management (60%), pay 56% and class sizes (55%)” (AEU, 2006). Forty five percent of the beginning teachers surveyed indicated that they would not be teaching in 10 years time. If this disposition becomes a reality it will in turn create yet another period of shortage in Australia - a similar shortage to that of many other countries in the developed world.

The issue of supply and demand

However, in times of shortage it is still vital that the ‘clients of a quality education’ that is the children/students, receive quality teaching, from a qualified, committed and dedicated teaching professional. It is perhaps timely that since early 2000, organizations representing the profession of teaching, such as the Victorian Institute of Teaching, the Queensland Board of Registration, the NSW Institute of Teaching etc have emerged in these and other states across Australia promoting the registration of all teachers and promoting the ‘profession’ of teaching. All states, excluding the ACT, now have some form of Teacher Registration Board. As a result of these non-government, yet regulatory boards emerging, people - without registration - are no longer permitted to teach in any school (government or non-government). These boards/ institutes seem to have emerged due to a world-wide need to lift the status of the teaching profession i.e. by formal recognition of credentialed professional teachers, the need to apply a set of standards applicable to all those involved in teaching and to provide a means of regulating the profession into the future (Victorian Institute of Teaching, 2003).

Dyson (2004), in tracing the journey of teacher education from the 1850s to the present day, highlighted many of the recurring dilemmas within teacher education and the frustrations of the educational community contributed to by the apparent lack of change in spite of countless reviews and recommendations - especially over the last 27 years. Perhaps it is now time to recognise the above binaries that have continued to cause division and move beyond them into a new era based on mutual collaboration, acceptance of diversity, effective dialogue and focus on what constitutes quality education. So what then constitutes a quality education? Certainly the research continues to highlight that what makes a real difference in the provision of a quality education is quality teachers.

Quality teachers make the difference.

Hatie (2003) reviewed a range of influences on student achievement and concluded from his study that “excellence in teaching is the single most powerful influence on student achievement… It is excellence in teachers that makes the greatest difference, not just teachers” (2003, p. 4) The findings of current research conducted for ACER by Rowe (2003) indicates that boys and girls in single sex schools achieve better results. 12%-15% higher Tertiary Entrance Ranking (TER) than those in co-ed schools. This research suggests that co-ed settings are limited in their capacity to accommodate the large differences in cognitive, social and developmental growth rates of boys and girls between 12 & 16. Rowe attributes the difference to the ‘two thirds rule’ That is, two thirds of a teacher’s
time in a co-ed setting (regardless of gender) is spent in managing behaviours. Rowe therefore makes a strong point that teacher quality, not sex segregation, was the most influential factor affecting student outcomes. Single sex settings accounted for 10% to 12% of the variance in outcomes while teacher quality accounted for 59%. Rowe’s research indicates that in the top schools in Melbourne students excel because of the quality of the teachers and the schools’ culture of learning (Rowe, 2007).

A quality teacher has been defined by Dyson (2004) as the following:

A quality teacher is self-efficacious and capable in their own right, is willing and able to take responsibility for the various tasks at hand, is able to manage their own life but is also able to recognise that they are not alone, is a moral person recognising the rights of others, is willing to put the needs of others, especially their students, before their own, when it is necessary to do so, and recognises that through collaboration and resource sharing the power of one becomes the power of many. Indeed a quality teacher is capable of changing one’s beliefs and everyday practices. A quality teacher is therefore a learner as well as a teacher and is primarily focused on facilitating quality learning in their students (2004, p. 223).

Such a person, as defined above by Dyson (2004) as a quality teacher, is someone very capable of thinking about their professional life and making the necessary adjusting educational judgements. Korthagen (2001) clearly identifies that the key to successful teacher education is reflection because it is situated in one’s own experience. One’s own ideas and concerns, emerging through reflection, provide good substance for further debate and discussion with others. Student teachers need time, in and out of schools, in order to reflect, relate and problem-solve their experiences as a student teacher. These are the events that become the most powerful in the lives of the students and can form the basis of what it is to be a teacher.

This of course entails a shift in the power balance within teacher education and presents a different way to conduct teacher education. No longer does the teacher educator, with the theory, alone know what is best. The experiences, or situations of learning - including professional placements - presented for further discussion and reflection, now become the shared experiences of the student teachers, rather than the experiences of the teacher educators, whose experiences, or cases might well only be designed to teach a particular theory that in turn the student should then be able implement in practice. As already referred to professional placements achieve much in enabling pre service teachers to come to terms with it is to be a teacher. In particular internships in the final year of PSTE programs are seen as an effective way to fine tune pre service teachers.

Internships in teacher education.

Ballantyne (1999) had this to say in describing the use of internships in Australian teacher education.

In Australia, the practice of internship, where universities and schools act as equal partners in the professional preparation of teachers, is now endorsed by major education policy makers. In contrast with the traditional practice teaching placements, intern programs are typically concentrated towards the end of pre-service preparation, allow students higher levels of autonomy and responsibility in the classroom and place teachers in the role of mentor rather than supervisor (Ballantyne, Green, Yarrow, & Millwater, 1999, p. 80).

Interns, recognised as ‘entry level teachers’ in a Professional Development School (PDS), (Darling-Hammond, 1994) rather than student teachers on a block placement seem to have a sense of belonging to the school. In their PDSs interns have the potential, opportunity and the resources to direct and negotiate their own teaching and learning tasks. Research has suggested that within this context of an internship learning may occur for both the intern and the mentors. In this, the intern is seen as the protégé of the mentors but the mentors are also learning. They are therefore, according to McNally & Martin, “co-learners within the school setting and collaborative learning takes place”
(1998, p. 39). Cairns (1995) also considered it more likely that interns will meet the requirements of what is deemed to be a ‘capable teacher’ when provided with the opportunities to assess and monitor their own needs within the PDS to which they are assigned. A capable teacher as defined by Cairns (2001) “is one who knows why they are taking actions, and is mindful of the way learners learn and his/her role in the process of developing them as capable teachers” (Cairns, 2001). It is also anticipated that the students will, in their own PDS, while supported by their mentor teachers, recognise the areas of personal and professional development that they require for further growth and to develop expertise (Dyson, 2004).

It would seem that an internship becomes a time of transition for student teachers and prepares them, perhaps more fully, for their forthcoming role as a beginning teacher. The graduating intern arriving at the point of transition at the end of their internship year, is prepared to take on whatever comes. They are self-efficacious and capable in their own right and as such the potential for higher retention would seem to be more likely.

Looking further a field at the UK

Furlong et al (2000) describe a period of rapid change in initial teacher education in the UK that was similar to that which was occurring in Australia during the 1980s and 1990s, with increasing central, governmental, control and policy changes which, in Furlong’s eyes “were... framed with the explicit aspiration of changing the nature of teacher professionalism” (p. 3). They identify two further policy imperatives: the first to “maintain an adequate supply of well-qualified applicants” and teachers and the second “to establish greater accountability for the content and quality of initial teacher education” (Furlong, 2000 p.3). Korthagen (2001) supports this view by making the point that pre-service teacher education in the UK was moved into, ‘school-based ‘training on the job’ because of a perceived failure of Higher Educational Institutions (HEIs) to prepare beginning teachers for the perceived reality of the classroom. This substantial shift, consisting of a return to an almost apprenticeship model of PSTE, that occurred in the UK in the early 1990’s, indicates some of the great dichotomies surrounding, and seemingly endemic, within teacher education in the western world for many years and reinforces the issues raised earlier about supply and demand, professionalism, training and the provision of quality education. As indicated by both Knight et al (1994) and Howe (1991) there was a plethora of reports being released in the late 80’s and early 90’s in Australia by Dawkins and by all the newly formed associations such as the Schools Council and the Australian Education Council (AEC). The common theme of all these reports was the “pursuit of quality” which Howe (1991) stated as “will be the hallmark of education policy in the 1990’s” (Howe, 1991, p. 57). She further relates in her paper to the National Workshop the three key elements necessary for the improvement in the quality of teaching: “teacher education, career and salary issues and classroom and school level practices” (Howe, 1991, p. 59) She also states that Australia was following, or was part of, a similar reform agenda that was also occurring in other countries around the western world. The essence of the reform was focused on the following:

there must be greater effort to attract people into the teaching profession who are able and suited to teaching; teacher education must be improved in both quality and outcomes and must pay greater attention to pedagogy and practical experience…These reforms are only achievable through the cooperative efforts of employers, higher education institutions, schools, teachers and governments and through the development of a unified teaching profession (Howe, 1991, p. 59).

So what is different today? Sixteen years have passed and the same statement could be made - and it would be just as relevant. Perhaps herein lies one of the most fundamental problems that has beset teacher education and in turn teaching throughout the last 150 years of formalized education in the western world. As Howe suggests there is the need for the recognition and the implementation of a ‘Profession’ at all levels of teaching. The major stakeholders as mentioned above, should in a
unified and cooperative manner be representing the ‘Profession of Teaching’ as a collective self-regulating organization, rather than a multitude of self-interest groups looking out for their own needs.

There has been a need in the western world to recruit more teachers. McGaw (2001) comments that problems in teacher supply / demand compared with rising numbers of school-aged children leads to two outcomes:

- A need to increase teacher supply by relaxing teacher preparation requirements, for example through ‘out of field’ or ‘unlicensed’ teachers;
- A need to reduce pupil demand by re-configuring teacher working patterns.

In the UK the numbers of school age pupils is now starting to fall and the numbers of teachers in preparation will fall commensurately, the numbers of teachers in schools has increased since 1997, and shows an increase in teacher supply through the relaxation of entry requirements. Research, published by recruitment agency ‘Select Education’ based on data produced by the Department for Education and Skills, showed that there was an increase of more than 32,000 teachers in state schools since 1997. Of these 3,000 were full-time and had qualified in the UK and another 13,000 were qualified part-time teachers, and the rest were unqualified. The claim, already made earlier, is that since 1997 there has been an increase of 500% in unqualified teachers teaching in the UK.

Re-thinking teacher education

As noted earlier national and international studies clearly indicate that the retention of beginning teachers has become an issue for schools and other employing bodies in recent years. Ramsey (2000), Ingersoll (2001) and McGaw (2002) have all highlighted the issues related to the increasing levels of retirements and resignations from schools here and overseas. Johnson (2004) in her text “Finders and Keepers: Helping New Teachers Survive and Thrive in Our Schools” has outlined the findings of a project that she carried out with her colleagues on the ‘Next Generation of Teachers’ in schools in Massachusetts. Drawing on data from interviews and surveys with 50 new teachers she indicates that these teachers approach their work with a significantly different attitude to those who commenced teaching in the 1960’s and 1970’s. Many of these teachers “approach teaching tentatively, conditionally, or as one of several in a series of careers they expect to have. Although some expected to make education a long term career, there were surprisingly few who envisioned a long-term commitment to classroom teaching” (Johnson, 2004, p. 28).

With this kind of thinking in mind a new way of conducting teacher education for, and in the twenty-first century might well need to be developed. Such a teacher education program would seek to meet the ongoing changing needs of a new generation of teachers, who may not make teaching their life long career. How do we meet the challenge now and in the future of Generation Y teachers?

Johnson’s (2004) study identified the emergence of two groups of beginning teachers. As cited by Hammerness (2006) outlines the nature of these two groups in her review of Johnson’s text. “One group, whom they term ‘explorers,’ were not sure about whether they would stay in teaching (although they might, given good conditions and appropriate rewards). The second, which Johnson et al, (2004) term ‘contributors,’ saw teaching as one way to make a contribution to society, but not the only way. The researchers emphasized that these groups of teachers did not consider teaching as a trivial pursuit but intended to teach with passion, commitment, and serious effort – but only for a short time” (2006, p. 431).

Some concluding comments

One of the essential attributes of a beginning teacher would seem to be the disposition of self-efficacy. Upon graduation from an institution of higher education pre service teachers need to know and understand the task and role of teaching. Together with this knowledge they need to be capable of reflection upon their practice so that they are tuned into the world in which they live and the world of the others around them. Pre-service teachers require space to acquire a knowledge of their
own self and the others they live and work with. As beginning teachers they don’t need to know first hand everything that they might eventually need but do need to know how to obtain what they might need to know.

Throughout their pre service and induction years new teachers require mentoring and support from experienced and enthusiastic mentors. The universities from which new teachers originate might also find it valuable to continue a relationship of mentoring and ongoing linkage.

If pre-service teacher education is moved into an apprenticeship model of school-based training, as distinct from internships, then the profession of education will never exist and pre service teachers will only be socialised by school staff into inappropriate practice only-based models of traditional education. If this occurs the status quo will be maintained and nothing will change. The problems will remain, including the poor retention of new teachers, and the opportunities for teachers and students to control their own lives and themselves in their environment, will never eventuate.

For PSTE to be effective in the twenty first century true partnerships are required between universities and schools. However, pre-service teachers need to have real choices in what they do and where they are placed. Consortiums of the stakeholders are essential and ongoing professional development should be included as a requirement for all involved. It is our firm belief that pre service teacher education in the developed world should remain within universities, operated in conjunction with and in partnership with schools and educational authorities.

As presented in the discussion above a teacher education program focused on the notion of ‘no external control’ Glasser (2005) has the potential to appeal to Generation Y students and teachers. Choice Theory (Glasser, 1998) is focused on maintaining positive relationships through interpersonal skills and effective communication. Beginning teachers who recognise that they are in control of their own lives and their own learning, do not seek to control the lives of others and recognise that they are the ones who choose the way they live and the careers they embrace. This approach to thinking about education and teacher education opens up a new landscape and enables a new perspective to be gained. One that recognises the binaries that caused division and move beyond them into a new era based on mutual collaboration, acceptance of diversity, effective dialogue and refocused on quality education.
References


Muslim Children and School Choice in Western Australia

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ABSTRACT
Research indicates “the majority of Muslim students in Australia, totalling 90 per cent of those of school age, are enrolled in government schools” (Clyne, 2001, p. 117). A research project – done as part fulfilment of the requirements for the degree of Doctor of Education at Edith Cowan university - studies this trend by consulting statistics available in this respect mainly ABS’s statistics. This paper offers some of that research’s initial findings. In order to provide a comprehensive understanding of the issue, this paper sheds light on the following subjects: the history of Muslims in Australia – past and present; educating Muslim children and Islamic schooling in Australia. The paper investigates the factors impacting on parental choice of schooling for Muslim children. It investigates the aspects of school culture that may appeal to Muslim parents in non-Muslim schools. It also investigates the ways non-Muslim schools meet Muslim parental expectations for education of their children. For the purpose of this investigation a survey is designed to include a representative sample of the Australian Muslims in Western Australia. The research ends with a summary of the findings and some future recommendations.

Introduction
Currently there are more than 29 Muslim schools across Australia. Those schools are meant to be an alternative for public schools. A key objective of those schools is “to provide education for children to enable them to function effectively in Australian life while remaining faithful to their religion, Islam” (Saeed, 2003, p. 155). Muslim children in public schools are exposed to a number of influences that affect their Islamic identity. As a result “Muslim families worry that their children may lose their religious identity or do poorly in public schools where their dress, holidays and religious taboos can make them curiosities” (Sachs, 1998, p. 5). Islamic schools, therefore, offer a solution to preserve the identity of Muslim children. Although those Muslim schools are considered as a voice of identity to the community, many Muslim parents believe that public schools better help their children to adapt to the Australian educational system and integrate quickly in the society. Research indicates that 90 percent of the Muslim children who are of school age in Australia are enrolled in non-Muslim schools. This paper studies this trend by consulting relevant statistics and literature. It seeks to investigate and identify the factors impacting on parental choice of schooling for their Muslim children.

The findings of this research will be made available for both Australian Muslim schools and non-Muslim schools. The findings will benefit non-Muslim schools to better understand the cultural and educational needs of the Muslim children. Muslim schools will benefit from the
findings to overcome any areas of concern that the research may identify. The findings may also help to inform new policies in Muslim schools if they wish to expand and increase their student intake. However, to start with, it is important to offer a review of the Australian Muslim Community and their size. Then I shall review Islamic schooling in Australia and the total number of Muslim Children enrolled in those schools.

Background

Who are the Australian Muslims?

Australian Muslims have a long history in Australia. “Some of Australia’s earliest visitors, pre-dating European settlement, were Muslims from the east Indonesian archipelago” (Department of Foreign Affairs, 2004, P. 3). They were followed by the Afghan cameleers who came to Western Australia as part of European settlement. Cleland (2001) states that “it was the Afghans and their camels who made it possible to gain access to the vast interior of the Australian continent. They further proved themselves during the construction of the Overland Telegraph Line in 1870-72” (p. 17). The first mosque built in Australia was in “Marree in northern South Australia in 1861” (Department of Foreign Affairs, 2004, P. 3). Later on, the growth of the Muslim community was fostered by a number of factors such as “multiculturalism and the abolition of the White Australia Policy, the influx of Muslim students, the non-discriminatory immigration policy which brought Muslims from a variety of backgrounds...” (Said, 2003, pp. 209 - 210). The real influx of Muslims took place “in the wake of World War Two. Between 1947 and 1971 the Muslim population increased from 2 704 to 22 311” (Department of Foreign Affairs, 2004, p. 3). According to the same source, another major wave of Muslim migrants arrived in Australia “after the outbreak of civil war in Lebanon in 1975” (p. 3)

Recently there are growing numbers of Muslim migrants / refugees coming to Australia with their families and children from every corner of the world. The official data obtained from the 2001 Australian Census reveals “a remarkable rate of growth in Australia’s Muslim population. The Census listed 281, 576 Australian Muslims, an increase of some 40 per cent in five years” (Department of Foreign Affairs, 2004, p. 1). According to the 2001 census, the number of Muslims living in Western Australia is 19 456. Many Muslim organisations and government bodies believe that those figures on Muslim statistics are underestimated and conservative. Some recent estimates suggest that “Australian Muslims now number more than 300 000” (Department of Foreign Affairs, 2004, p. 1). An article by Brisbane Institute on ‘Muslims in Australia’ indicates that “the Muslim population comprised one per cent and 1.5 per cent of the total Australian population in 1996 and 2001 respectively” (The Brisbane Institute, 2003, p. 1).

Currently, Muslims are represented by state/territory councils. Many of those councils are associated at the national level into a federation which is known as the Australian Federation of Islamic Councils (AFIC) to officially represent the Australian Muslim population.

Educating Muslim Children in Australia

Australian Muslim children vary widely in their levels of education. The questions of how and where to educate them are the most urgent questions all parents ask. Their main concern is to teach their children the Australian standard curriculum and at the same time to maintain their religious and cultural identity. Many of them are not sure if Muslim schools or public
schools are the right choice for their children? Many Muslim parents express concerns regarding the academic standard of Muslim schools. Clyne (2001) states in this respect that the Muslim community does not have a coordinating body “to communicate effectively with Australian education authorities and to undertake the coordination, curriculum development and professional development necessary in Islamic schools” (p.118). Based on ABS 1996 Census, Clyne (2001) states “there is a considerable potential demand for education within the Muslim community with at least 60 000 children within the compulsory years of schooling (5-15 years)” (pp. 118-119). He further says that according to the principles of Islamic schools “approximately 10 percent of these children are enrolled in Islamic schools” (p 119). This means 90% of Muslim school children are enrolled in non-Muslim schools. This issue has many implications and needs to be investigated.

**Islamic Schooling in Australia:**

Independent Muslim schools are established to achieve a number of objectives. According to Omar and Allen (1996) those schools “teach the normal curriculum, as designated by each State education department, however, they include classes on Islam and Arabic Language” (p. 44). Some of those schools are represented by the Australian Council for Islamic Education in Schools (ACIES). The mission of Muslim schools is based on the Philosophy of Islamic Education which seeks to help Muslim children learn and practice their Islamic values and morals in a non-Muslim environment. Generally speaking, the objectives of the Australian Muslim schools is to develop awareness of their children’s role in their local communities and the society at large, teach their children different topics from an Islamic perspective and prepare them for life in a multicultural and multiracial society.

At the moment, the student enrolments in most of the Muslim schools are limited and statistically insignificant. Saeed (2003) states in this respect: “given that the number of students in Islamic schools is around 12 000 to 15 000, one could say that Islamic schools are serving a relatively small percentage of the Muslim children in Australia” (p. 151).

**Muslim Parents and School Choice:**

Many parents believe that school selection plays an important role in the success of their children. Therefore, they try their best to select a school capable of fulfilling their aspirations for their children. The selection process depends on a number of factors and influences such as:

> Our own experience of schooling, good or bad; our personal educational philosophy; family tradition and expectation; friends’ opinions; religion; location and convenience; our own financial situation and bureaucratic decisions affecting choice, such as zoning (Laird, Maloney & Moody, 1986, p. 3).

It is a well-known fact that “in school what works for one child may not work for another” (Wagner, 1998, p. 2). This justifies parents’ efforts to find a suitable school that they feel is best for their children. Parents’ choice can also be justified with a number of reasons. Those reasons reflect parents’ “present class position and aspirations” (Praetz, 1974, p. 27). Further, according to Angus and Olney (1998) “choice of schooling is often construed as an application of market forces” (p.13). As a result, public and private schools compete for
students by allocating additional resources and adopting curriculum policies to facilitate the selection process. Walford (1994) believes that such “competition between schools will lead to improvements” (p. 5). At the end this will result in schools becoming more responsive to family needs and community expectations. However, there is evidence that “where families are given school choice – they prefer enrolment at schools that are the same racial and socio-economic group as their own” (Levin & Belfield, 2003, p. 37). Unfortunately, research indicates that this is not the case with Muslim schools. This leads us to ask the following questions: Why are particular schools chosen? And what are the reasons behind choices?

**Emerging Issues and Research Questions:**

This paper focuses on the Western Australian context, within the broader national context. Statistics and research indicate that existing Muslim schools are serving a small percentage of the Muslim children in Australia (10%). Statistics suggest that the majority of Muslim students go to public schools despite the fact that more than 29 Muslim schools are functioning in Australia. The Independent Schools Council of Australia (2006) confirms the above percentage. It mentions that the total number of Muslim children enrolled in Muslim schools in 2006 is “14406”, and the number of Muslim schools is “29” (p. 2).

In problematising this particular issue there appears to be an apparent gap between existing Muslim schools and a broad sector of the Australian Muslim community. Despite the long struggle and efforts to establish those existing Muslim schools only a small number of the Muslim children are enrolled in them. This paper investigates this issue in order to understand this trend.

Based on statistics, literature review and further readings in this context, two pressing questions emerge: What aspects of school culture appeal to Muslim parents in non-Muslim schools? In what ways do non-Muslim schools meet Muslim parental expectations for education of their children?

**Methodology, Sampling and Data Collection Instrument:**

The quantitative methodology is adopted for the purpose of this research. A survey is designed to include a representative sample of the Australian Muslims in Perth, WA. The collected data is mainly about factors that influence the choice of school such as school location, discipline, academic standard, friends’ opinions, family expectations, and affordability of fees. The data also covers other aspects such as curriculum, behaviour, facilities, safety, school culture and reputation.

To produce a representative sample of the Australian Muslim community in WA, the “practical necessity requires the application of some type of sampling procedure” (Hillway, 1969, p. 59). Therefore, a sample of 98 volunteers is included in this study. All of them are parents of Muslim children enrolled in non-Muslim schools in Perth WA. The survey is distributed in all Perth's mosques, Islamic centres and prayer halls where all Muslims meet - males and females from different ethnic backgrounds. To insure that my sample includes religious and non-religious parents, the survey is distributed in social events where Muslims meet together and in public schools as well where many Muslim children are enrolled. This ensures that the selected sample is random and representative of the whole community. My understanding of sampling is based on Burn’s (2000) concept of this issue which “involves
taking a portion of the population, making observations on this smaller group and then generalising the findings to the large population” (p. 82).

**Data Collection Instrument:**

My data collection instrument is a survey with nine variables to provide information on the participants’ backgrounds. Its introduction provides enough information to the respondents “to elicit their cooperation” (Gaddis, 1998, p. 2). The survey incorporates a five point Likert scale. It requires parents to indicate their agreement or disagreement to each statement along a five-point scale ranging from ‘strongly agree’ to ‘strongly disagree’. The aim is “to obtain information which can be analysed and patterns extracted and comparisons made” (Bell, 1999, p. 13).

**Survey Analysis**

Different methods are used to present responses to different questions in the survey data such as charts, graphs and diagrams. A data matrix is created for the purpose of summarising 98 responses to survey questions that incorporate a five point Likert scale. The matrix includes data to nine variables for the 98 respondents. EXCEL is then used to explore the data matrix. Appropriate tables and graphs/diagrams are created to summarise my analysis of the survey data. The survey is made into three parts. Part one includes nine variables to provide more information on the respondents. A list of fifteen factors that may influence parental choice of schooling for their children is made in part two. Survey statements in part three are divided into seven categories: curriculum & academic standard, behaviour, safety, facilities and services, school reputation, culture and policies.

**Part One: Respondents and Variables**

The number of respondents to the survey is 98.

- 56 males and 40 females;
- 42 of them are full-time employed, 19 part-time, 10 self employed and 27 unemployed;
- 53 respondents have university education, 36 have secondary education and 9 have primary education.
- 24 of the respondents live within 5 km from a Muslim school, 38 live further than the range of 5 km and 36 have no available Muslim school around their residence.
- 86 of the respondents are born overseas and 12 are born in Australia.
- The respondents belong to 24 different nationalities.
- 81 respondents have their children enrolled in public schools, 10 of them have their children enrolled in independent schools and 7 of them have their children enrolled in Catholic schools.
- 27 respondents have their children enrolled in both high and primary schools, 32 of them have their children enrolled in high schools only and 39 of them have their children enrolled in primary schools only.

The following variables are included in the survey: gender, employment, education, residence, ethnicity (Aussie or overseas), nationality if born overseas, number of children
attending school, type of school they are enrolled in (public, Catholic, independent or Muslim) and level of school (primary, high or both).

**Part Two: Factors That Influence Parental Choice of Schooling for Their Children**

There are 15 items listed in the survey as possible factors that may influence choice of school. The decision to include those items is informed by the literature review that is done in this respect and by my professional experience as a Muslim teacher working in a Muslim school and has a direct contact with the Muslim community. Table 1 – Appendix A shows the respondents’ answers to those factors in numbers and percentages. Based on the respondents’ answers, the fifteen listed factors can be ordered according to their importance to the respondents as follows:

**Group A: Very Important**

1. My child’s needs  
2. Academic standard  
3. Organization and planning

**Group B: Important**

4. Curriculum / variety of subjects  
5. Facilities and services  
6. School reputation  
7. Friendly environment  
8. Discipline / behaviour  
9. High expectations  
10. Skilful administration  
11. School Location and convenience

**Group C: Less Important**

12. Affordability of fees  
13. Religious education  
14. Friends’ opinions

**Group D: Not Important**

15. Single sex classes

**Part Three: School Curriculum, Behaviour, Safety, Facilities & Services, Reputation & Culture and School Policies**

**School Curriculum**

Seven statements on curriculum issues are included in the survey to investigate the respondents’ opinions regarding them:  
1. The school offers opportunities for gifted students  
2. The school has an extracurricular activities program  
3. The school has an effective English Language acquisition program for children who need it
4. The school accommodates children with special learning needs
5. School homework policy matches with your expectations
6. Size of school classes is reasonable
7. The school achieves good results on standardised tests

The majority of the respondents (64.4%) agreed/strongly agreed to the sixth statement above. There is an issue of concern that the answers of a high percentage of the participants to statements 1, 3 & 4 above are ‘uncertain’. Their ‘uncertain’ answers represent the following percentages of the total answers: 24.5%, 22.5% and 25.5% respectively. Such answers suggest that those parents are not confident enough about their choice of school.

Responses to the seventh statement ‘The school achieves good results on standardised tests’ may suggest that Muslim parents enquire about the school results in standard tests before they decide to enrol their children in a particular school especially if it is a high school. The academic standard of the school is a top priority issue for the parents and the success of their children means a lot to them. “When children are unsuccessful, or do not come up to the expectations of the parents, parents see themselves as failures, and feel that the sacrifice of migration has not had many rewards.”(Hartley & Mass, 1987, p. 58).

Behaviour

There are two statements on behaviour issues in the survey:
1. The school adequately addresses behaviour problems
2. School teachers are fair in their responses to students who misbehave

The first statement attracted the agreement of 80.6% of the total respondents, whereas the second statement attracted the agreement of 82.7% of the participants. Only a percentage of 6.1% and 5.1% respectively of the respondents disagreed to these two statements.

School and Safety Issues:

The safety issue is addressed in the survey in the following three statements:
1. The school has an adequate drug, smoking and alcohol prevention program
2. The school adequately handles violence, harassment and abusive behaviour
3. The school has a plan for emergencies to ensure children’s safety

The percentages of the participants who agreed to these three statements are 69.3%, %67.3% and 80.6% respectively. There are strong agreements to these statements: 20.4%, 21.4% and 26.5% respectively. These figures suggest that the safety issue is a concern for those parents that schools should take into consideration.

Facilities / Services Available in School

Five statements in the survey address this issue:
1. The school has a good library to do research and check out books
2. Students have access to computers and to the Internet in the classroom and library
3. The school monitors the use of the Internet
4. The school has an auditorium or a large hall for assemblies
5. Counselling services are available to students
The percentages of the participants who agreed to these five statements are 88.7%, 86.7%, 69.3%, 74.4% and 60.2% respectively. There are strong agreements to statements 1, 2, 3 & 4 - 30.6%, 23.4%, 24.4%, and 19.3% respectively. However, 22.4% of the respondents strongly disagreed to the last statement on ‘counselling’ and 16.3% are uncertain about it.

**School’s Culture & Reputation**

There are eight statements in the survey to address the general school culture and its reputation:
1. I am happy with the school’s dress code
2. The school secretary/administrative staff are helpful and friendly
3. The school is orderly and neat
4. The school communicates with students and parents on a regular basis
5. Students appear to be courteous, disciplined and have school spirit
6. Teachers appear to be helpful and friendly
7. The school welcomes parents’ inquiries
8. All students are treated on an equal basis without discrimination

The majority of the respondents agreed to the second through to the eighth statements (89.8%, 90.8%, 80.6%, 72.4%, 90.8%, 93.9% and 78.6% respectively). The participants who strongly agreed to those statements are represented in the following percentages: 34.7%, 29.6%, 25.5%, 20.4%, 36.7%, 37.8% and 37.8% respectively.

It is unusual that the total of 67.3% Agreed / strongly agreed to the first statement “I am happy with the school’s dress code” especially when it comes to the girls uniform. Maybe the majority of those who are happy with the school uniform have boys and not girls in those non-Muslim schools. This issue needs to be further investigated.

**School Policies**

There are four statements in the survey addressing the school policy issues:
1. School policy addresses school absences and encourages daily attendance.
2. The school personnel call parents when students are absent
3. The school has a parent-teacher organisation
4. Parents are involved in the development of school polices

Strong agreements are made regarding these four statements: 28.6%, 24.5%, 20.4% and 19.4% respectively. The total agreements represent 85.7%, 75.5%, 76.5% and 65.3% respectively. These percentages indicate the participants consider it very important to see these things in schools such as ‘parent-teacher organisation’ which the majority of Muslim schools lack or if exists is on paper only.

**Findings**

1. The survey analysis reveals minor / insignificant differences between the males and females answers. Choosing a school for the children is normally a family decision and not an individual issue. Therefore, whether the survey is answered by a male or a female, the answers reflect both parents’ points of view.

2. The respondents strongly agree the following factors affect school choice:
1. Academic standard
2. My child’s needs
3. Discipline / behaviour
4. Organization and planning
5. Skilful administration
6. School reputation
7. Curriculum / variety of subjects
8. Facilities and services

3. The following are the least important factors to affect school choice according to the participants’ answers:
1. Single sex classes
2. Religious education
3. Friends’ opinions
4. Affordability of fees
5. Availability of counselling services
6. The school’s dress code

Unexpectedly, the least important factor is the “Single sex classes”. Although it is part of the Muslims tradition and culture to have single sex classes but participants’ answers indicate that this is a minor factor to them. A high percentage of the participants ‘61.3%’ are uncertain or disagree to this factor.

4. Table 2 – Appendix B indicates that more than two thirds of the participants agree or strongly agree to the statements in the table. The highlighted statements (14, 15 & 18) refer to ‘factors that influence school choice’. The remaining statements in the table refer to the school itself such as its culture, policies, staff, reputation and facilities which are prime concerns for all parents. If schools wish to compete for Muslim students, I believe the data in this table should be taken into consideration.

5. A big number of the respondents (72 out of 98) agreed / strongly agreed to “School Location and Convenience” as a factor that influences school choice – see graph 1 below. Muslim schools are further than 5 km to 38 of the participants; 36 participants have no Muslim school close to their residence and 24 participants have a Muslim school within 5 km of their residents. This means that we have 72 participants live further than 5km from a Muslim school or have no Muslim school available around their residence. Those 72 participants consider school location an important factor in school choice. This implies that some of those respondents may choose to send their children to Muslim schools if their location is convenient and within 5 km from the respondents’ residence. I believe this issue needs further investigation.

Graph 4: School Location & Convenience
6. The percentage of 39.7% of the respondents who disagreed / uncertain to “Counselling services are available to students” does not necessarily mean that counselling services are not available in their children’s schools. This percentage may suggest that they are not interested in the school counselling services because they may prefer a different approach to counselling that is based on their Islamic belief and culture.

7. The following issues need to be further investigated in order to fully understand their effect on parents’ choice to enrol their children in non-Muslim schools:
   - The effect of Muslim parents’ class position on school choice
   - Parents’ aspirations for children and school choice
   - Parent’s religious background and school choice
   - Religious education and school choice
   - Single sex classes and school choice
   - School choice and ‘special need students’
   - The importance of having a parent - teacher organisation in school
   - Involvement of parents in school development and policy planning
   - Muslim female students and school’s dress code
   - Opportunities for gifted students and school choice
   - Counselling services and school choice

Conclusion

An attempt is made to investigate the aspects of school culture that appeal to Muslim parents in non-Muslim schools and the ways non-Muslim schools meet Muslim parental expectations for education of their children. Accordingly a number of factors impacting on parental choice of schooling for Muslim children are identified. Those identified factors help to understand why Muslim parents choose non-Muslim schools for their children’s education. The findings may help schools to review their policies and performance related to teaching Muslim children. The findings may also inform new policies in Muslim and non-Muslim schools. The outcomes of this research will enable non-Muslim schools to better understand the cultural, religious and educational needs of Muslim children.

It is hoped that this study will help the Australian Muslim parents to clarify their choice of schooling for their children. They will have the chance to better understand the advantages / disadvantages of both government and Muslim schools. Accordingly, they will be more focused and more confident in their choice of schools in a multicultural / multiracial society.
References:


Appendix A

Table 1: Factors influence parental choice of schooling for their children

<table>
<thead>
<tr>
<th>Statements</th>
<th>AGREE/SAGREE</th>
<th>DISAGRE/SDISAGREE</th>
<th>UNCERT</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. School Location and convenience</td>
<td>72 (73.5%)</td>
<td>22 (22.4%)</td>
<td>04 (04.1%)</td>
<td>98</td>
</tr>
<tr>
<td>2. Discipline / behaviour</td>
<td>74 (75.5%)</td>
<td>11 (11.2%)</td>
<td>13 (13.3%)</td>
<td>98</td>
</tr>
<tr>
<td>3. Academic standard</td>
<td>80 (81.6%)</td>
<td>09 (09.2%)</td>
<td>09 (09.2%)</td>
<td>98</td>
</tr>
<tr>
<td>4. Friends’ opinions</td>
<td>51 (52.1%)</td>
<td>31 (31.6%)</td>
<td>16 (16.3%)</td>
<td>98</td>
</tr>
<tr>
<td>5. Single sex classes</td>
<td>38 (38.8%)</td>
<td>43 (43.9%)</td>
<td>17 (17.3%)</td>
<td>98</td>
</tr>
<tr>
<td>6. Friendly environment</td>
<td>74 (75.5%)</td>
<td>09 (09.2%)</td>
<td>15 (15.3%)</td>
<td>98</td>
</tr>
<tr>
<td>7. High expectations</td>
<td>73 (74.5%)</td>
<td>07 (07.1%)</td>
<td>18 (18.4%)</td>
<td>98</td>
</tr>
<tr>
<td>8. Affordability of fees</td>
<td>58 (59.2%)</td>
<td>24 (24.5%)</td>
<td>16 (16.3%)</td>
<td>98</td>
</tr>
<tr>
<td>9. Facilities and services</td>
<td>76 (77.6%)</td>
<td>09 (09.2%)</td>
<td>13 (13.3%)</td>
<td>98</td>
</tr>
<tr>
<td>10. Curriculum / variety of subjects</td>
<td>78 (79.6%)</td>
<td>10 (10.2%)</td>
<td>10 (10.2%)</td>
<td>98</td>
</tr>
<tr>
<td>11. Organization and planning</td>
<td>79 (80.6%)</td>
<td>06 (6.1%)</td>
<td>13 (13.3%)</td>
<td>98</td>
</tr>
<tr>
<td>12. Skilful administration</td>
<td>72 (73.5%)</td>
<td>11 (11.2%)</td>
<td>15 (15.3%)</td>
<td>98</td>
</tr>
<tr>
<td>13. Religious education</td>
<td>55 (56.1%)</td>
<td>25 (25.5%)</td>
<td>18 (15.4%)</td>
<td>98</td>
</tr>
<tr>
<td>14. School reputation</td>
<td>75 (76.5%)</td>
<td>06 (06.1%)</td>
<td>17 (17.3%)</td>
<td>98</td>
</tr>
<tr>
<td>15. My child’s needs</td>
<td>82 (83.7%)</td>
<td>08 (08.2%)</td>
<td>08 (08.2%)</td>
<td>98</td>
</tr>
</tbody>
</table>
## Appendix B

### Table 2: Statements on school culture, reputation & facilities

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>AGREE</th>
<th>SAGREE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The school welcomes parents' inquiries</td>
<td>55</td>
<td>37</td>
<td>92</td>
</tr>
<tr>
<td>2. The school is orderly and neat</td>
<td>60</td>
<td>29</td>
<td>89</td>
</tr>
<tr>
<td>3. Teachers appear to be helpful and friendly</td>
<td>53</td>
<td>36</td>
<td>89</td>
</tr>
<tr>
<td>4. The school secretary/administrative staff are helpful and friendly</td>
<td>54</td>
<td>34</td>
<td>88</td>
</tr>
<tr>
<td>5. The school has a good library to do research and check out books</td>
<td>57</td>
<td>30</td>
<td>87</td>
</tr>
<tr>
<td>6. Students have access to computers and to the Internet in the</td>
<td>62</td>
<td>23</td>
<td>85</td>
</tr>
<tr>
<td>classroom and library</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. School policy addresses school absences and encourages daily</td>
<td>56</td>
<td>28</td>
<td>84</td>
</tr>
<tr>
<td>attendance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. The school communicates with students and parents on a regular basis</td>
<td>54</td>
<td>25</td>
<td>79</td>
</tr>
<tr>
<td>9. The school adequately addresses behaviour problems</td>
<td>56</td>
<td>23</td>
<td>79</td>
</tr>
<tr>
<td>10. The school has a plan for emergencies to ensure children’s safety</td>
<td>53</td>
<td>26</td>
<td>79</td>
</tr>
<tr>
<td>11. All students are treated on an equal basis without discrimination</td>
<td>40</td>
<td>37</td>
<td>77</td>
</tr>
<tr>
<td>12. The school has a parent-teacher organisation</td>
<td>55</td>
<td>20</td>
<td>77</td>
</tr>
<tr>
<td>13. The school achieves good results on standardised tests</td>
<td>55</td>
<td>22</td>
<td>77</td>
</tr>
<tr>
<td>14. School reputation</td>
<td>49</td>
<td>26</td>
<td>75</td>
</tr>
<tr>
<td>15. Discipline / behaviour</td>
<td>41</td>
<td>33</td>
<td>74</td>
</tr>
<tr>
<td>16. The school personnel call parents when students are absent</td>
<td>50</td>
<td>24</td>
<td>74</td>
</tr>
<tr>
<td>17. The school has an auditorium or a large hall for assemblies</td>
<td>54</td>
<td>19</td>
<td>73</td>
</tr>
<tr>
<td>18. School Location and convenience</td>
<td>57</td>
<td>15</td>
<td>72</td>
</tr>
<tr>
<td>19. Parents are involved in the development of school policies</td>
<td>50</td>
<td>32</td>
<td>72</td>
</tr>
<tr>
<td>20. Students appear to be courteous, disciplined and have school spirit</td>
<td>51</td>
<td>20</td>
<td>71</td>
</tr>
</tbody>
</table>
Beyond Pre-service Teacher Education:  
What Happens When New Teachers Meet ICT in Primary Classrooms?

Anne Elliot & Dr Mark Brown  
College of Education, Massey University

Abstract
A large body of literature exists on different models and approaches of integrating information and communication technology (ICT) within the pre-service period of teacher education. Many studies describe efforts by colleges of education to prepare pre-service teachers to use ICT during the practicum as well as for their own learning and professional use. However, scant attention has been paid to the school context in which new teachers will continue their professional learning in ICT as they work towards attaining full teacher registration. This paper presents a snapshot of two beginning teachers’ experiences in very different school contexts. It shows that when the schools’ goals for ICT use are clearly articulated, support and resources are available to attain these goals, and there is timely access to mentoring, beginning teachers are more likely to grow professionally regardless of their pre-service preparation.

Introduction

Over the last decade, numerous research studies, reports and surveys have been published discussing ICT-related issues in pre-service teacher education. Although these have largely described international contexts (e.g., Albee, 2003; Goodwin & Horowitz, 2002; Hargrave & Hsu, 2000; Office of Technology Assessment, 1995; Panel on Educational Technology, 1997; Willis, Austin, & Willis, 1994; Zhao, 2003), recently a number of New Zealand studies have begun to address the role of ICT in teacher education (e.g., Brown & Vossler, 2000; Elliot, 2004; Hunt, 2000; Shaw, 2004). These studies typically discuss what pre-service teacher education students should know about ICT; their prior ICT skills and knowledge; advocacy for ICT standards for teachers; the importance of pedagogical knowledge in ICT use; and how best to prepare pre-service students in ICT.

In New Zealand, this overwhelming interest in ICT in pre-service teacher education has not carried over into the continuing phase of teacher development, when new graduates begin their teaching careers. Indeed, even in the United States there is a dearth of research on this issue (Clausen, 2007). The gap in the literature is perhaps not surprising given the hyperbole and ambiguous place ICT inhabits not only in pre-service teacher education but also in many schools. Nevertheless, there is ongoing debate over the different imperatives—vocational, societal and pedagogical—for using ICT in schools (Wellington, 2005) and beginning teachers’ work needs to be understood in this wider context.
The challenges beginning teachers face in their first years of teaching are well documented in the literature (e.g., Feiman-Nemser, 2003; Veenman, 1984). One aspect that influences new teachers’ continued growth and development is the workplace context (Liston, Whitcomb, & Borko, 2006). For example, the school’s culture, and the competing subcultures that contribute to this culture, determines whether beginning teachers receive adequate support and whether the guidance and advice programme is responsive to their needs. In the so-called Digital Age it would be reasonable for schools to assume that beginning teachers have well-developed ICT skills and understandings; however, we know from the aforementioned pre-service literature that teacher educators struggle to provide programmes that adequately prepare teachers in ICT.

This paper describes two beginning teachers’ experiences with ICT in their first year of teaching. In particular, the paper illustrates in narrative form the impact of the school context in which they found themselves on their development in using ICT for teaching and learning. It does so by first presenting the profiles of the two cases and their individual circumstances based on informant interviews. Second, it discusses what these different circumstances mean for their further development in using ICT for teaching and learning. Third, the paper suggests possible trajectories for the two teachers and concludes with a set of tentative recommendations for supporting beginning teachers’ development and professional growth in using ICT for teaching and learning.

**Background to the Study**

The two case studies described in this paper are part of a larger qualitative study of beginning teachers. This larger study involves eight teachers and is framed around a research objective of investigating beginning teachers’ experiences and perceptions of ICT in the first year of teaching. The study has yet to be completed and thus the research reported in this paper is still a work in progress.

**The participants**

The two beginning teachers were self-selected for participation and were both graduates from the same institution but from different pre-service primary programmes. The primary criterion for inclusion in the sample was that they had a teaching appointment at the primary level for the school year following their graduation, the year in which the research was carried out. To maximise the variation in the sample, the group composition was further assessed against the following criteria: (a) gender, (b) geographical location, (c) whether urban or rural school, (d) decile (socio-economic) rating of the school of employment and (e) whether participants had taken subject courses in ICT during their pre-service education. From this assessment, working with the cooperation of the institution, eight participants were selected representing the greatest variation.

**Procedure**

Data were gathered in three ways: (a) a background questionnaire to gain demographic and biographical information, (b) a semi-structured interview and (c) a photo interview based on photographs taken by the participants illustrating ICT use in their classroom. The audio taped interviews were transcribed and the data analysed...
qualitatively through first developing an organising system, followed by a systematic process of building themes inductively. A slice of the findings from two cases is presented below in narrative form.

A Slice from Two Case Studies

The two participants selected from the larger study are Arnold and Pam. These pseudonyms are used to protect the teachers’ real identity. For the purpose of this paper the two schools involved in the study will be referred to as School A and School B. The schools are located in different cities and provide quite different contexts for each beginning teachers’ further development in using ICT for teaching and learning. Themes that describe each participant’s context of work were selected for this paper from the larger study.

Arnold

Arnold is in his early twenties and has a strong interest in sports and physical education. He had not used a computer before he began his pre-service teacher education. He slipped through the institution’s computer literacy test because he was absent on the day of the test. He eventually learnt to use a computer from his peers in the institution’s computer lab out of necessity, because his lecturers insisted his assignments were word-processed. He also used PowerPoint and both still digital images and video cameras, including editing a brief movie, during his pre-service training. Arnold explains that he was ‘anti’ ICT during his pre-service education because his interest was in sport. Reflecting back, he wishes now he had known then how much he was going to use new digital technology.

On practicum Arnold saw some of his associate teachers use ICT but he did not experience modelling of ICT being used to support teaching and learning. On his only teaching experience posting at his current class level he “didn’t really see too much going on there” (Arnold, Interview 1) and he cannot remember if there was a computer in the classroom.

School context

School A in which Arnold is employed is a full primary decile 7 school of nearly 500 students. The school’s prospectus states, “Students have access to a fully networked computer system and computer suite with access to e-mail and the internet” (School A prospectus). The prospectus also outlines a range of essential skills expected of its Year 8 students. Amongst these are the expectations that students will be competent in using a variety of ICTs to communicate and able to effectively use many types of ICT to seek information from a range of information sources (School A prospectus). The 2003 Education Review Office report on School A states, “The principal and syndicate leaders have improved the systems for providing support to beginning teachers.”

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1 To protect the identity of the school, the prospectus is not named.

2 The details about the reviews are withheld to protect the anonymity of the school.
Arnold is not sure if the school has an ICT policy but believes ICT is considered to be very important as the school has someone employed two days a week to look after the technology. Arnold describes staff ICT knowledge as “better than the last school I was at for the third-year posting. They get into it, for example, assembly was PowerPoint last week and that was run by the students. So, staff really get into that and believe in getting children involved” (Arnold, Interview 1). The syndicate leader and principal have told him to integrate ICT with most of the units he teaches. Each class has an hour allocated in the computer suite per week or more if it is not being used. There is also a resource room with digital, still and video cameras.

As a permanent teacher, Arnold was eligible for a laptop through the Laptops for Teachers Scheme (TELA), which seeks to develop teachers’ confidence and competence in the use of ICT. Arnold enjoys having the laptop so he can do some of his work at home and he uses it for many things.

The school has a Technology Group and these teachers go to all the courses and then come back and share and teach others what to do. Arnold was invited to go to a two-day ICT conference but it was held in the school holidays and he did not plan to use his break for professional development. Rather than ICT, the major focus of school staff development is on Numeracy. Ironically, Arnold, and the other beginning teacher, had to sit through an after-school presentation about maths, which he claimed they were already familiar with due to their recent training.

**Classroom context**

Arnold teaches a Year 8 class of 24 students. His teaching experience postings during his pre-service teacher education were mostly at the lower class levels of the primary school and it was a bit of a shock when he was appointed to his current class level. According to Arnold most of the students are confident with ICT.

The class has access to the school’s computer suite through a booking system with a regular hour each week. They only go there if they have a purpose.

Arnold lets the students use his laptop to optimise computer access in the classroom, which has just one computer for student use. He is pleased he can have two students do ‘Internet research’ at the same time. The main ICT-related activities is word-processing a variety of written texts, for example preparing for the science fair. He has taught the students to use the spell check and thesaurus functions and options for making headings.

They also do Internet research and the students have already learnt about key words:

> We are studying up on short stories – that’s one of our units this term, so I have got them searching for short stories in Goggle and I got them to

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3 From 2003, all permanent full-time and part-time teachers working at least 12.5 hours in Y7 and 8 classes in state and integrated schools became eligible to apply for a laptop under the TELA scheme, expanded to include Y4 to 6 teachers. Under the scheme teachers are reimbursed approximately two thirds of the costs of leasing a laptop. Long term relievers on fixed-term appointments are not eligible [http://www.minedu.govt.nz/index.cfm?layout=document&documentid=8568&date=1].
look for one they liked and printed them off and they use them in class (Arnold, Interview 1).

For the science fair, the students learnt how to make graphs:

I have just taught the whole class and the rest of them that didn’t know how to do graphs, to use Excel for their graphs. My tutor teacher showed me, and also one of the boys in here is very good on the computer, so actually, for that session [laughing] he was peer teaching while I was with another group and he was running through, step-by-step, where to go on the whiteboard while the others did it and I was working with the stragglers, who didn’t have the skills there (Arnold, Interview 2).

While Arnold’s classroom computer is always switched on, he believes ICT is used more in other classrooms in the school. He reports:

My students don’t really use it compared to, say, the experienced teacher here. Every time I walk in, there seem to always be two or three people on it.

Interviewer: What do you think they do?

Well, they have educational games that they seem to be using most of the time. But there’s always a lot of publishing, for example, there’s one boy doing a speech at the moment, who found it easier to type it. And this boy is a huge behaviour problem (Arnold, Interview 2).

Arnold also has taken some extension classes, where he has used his interest in still and video cameras that began before his pre-service teacher education.

Perception of the role of ICT in schools

Arnold perceives the role of ICT in education to be for students to acquire computing skills for study and employment in the future. He claims:

All schools need to get the skills out there to everyone because the workforce is just computer orientated. It’s just getting more and more towards that way, so I think they need the skills there for that (Arnold, Interview 1).

Arnold also suggests that schools have the ability to demonstrate to students that computers are for more than playing games:

I think a lot of children have access to games and all that, but at school you can actually teach them that they are not just for games. They are for research, you can do anything there, you can teach yourself, you can just use the tools there, and that shows them there is something other than games - the use of equipment like video cameras, digital cameras, and editing gets them ready for the workplace/tertiary study, you know (Arnold, Interview 1).
Arnold wishes for his students to go further with their education than what happened to him – he did not know anything about computers from primary and high school and learnt it all during his pre-service education.

Arnold is not aware of the government’s ICT strategy for schools (Ministry of Education, 2003), and he sees ICT as an add-on to teaching and learning, not integral to it.

Support and mentoring

Arnold has a good relationship with his colleagues and the five other members of his syndicate. However, all but one teacher in the syndicate are new to the school and beside Arnold, there is one other beginning teacher in the syndicate. His tutor teacher is ‘great’ and ‘she helps him along,’ for example when he did not know much about spreadsheets, so she offered to show him ‘how to do it’ (Arnold, Interview 1).

Later in the year, Arnold admits to finding it quite hard:

It’s not so much the planning, that’s great and we get a lot of support with that, but it’s more the other issues, the counselling issues for students, the behaviour management aspect. I’m just getting worn down [polite laughter] (Arnold, Interview 2).

Although the tutor teacher is experienced and very good, Arnold explains that she is only at the school three days a week, part time, so not the full week. She is new to the school and job shares. He believes it would have been better to have someone who had more knowledge of the school.

Self-efficacy beliefs

Arnold is fully aware of his limited level of skills with ICT but recognising the potential of ICT for his students, he finds ways of coping. He comments in his first interview:

Because I’m not the best, you know, not the most knowledgeable in this area, sometimes I’m a bit weary about teaching it, because I’m not too sure about it. I am starting to get better, because I know some of the children have a lot of knowledge in this area, so I get them to help me out and then help the other children, and I know there’s one boy in another class that is miles ahead and has his own website and all that sort of thing, so he helps me. I get him every now and then to help me with the class (Arnold, Interview 1).

Later in the year, Arnold looks optimistically at his progress:

Hopefully, I am developing my skills as we go, too, and I am learning from the kids [laughter] as well as getting support from my tutor teacher, because she’s very able in technology and helps me with that. But in ways to teach it, I think I will become more confident, whereas this year I haven’t been one hundred percent sure what I was doing (Arnold, Interview 2).
In sum, Arnold knew virtually nothing about computers when he began his teacher education. His main focus was sport. He saw very little modelling of ICT during his pre-service education and little use on his ‘postings’ except for his associate teacher’s professional use. Because he did not use ICT himself and rarely saw it used in teaching and learning, he was unaware of the place it would have in his own teaching. Arnold is now aware that ‘ICT integration’ means “giving in each planned unit the opportunity for ICT to be used in all the curriculum areas” but he is not sure “how we get around it” with 26 students and one or two classroom computers and one hour a week in the computer lab (Arnold, Interview 2). Overall his rationale for the role ICT has in schools is a vocational one with technology being a requirement in the future workplace of his students.

Pam

Pam’s School B is a contributing decile 5 school with a roll of almost 400 students. School B’s website states that it is recognised for its innovative use of ICT and has, for example, entered national video competitions. The Education Review Office supports this view with its 2004 report on School B stating, “The school is widely recognised for its innovative use of information and communication technology (ICT).”

School context

School B has a well-developed ICT plan and is a veteran amongst schools in the city for using computers in schools. It has an integrated school-wide computer network to which there is access from all computers and workstations in the school. The principal is actively involved in modelling ICT use to teachers and students. For example, each morning the principal circulates news on the school’s intranet, which the students read. Each week the students have as a task to email the principal or a buddy. As Pam describes:

They can either write a letter to the principal or we have a weekly quiz on our Intranet news. The principal usually has a question and the children can email their answer to him and that is covered in one of their ICT tasks (Pam, Interview 2).

The school does not have a computer lab. However, once a term each class contributes one of their three or four classroom computers to the technology room, where a lab is set up for a period of two weeks. Pam explains the purpose of the computer lab:

The computers are set up so that we can teach the class as a whole about computers, the different things in computers like using KidPix, using Word and using Excel and PowerPoint and those sorts of things. If we go to a computer lab, we can explain it all, demonstrate it all and then help them one by one there. And then in the classroom we reinforce it and reuse it and I may teach new things in the class to children that are ready for it. So, I wouldn’t say it’s a big push on ICT because I do it throughout the

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4 Details of review withheld to protect the identity of the school.
class anyway, but it is a good thing just to be able to have everyone sitting
down at a computer and saying, “Right, this is how we do this. Let’s
practice” (Pam, Interview 2).

The school also has a pod of wireless laptops that can be booked. Resources can be
pre-booked by writing the request on a whiteboard in the staffroom, “If you write it
there, then you have it. I have booked the laptops for the week after the computer lab
finishes and I just write up on the whiteboard” (Pam, Interview 2).

Each class has an email address and individual students have a login. While ICT is
pervasive in the school, Pam remembers only one question being asked about her
ICT skills in her job interview.

**Classroom context**

Pam teaches a Y3-4 class of 24 students. She has three computers in her classroom
that are connected to the school network and the Internet. The third classroom
computer “was a spare one in the school and the principal asked one day, when he
was just passing through, ‘Do you want another computer?’ And I said, ‘Yes, please!’
And it turned up…” (Pam, Interview 1). Pam can access the library catalogue from
the classroom via the network.

The syndicate has developed two ICT checklists. One is used to track students’
independent day-to-day ICT activities, for example a weekly quiz about their Intranet
news. The other is used to assess the learning goals in ICT from integrated units, for
example ‘Presenting moving images’ from a unit on disaster and safety, where
students could choose to create a slideshow about dialling 111 in KidPix.

One activity Pam thought went better than she had expected was in maths:

> We have been learning about weight and shape this term, so on KidPix we
> have done some pictures, where we have drawn scales and put something
> heavy at one end and something light at the other, exported that to Word
> and put a question with it to make a class book. Really, it’s all those sorts
> of things that is really reinforcing their learning on the table, “This is
> heavier than this.” I was quite surprised because I thought the children
> might struggle a bit with it, but because they understood the weight they
> could quite easily draw the scales and go through the whole exporting it
> into a document. They did that really, really well and I was quite
> impressed (Pam, Interview 2).

**Perception of the role of ICT in schools**

Pam believes schools have a responsibility to respond to the pervasiveness of
computers in society. She comments:

> It’s one of those skills that children need to learn. It’s getting to the stage
> in society that if they weren’t in schools, then it is inhibiting children’s
> growth with them, because when they out into the workforce, whatever
> workforce, there’s going to be a computer of some sort (Pam, Interview 1).

She also considers the role of ICT to be to help with the children’s learning.
Some children learn better with pen and paper; some children learn better listening; some are visual; and some better using computers. It’s just another tool you can use in the classroom to help the children learn in some form (Pam, Interview 1).

In keeping with this toolster perspective (Brown & Murray, 2005), Pam does not believe that having a computer makes a teacher much better:

It doesn’t enhance the teacher. If anything, it might enhance the learning, which is different to enhancing the teaching, because it’s supporting the children, which is, in effect, enhancing their learning, making their learning grow (Pam, Interview 2).

Pam is alert to the use of computers in business and makes the comment that even in jobs such as stacking shelves in supermarkets, computer systems are used for tasks such as stocktaking.

**Support and mentoring**

According to Pam at School B “everyone knows how to use a computer and uses it within the classroom. And if there’s trouble everyone just asks everyone else” (Pam, Interview 1). Pam’s tutor teacher is OK with ICT but she usually asks the teacher one classroom away for support. Even in the middle of a class Pam can go and ask this colleague a question. If she has a breakdown or technical problem, she usually goes to this colleague first. If Pam cannot fix it, the colleague has a telephone in her classroom and will ring the principal to come and fix the problem.

Pam has ready access to staff development and in-time support. If she wants to go on courses or have a set time for it, she can have it. Otherwise she can just ask for help when she needs it, and if she is having trouble Pam feels she can just go and ask. She has also had the opportunity to observe other teachers starting off an ICT activity, which she found helpful.

**Self-efficacy beliefs**

Pam is very confident about her capability with ICT. She would not be fazed at being asked to use an application she is not familiar with; as Pam comments, “No, it doesn’t worry me. I am quite confident with computers and the children in here are, too, and we get along just fine with it” (Pam, Interview 1).

Pam explains how she first adapted to using ICT with her class:

It was quite hard at the start trying to get my head around it. I ended up talking to the other teachers to see what they do and how often they use the computers in the classroom, because it was a big thing, and you think, “I’m getting there,” but I still don’t use them as much as I should.

Interviewer: Why do you think you should be using them more?

Because they are they’re to be used and it’s good learning for children. I find that some days, maybe even for a week, some children may not get on the computer for a whole week. And because it’s one of those things they...
love learning through, they are doing a lot more learning through it (Pam, Interview 2).

In sum, Pam had job experience with ICT before her teacher education and this is where she learnt most of her skills with ICT. Indeed, Pam believes she graduated with the same level of ICT skills as she entered her pre-service training. She saw little ICT integration on practicum. Pam felt quite confident “but not over confident” when she first started teaching. Her confidence level in her personal use of ICT was quite high, but because Pam had not taught much with ICT before, she was less confident with that. While her confidence level has increased, she perceives that she “still has a wee way to go” in better utilizing ICT in the classroom (Pam, Interview 2). Her rationale for ICT in schools is mainly based on a pedagogical rationale but is also influenced by a vocational perspective.

Discussion

Arnold and Pam both had little formal learning about ICT in their teacher education programme. Moreover, there was almost no modelling of ICT by associate teachers while on practicum and they had seen little evidence of ICT being used in classrooms. Where their prior experiences differ is that Arnold had a ‘negative’ attitude to ICT and did not see its relevance at the time of his training. In contrast, Pam had prior experience with ICT and this had provided her with versatile skills and demonstrated the effectiveness of new technology in the workplace.

As beginning teachers, Arnold and Pam had very different experiences with ICT during their first year of teaching. Pam had clear advantages over Arnold in being immersed in a ‘technology-rich’ school where computers were not so much a priority as an integral part of the learning environment. Pam’s syndicate planning was led by an experienced ICT-using teacher who supported her in integrating computers effectively; Pam was encouraged to use ICT in the classroom learning environment by everyone but was free to adapt the syndicate planning to best suit her students’ needs. She had access to computers in her classroom, enabling a timely integration of ICT in the teaching and learning process. Moreover, Pam was supported by ICT-using colleagues and surrounded by frequent ‘technology talk’. Although speculative, there is evidence to suggest this talk and the supportive school culture may be having a key role in (re)shaping Pam’s understanding of ICT away from a vocational rational to a pedagogical one; however, she is also influenced by a societal rationale (Wellington, 2005) and lacks a deeper appreciation of the relationship between technology and society.

Arnold, on the other hand, was keen to improve his own developing ICT skills but had a more limited opportunity to do so. While technology had a substantial presence in the school in the form of a computer lab, the ICT goals were not clearly articulated to Arnold; his syndicate’s staff development focus was on Numeracy, which precluded Arnold’s individual needs in ICT from being prioritised. In addition, his tutor teacher, while experienced, lacked institutional knowledge and she was in a job sharing position and therefore not always available. Arnold also perceived ICT to be more about preparing students for their future work rather than something that could be used to support teaching and learning. In this regard, his views fit the vocational imperative underpinning the use of ICT in education as described by Wellington (2005). Although speculative, there is little evidence to suggest that his school
context will challenge Arnold to think more widely about the use and value of ICT in education.

Given Arnold and Pam’s respective contexts, two questions arise that are worthy of deeper consideration: What trajectory might their further development as ICT-using teachers take if they remain in their current teaching contexts? What would need to change in Arnold’s context if his current trajectory was to change? A deeper analysis of these questions drawing on further literature on transition and teacher induction is beyond the scope of this working paper, but the outcomes of such a discussion are likely to yield a number of potentially valuable insights. Clearly, support within the school context where beginning teachers commence their careers is an important factor as they transition from student to professional educator. Although pre-service teacher education is important, teacher development is a process that continues throughout their career and schools play an important role in nurturing professional growth.

**Recommendations**

This final section speculates on the recommendations that might follow a deeper analysis of the experiences of Arnold and Pam and other beginning teachers like them. There is evidence to suggest that beginning teachers might be likely to grow professionally in the area of ICT, regardless of their pre-service preparation, if the following conditions are met:

- Beginning teachers have adequate access to ICT for personal and professional use.
- The school’s goals for ICT use are clearly articulated to the beginning teacher.
- The competing imperatives for ICT in education are made explicit and beginning teachers are encouraged to question these in the process of striving to meet collective goals.
- Schools ensure that support is available to attain these goals. This may be the responsibility of the tutor teacher or an experienced teacher with knowledge about using ICT for teaching and learning.
- Timely access to ICT is provided for students, either by increasing the number of computers available in the classroom, having a pod of laptops available or providing more flexible access to computer labs.
- Beginning teachers are given access to professional development in using ICT for learning, teaching and administration; however, this needs to be part of and embedded within a comprehensive induction and professional development package.
References


“GET WITH THE PROGRAMME!”

Geoff Franks and Anne Giles

This article reports on a programme for Aspiring Principals developed and delivered by Massey University, Palmerston North, New Zealand in 2006.

Globally, education authorities have been considering how to develop and support school Principals. De Vita (2005) contends that today’s climate of heightened expectations means that Principals are in the ‘hot seat’ to improve teaching and learning. In recognising this, the education sector has begun to give overdue recognition to the critical role and mounting demands on school Principals by commissioning research into what constitutes effective Principal preparation (pg.12).

In a review of research by the Stanford Educational Leadership Institute (2005) on developing successful Principals, four key considerations emerged:

- The increasing demands of the role of the Principal;
- The leadership crisis in terms of recruitment and retention;
- The dearth of qualified school leaders with sixty percent of Principals due to retire or leave in the next five years, and
- The limited capacity to lead of some appointees to recent Principal positions.

These considerations mirror the situation in New Zealand and internationally and support the contention that “traditional methods of preparing Principals are no longer appropriate” (Davis, Darling-Hammond, LaPointe and Meyerson (2005). A study by Valentine (2001), cited in Stanford found that Principals who, “participated in a preparation programme that was concept driven, cohort based and a year long, carefully mentored field based internship…were perceived by teachers as being more effective in managing their schools” (ibid, pg.1).

Based on these understandings the Massey Aspiring Principals Programme was conceived.

The New Zealand Setting

At the turn of the new century there was minimal public sponsored support available for school Principals. There was no requirement for pre appointment training or indeed any official post appointment support. After many years of advocacy by Principal organisations the New Zealand Ministry of Education introduced The First Time Principals Programme in 2003. The First Time Principals Programme is a three week residential course spread over eighteen months and supported by mentor visits and online learning. The emphasis of the Programme is on leadership.

After the First Time Principals Programme was embedded, the Ministry of Education began considering issues around developing capable and experienced teachers and

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1 Regionally based School Support Service providers have for many years played a key role in supporting first time Principals. However, there was never a coordinated and national programme of support for this group.
senior managers into Principals. Each regional School Support Service Provider was asked to offer programmes for this group.

The Massey University Initiative
In planning the programme the Programme Directors acknowledged that a number of influences impacted on decisions about the content and structure of the programme. They included:

1. The New Zealand Ministry of Education asked School Support Services nationwide to make the provision of support for aspiring Principals a priority in 2006.

2. The Aspiring Principals Programme model from Canterbury University School Support Service provided significant background for the development of the Massey model.²

3. The Directors’ own personal experiences as Primary School Principals, and more recently as Leading and Managing advisors, alongside their understanding of what constitutes effective professional development.

A deliberate decision was made to make the programme available exclusively to current Deputy and/or Associate/Assistant Principals who had been in their positions for more than a year. It was viewed as critical that aspirees were in leadership roles, with responsibility for staff (either curriculum development and/or appraisal).

Finally, participants had to genuinely aspire to Principalship.

The Massey Aspiring Principals Model

During the planning phase, there was a desire to take a fresh approach in shaping a curriculum that was “concept driven”, rather than a traditional topic based model (Valentine, 2001, page 12).

West and Jackson’s table (below) describing the current trends in leadership development in the United Kingdom (based on Vicere and Fulmer’s 1998 study of leadership learning in a number of top companies) further illustrated the need to move beyond ‘delivering’ the type of prescriptive course that may have been the tradition. (Weindling, 2003, P. 7)

Figure One: Trends in Leadership Development

<table>
<thead>
<tr>
<th>KEY TRENDS</th>
<th>FROM</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Programme</td>
<td>Prescribed course</td>
<td>Study programme and real issues</td>
</tr>
<tr>
<td></td>
<td>Standard</td>
<td>Customised</td>
</tr>
<tr>
<td></td>
<td>Theoretical</td>
<td>Theory in context</td>
</tr>
<tr>
<td>The Time-frame</td>
<td>One-off event</td>
<td>A journey with ongoing support</td>
</tr>
</tbody>
</table>

² We are grateful to Marg Lees (Christchurch College of Education) for the generous way in which she supported our thinking and planning.
### The Mode

<table>
<thead>
<tr>
<th>The Mode</th>
<th>Lecturing/listening</th>
<th>Participatory, interactive and applied</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Focus</td>
<td>Individuals</td>
<td>Individuals within a group and for a purpose</td>
</tr>
<tr>
<td>The Consultant</td>
<td>Supplier</td>
<td>Partner, co-designer, facilitator, and coach</td>
</tr>
</tbody>
</table>

Bearing the research in mind and keeping true to a local context the draft New Zealand National Leadership Model (G. Collins, MoE, 2005) was adopted as the framework for the programme.

The New Zealand National Leadership Model (2005) identifies three key dimensions:

- Relationship building
- Situational expertise
- Managing Change

A fourth dimension – Professional Pathways - was added to increase the confidence and capability of participants to enhance their prospects of winning Principal positions.

Threaded through all dimensions was the notion of “reflective practice” to help aspirees make the essential links between theory and their own leadership practice.

The Stanford research suggested that the key features of effective Aspiring Principals Programmes are that they:

- be research based;
- have curricular coherence;
- provide authentic experiences;
- use cohort groupings and mentors, and
- enable collaboration between the programme and the school setting (2005, pages 8 - 12).

These features were fundamental to the structure of the Massey model.

**Figure One: The Massey Model**
Programme Elements
Diverse threads were woven together to form the programme. They included:

(1) Professional Learning
Five and a half days of professional learning was delivered to aspirees over a ten month period. This ensured that content was able to be covered in depth and in a sustained manner. Five and a half days also gave the opportunity to cover a broad range of concepts and allowing time for the aspirees to adequately reflect on their development.

(2) Individual Learning Plan
Each aspiree was required to set focused but achievable goals. Goals had to incorporate work that was to be undertaken in their school and to have a clear focus on leadership development. Aspirees were encouraged to keep reflective journals and regularly discuss their goals with their Principal, their Professional Partner and with the Programme Directors.

(3) In school Visits
Participants in the Aspiring Principals Programme were supported by three visits from the Programme Directors. The visits had a focus on the Individual Learning Plan of each aspiree, as well as engaging them in professional conversations around leadership. The visits provided a vital connection between the programme material and the enactment by the aspiree in the school context.

(4) Principal Mentorship
The Principal’s involvement was seen as a vital component of the programme. The Principal provides an ‘in practice’ lens that reflects the reality of Principalship. They are in a unique position to mentor the aspiree based on their knowledge and understanding of their school setting as well as the skills of the aspiree.
(5) Professional Partnerships
Each aspiree was paired with another and was encouraged to engage in professional dialogue to:
- Deepen the collective understanding of the course content;
- Receive support for their Individual Learning Plan; and
- Grow a network of supportive colleagues.

Partners were encouraged to visit each others’ school as well as meeting at other times.

(6) Data
A large amount of data was collected from aspirees across the duration of the programme.

Before the programme began two sets of initial data were collected. One set focused on the aspiree and their aspirations for the programme and for Principalship. The second set focussed on the aspiree’s strengths and areas for development. These were identified independently by the aspiree and their Principal and discussed at a subsequent meeting. Additionally, the aspiree had to seek some information about Principalship from their current Principal. A questionnaire booklet was used to gather this information. The discussion between Principal and Aspiree enabled agreement to be reached about development goals for the aspiree. This set the ground work for the mentor/learner relationship that was pivotal to ensuring that professional leadership was a focus of ongoing discussion during the programme. The list of questions used can be viewed in Appendix One.

At the conclusion of each professional learning day specific feedback from participants was collected. Programme Directors allowed the feedback to influence the content of future face to face days. An example of this occurred on Day One of the programme. A newly appointed Principal was invited to share the presentation she used during her interview, followed by answering aspirees’ questions. Feedback was so positive about this session that a further four Principals were involved in other Professional Learning Days.

One participant related that the pre-programme conversation was “the best conversation about my practice that we have ever had”. (AC01)

Another noted that, “I was surprised to find that we both identified the same strengths but my Principal differed from me in identifying my areas for development. This really made me think”. (AC02)

A very similar data collection process was used at the completion of the programme. Aspirees completed a questionnaire booklet, interviewed their Principal and discussed their strengths and weaknesses. The list of questions used can be viewed in Appendix Two.

(7) Relationships
The Programme Directors worked hard to engage a number of key people in the programme. They formed a strong link with the local Principals Association with one
of their members acting in a liaison role. Links were made within Massey University and with the Ministry of Education to ensure that the programme was rigorous and that the directors had access to support and dialogue about the programme.

The network of relationships that were formed between aspirees during the programme was a significant and desired outcome and one the Directors continue to encourage.

(8) Problem Based Learning
The use of problem-based learning (PBL) for school leadership development has grown in recent years (cited in Weindling, 2003, p.19) and it was seen as critical to include authentic scenario problem-solving and role play opportunities to maximise learning for the aspirees.

Bridges and Hallinger argue that “PBL has strong cognitive and motivational advantages over traditional …approaches.” (Weindling, 2003, P.20). The context, problem or scenario provided requires the participants to apply prior knowledge to understand how they might apply new information into their own school setting. There is an emphasis on learning by doing, interacting with peers and getting immediate feedback. This was a strong feature of the programme on each professional learning day and also the focus for discussion on school visits.

(9) Reflective Practice
The most prevalent concept that runs through leadership programmes is the notion of the ‘reflective practitioner’ (Schon, 1983, 1987 and 1991) and this is often linked with experiential learning approaches (Kolb, 1984). It is argued that reflection forms fundamental shifts in thinking about action and allows school leaders to take ownership for decisions they make and to support the building of their own leadership capability.

Frequent opportunities for written reflection were built into the programme at all phases. Reflective conversations were also utilised and valued as essential building blocks for professional learning - “Structured ongoing learning dialogue can be the most powerful professional development an educator will experience” (Glaude, 2005, p.1)

The Programme in Action
Each of the five full days of professional learning had a theme that wove together the leadership framework. Aspirees were encouraged to examine the theme through a leadership lens – to view their situation as if they were indeed Principals. Each day included theory and practice, with a deliberate emphasis on applying the learning in a school setting. This strategy was based on Hersey (cited in Reynolds 1986) who asserts that “when embedded in realistic simulation, the principles of modelling, rehearsal and reinforcement can lead to rapid skill development, participant enthusiasm and effective transfer of skills to on the job performance” (pg.8)
A deliberate decision was also taken by the Directors to spread coaching and practice in public speaking throughout the professional learning days to acknowledge that Principalship demands a variety of public speaking engagements.

Themes for the professional learning days were:
• Leadership;
• Coaching;
• Behaviour management;
• Performance management;
• Working with Boards of Trustees.

Each of the themes mentioned above became the practical face of the leadership framework. The table below sets out how the themes were aligned with the framework dimensions.

**Figure Three: The Framework Dimensions**

<table>
<thead>
<tr>
<th>Framework Area</th>
<th>Concepts and Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situational Expertise</td>
<td>Leadership</td>
</tr>
<tr>
<td></td>
<td>Coaching</td>
</tr>
<tr>
<td></td>
<td>School finances</td>
</tr>
<tr>
<td></td>
<td>Working with Boards of Trustees</td>
</tr>
<tr>
<td>Relationship Building</td>
<td>Leadership</td>
</tr>
<tr>
<td></td>
<td>Coaching</td>
</tr>
<tr>
<td></td>
<td>Managing Conflict</td>
</tr>
<tr>
<td></td>
<td>Managing Performance</td>
</tr>
<tr>
<td>Managing Change</td>
<td>Leadership of Curriculum</td>
</tr>
<tr>
<td></td>
<td>Leadership of Change</td>
</tr>
<tr>
<td></td>
<td>Managing Behaviour</td>
</tr>
<tr>
<td>Professional Pathways</td>
<td>Leadership</td>
</tr>
<tr>
<td></td>
<td>Presenting Yourself</td>
</tr>
<tr>
<td></td>
<td>Effective Public Speaking</td>
</tr>
<tr>
<td></td>
<td>CV’s and interviews</td>
</tr>
</tbody>
</table>

A significant feature of the programme was the presentations by current Principals. A recently appointed Principal, a Principal in their second Principalship and three Acting Principals were invited to speak to the group. Their presentations and the follow up question and answer session were greatly appreciated by the aspirees and received the strongest and most positive feedback after each professional learning day where they featured.

**Individual Learning Plan**

Each aspiree was required to develop an Individual Learning Plan while participating in the programme. The leadership framework was used to structure the plan. Each plan was supported by the aspirée’s Principal, the professional partner and the Programme Directors. Aspirees were expected to make regular entries over time that would provide a ‘chronicle of progress’. The Individual Learning Plan formed the basis of each of the in-school visits and provided a context for interaction with the aspirée as well as the Principal.

Several models, including the one below, were provided so aspirees could structure their plan using the leadership framework.
Significantly, the Individual Learning Plan provided a context for the aspiree to reflect on their development. Fenwick (2000) cited in Zellner et al (2002) points out that, “All preparation experiences and programmes should emphasise formal reflection strategies for collaborating with teachers (particularly coaching teachers towards instructional improvement), and substantive time to practice the variety of decision making and leadership skills associated with Principalship” (pg. 8).

**Feedback and Feed forward**

As previously indicated, feedback was sought from aspirees through out the programme. As Programme Directors we were impressed by the depth of the reflection and the impact the programme was having on aspirees. Examples of this include (i.e. following Day 4)

“I have recently been involved in interviews for new staff and the Aspiring Principal programme has made me much more aware of the questions to ask. I think the difference is that although previously I worked in these areas I do it now with a different focus. I now see myself in a Principal role and watch my Principal more specifically, learning and asking questions as to why something was done a certain way. I am very lucky to have a mentor Principal who is willing to share and help me learn”. (AC03)

“I feel as if my confidence in my own ability has grown and I now believe that I could be a Principal” (AC04)

“I have found the interaction with other DP/APs in the area priceless. The forming of strong bonds has enabled me to discuss all aspects of school life and also realise that others are experiencing similar things” (AC05)
Feedback such as this allowed the Directors to check that the content was meeting the needs of aspirees and also meant that suggestions such as the latter could be ‘fed forward to influence future sessions.

**Impact of Data**

Data gathering and analysis was a strong feature of the programme. As previously stated data was collected from aspirees before, during and after the programme. The Programme Directors recognised that because the programme was a new initiative, information was required so that:

- The impact of the programme on participants could be regularly evaluated;
- evidence of professional growth could be collected and that this collection needed to be more rigorous than self assessment alone;
- Participant feedback could influence the evolution of the programme.

To achieve these aims data needed to be collected throughout the programme.

Data was collected from participants:
- Before the programme began;
- After each professional learning day;
- During each in school visit; and
- At the conclusion of the programme.

Data was collected from participant’s Principals
- Before the programme began;
- During each in school visit; and
- At the conclusion of the programme.

Programme Directors met regularly and discussed the data and feedback to ensure the programme continued to meet the needs of the participants as well as the programme goals.

**What Was Learnt From the Initial Data**

**Background**

Twenty three questionnaire booklets were analysed. About the aspirees it was learnt that the average length in teaching of the group was 15.8 years with the largest group (41%) having taught between ten and fourteen years. 52% had held their Deputy or Assistant Principal position for two years or less, with the largest group (30%) being in the role between one and two years.

**Trends**

The following seven trends emerged from the data collected before the programme began:

- In answer to a question about what Principals would have liked to have known more about before they took up their first Principalship their answers were dominated by administration. 79% of all answers fell into this area. Answers about people accounted for 13% and management accounted for 8% of the answers.
When asked what skills they believed were fundamental for Principalship, almost half (45%) of the answers were about the personality and character of the leader. When the self and people categories were combined the total was just over three quarters (76%) of all answers. This strongly suggests that Principals must have a sound character and be people focused. Very few answers to this question were about curriculum or pedagogy.

When Principals were asked specifically about their hopes for the participant in the programme more than anything else they wanted them to develop personally (44% of all answers). Significantly, developing their knowledge of leadership came next, receiving 25% of the answers. Preparing for Principalship (promotion) was also reported as a significant outcome by the Principals (19% of all answers).

The analysis (refer to the tables below) of the Principal and the Aspiree’s view of the aspirees strengths and weaknesses revealed that they see both communication and organisation as a strength and an area for development.

<table>
<thead>
<tr>
<th>Aspiree</th>
<th>Strengths</th>
<th>Principal</th>
</tr>
</thead>
<tbody>
<tr>
<td>28%</td>
<td>Motivation</td>
<td>17%</td>
</tr>
<tr>
<td>27%</td>
<td>Organisation</td>
<td>40%</td>
</tr>
<tr>
<td>23%</td>
<td>Communication</td>
<td>23%</td>
</tr>
<tr>
<td>20%</td>
<td>Initiative</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aspiree</th>
<th>Areas for Development</th>
<th>Principal</th>
</tr>
</thead>
<tbody>
<tr>
<td>52%</td>
<td>Communication</td>
<td>46%</td>
</tr>
<tr>
<td>25%</td>
<td>Organisation</td>
<td>20%</td>
</tr>
<tr>
<td>17%</td>
<td>Motivation</td>
<td>20%</td>
</tr>
<tr>
<td>7%</td>
<td>Initiative</td>
<td>13%</td>
</tr>
</tbody>
</table>

Almost ninety percent (87%) of aspirees enrolled in the course to either (or both) develop their leadership skills or to enhance their opportunities for promotion.

It was of some concern that only 41% of the aspirees could relate a recent time when they received feedback that made a difference to their practice. Two possible reasons exist to explain this. One is that all of the aspirees have exemplary practice and therefore any feedback they receive reinforces their current practice rather than changing or altering it. Secondly, and more likely, is that our aspirees are not receiving feedback about their practice, regardless of its quality or their desire and/or willingness to change it.

A critical selection criteria for the programme was a genuine desire to be a Principal. When asked to explain why they wanted to be a Principal two main reasons emerged. One can be defined as a moral imperative. 57% of the answers fell into this area.

“I’m passionate about children and learning”. The second reason was about promotion. 43% of the answers related this.
“It’s the next logical step for me”

What was Learnt From the Post Programme Data

Background
At the end of the programme a further set of data was collected from Aspirees and their Principals. Questionnaire booklets were used as the source of information. Twenty three data sets were analysed.

Trends
Seven key trends were apparent from the data analysis.

- When considering the new skills the participants had developed as a result of participating in the programme 70% of the answers reported growth in professional pathways and relationship building. The skills focused on in these areas (speaking in public, communication, Power Point activity, reflection, leadership, networking, listening skills, saying difficult things and coaching) had a significant impact on the aspirees.

- Aspirees rated their confidence in applying for Principal positions as being increased as a result of their participation in the programme. Twenty four of the twenty seven comments (88%) specifically or by implication mentioned increased confidence in applying for a position.

- Three areas of the programme were identified as having the greatest impact on the professional practice of the aspirees. The importance of relationship building (47% of all answers) was the most recorded area, followed by professional pathways (39% of all answers), and situational expertise (13% of all answers).

- Every aspiree was positive about the overall impact of the programme on their practice. Typical comments included:

  “Having the opportunity to step off the treadmill and take time for reflection has been very powerful professional development.” (AC08)

  “I found the programme very practical for both future Principal positions and in my current role.” (AC09)

  “The content, presentations and variety of opportunities for discussion provided a balance into which we could interlace our views.” (AC10)

- Principals saw significant benefits to the aspiree from their participation in the programme. Specifically they noted that networking (36% of all answers) was the most beneficial aspect of the programme. This was followed by knowledge (21% of all answers) and reflection (18% of all answers).

- Principals were asked to comment on any changes in the professional practice of the aspiree they could attribute to the programme. The development of new skills (33% of all answers) was the most noticeable change in the professional practice
of their aspirees. This was followed equally by understanding the ‘big picture’ (18% of all answers) and reflection (18% of all answers).

- When asked about changes in their workload as a result of the programme Principals were positive. Ten answers (47%) suggested or stated that Principals felt their workload had been reduced. Two comments stated that their workload had not reduced.

Reflections from All the Data
Of the many things we learnt from the data three stand out.

- Aspirees developed their confidence to apply for Principal positions as a result of participating in the programme. Confidence in applying for Principal positions was high at the end of the programme. Of twenty three aspirees, twelve reported that they had applied for Principal positions. As at the end of May 2007 four of the group had successfully won a job as a Principal.

- Aspirees developed new skills while on the programme. The content of the programme focussed on leadership in modern New Zealand school settings. For many this was new learning. Principals tend to protect their staff from the politics of education as well as some of ‘the big picture’ details. Our programme exposed aspirees to Principalship in the fullest sense while supporting them with learning about leadership.

- Relationship building (networks) was seen as a very important outcome of the programme by the participants as well as by their Principals. Indeed the Programme Directors deliberately set out to ensure relationship building was a key component running throughout the programme, believing that a wide network of contactable people is an essential key for successful Principalship.

Reflections on This Type of Programme
Four key themes emerged for the Programme Directors about this type of professional development programme.

- Layers Upon Layers
The programme was made up of many elements. This onion like approach was deliberate. The Programme Directors wanted a programme that was more than one dimensional – more than just the professional learning days. In the end there were nine different interrelated elements that made up the programme. They included the professional learning days, the individual learning plan, the in school visits, the principal mentorship, the professional partnerships, the collection of data, relationship building, problem based learning and reflective practice. Many of the elements could have stood on their own but together they combined to create a coherence unseen in any other similar piece of professional development.

The layers also ensured that the many and varied needs of the aspirees were better able to be met. This was because the programme was diverse and there were many more ways for aspirees to be connected to the learning.

- Relationships Critical
Too often professional development programmes stand alone. Unless there are deliberate connections made between the provider and the school sector programmes can become isolated.

In preparing the programme the Programme Directors sort the support of the local Principals Association. One of their members served in an advisory capacity, attended several professional learning days and presenting at one of the professional learning session. This proactive move ensured that the programme had credibility within our local area and recruitment was easier than we might otherwise have expected.

Another critical partnership was between the Principal and the aspiree. All our initial advertising was addressed to the Principal and applications for the programme had to come through the Principal. The support of the Principal as a mentor during the programme was essential so that the aspiree could gain maximum benefit from their time and involvement.

Further, we sort to build relationships within Massey University by engaging with our preservice colleagues. Their support could eventually lead us to be able to offer a post graduate qualification in Preparation for Principalship.

Perhaps the most important relationships were built between aspirees. Each participant was required to have a professional partner from within the group. A number of opportunities were provided during professional learning days for partners to discuss progress on their goals as well as the new learning they were being exposed to. Partners were encouraged to visit each other in school as well as meeting at other times.

- Follow up Really is Effective!

Each aspiree received three school based visits from the Programme Directors over the duration of the programme. Each visit explored the goals the aspiree had set and provided individual support for the participant about their Principal aspirations and the current leadership dilemmas they were encountering.

The visits were an important way of maintaining the momentum of the programme in the face of the relentless demands of a busy school. Equally important was the ability of the visits to provide feedback to the Programme Directors about the impact the programme was having generally and individually.

- Data, data Everywhere…

Early on in planning the programme the Programme Directors decided that collecting information from the aspirees would be a significant feature of the programme. The Programme Directors learnt that data takes a long time to collect, process and analyse. For the twenty five aspirees in the 2006 programmes just over one hundred typed pages of data was analysed and a further one hundred and fifty pages were read and considered. However, and more importantly, the data played a significant part in the delivery of the programme. It was used to support decisions about the programme content and to gauge the impact of the programme on the aspirees as well as their principals.
Conclusions

The increase in complexity of the role of the Principal today is well documented. The influence of the Principal on teacher performance and student achievement is also viewed as critical in the research. Schools need leaders who will be resilient and effective in the challenging educational environment of today and tomorrow.

The notion that professional development for Principals should be ‘ongoing, career-staged and seamless’ (Stanford, 2005) emphasises that programmes for aspiring principals should not occur in isolation but be a fundamental part of a coherent and accessible ‘staircase of opportunities for continuous Principal development both prior to appointment and after. There is also general consensus that prescriptive programmes fail to adequately prepare school leaders as the contextualisation of each leadership challenge is likely to be situationally unique. There is no single model.

It would appear that the Massey University Aspiring Principals Programme is satisfying an important need in the preparation journey towards Principalship. It is equally important that once Principalship is achieved the support and development is continued through First Time Principals Programme and beyond.
References:


Appendix One

Pre Programme Questionnaire

Aspiree Booklet
1. How long have you been teaching?
2. Are you a DP or an AP?
3. How long have you been in this position?
4. List the leadership roles you have held while teaching.
5. List the previous leadership professional development you have undertaken.
6. Have you ever applied for a Principal position? How many?
7. Why did you enrol in this programme?
8. What are your expectations for the programme?
9. Describe a time when you received feedback that made a difference to your performance?
10. What leadership skills have you developed in your current position?
11. How often do you engage in professional dialogue with your principal?
12. Describe your involvement in analysing student achievement data.
13. Why do you want to be a Principal?

Principal Interview Booklet
1. Before you became a Principal what would you have liked to have known more about?
2. What skills do you see as fundamental for Principalship?
3. What are your hopes for me in terms of this programme?
4. My strengths are?
5. My areas for development are?
6. My Principal identified the following as my strength areas.
7. My Principal identified the following as my areas for future development.

Appendix Two

Post Programme Questionnaire

Aspiree Booklet
1. What skills have you developed as result of your participation in the Aspiring Principals Programme?
2. What aspects of the programme have had the greatest impact on your practice as a leader? Please be specific.

3. Reflecting on your preparation for Principalship how confident do you now feel about applying for positions? Please explain your answer.

4. Have you applied for any Principal positions while you have been in this programme? How many have you applied for? How many interviews did you get to?

5. How do you view Principalship as a result of your participation in the Aspiring Principals Programme? How is this different from the view you held before starting the programme?

6. How well have key aspects of the programme (inservice days, professional partner, Principal mentorship, adviser visits) provided you with feedback on your performance?

7. How well have your expectations of this programme been met? Please comment on:
   a. Structure of the programme;
   b. Content of the programme;
   c. Participation in the programme

8. Evaluate your Individual Learning Plan. Take time and space to write about each of your goals. Were they achieved? Why/why not? What did you learn about yourself as a leader? What will be your next step?

9. Evaluate the overall impact of the programme. This broad question allows you to comment on any and all aspects of the programme.

10. Please complete the rating scale and comment on each of the visiting speakers.

Lin Dixon (First Time Principal)

<table>
<thead>
<tr>
<th>Extremely Helpful</th>
<th>Helpful</th>
<th>Ok</th>
<th>Not that Helpful</th>
<th>Unhelpful</th>
</tr>
</thead>
</table>

Comment:

Information was collected about four speakers
11. Anne and Geoff have co lead this programme. Please comment on their facilitation skills.

Principal Interview Booklet

1. What aspects of the Programme have you seen to be most beneficial to your aspiree?
2. What changes in their professional practice can you attribute to the Aspiring Principals Programme?
3. In what ways has their participation in this programme reduced or changed your workload?
4. Would you recommend this Programme? Please explain your answer.
5. At the start of the programme you identified their three strength areas. What do you now see as their strength areas? How are they different than before? Please comment.
   • At the start of the programme you listed their three development areas. What do you now see as their development areas? How are they different than before? Please comment.
“Learning about the risks”: Teachers’ and students’ reported experiences of piloting an innovative curriculum about gambling

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Introduction

In a global trend schools increasingly have been the target of policy makers as the site of induced social change; for example, in the 1960s in the US with the civil rights legislation to change the national socio-political landscape, to more recent and limited and, perhaps, reactive, ‘student safe driving’ campaigns in some Australian states. Recently, gambling by school-age children has been the subject of criticism in one Australian state (Tasmania) and calls for the schools to do something about it have been raised. In this paper, some of the findings from the Tasmanian study (Gardner & Williamson, 2006) are reported and implications are highlighted.

Gambling is a key component of Australian, and Tasmanian, culture (Blaszczynski, Walker, Sagris & Dickerson, 1999). Increases in the range of existing forms of gambling, and legislation that has enabled the introduction of new forms of gambling, has led to concerns about the increased exposure of people to gambling and consequences of extreme gambling behaviour (Blaszczynski et al., 1999). The consequences of problem gambling in Australia have been well-documented; categories of problems are in the realm of personal, financial, legal, interpersonal (or relationship) and work-related (Dowling, Clarke, Memery & Corney, 2005).

A “substantial proportion” (Dowling et al., 2005, p. 17) of adolescents, up to 15 percent, regularly partake in gambling activities. Indeed, the young adulthood stage, which follows adolescence, the highest comparative pervasiveness of regular (weekly) gambling occurs (Dowling et al., 2005). Gupta & Derevensky (1998) reported that Canadian adolescents’ participation in pathological gambling is also higher than that of adults. Challenges of working with adolescents to educate them about gambling occurs against a complex backdrop: specifically, adolescents, face their first identity crisis (Bandura, Caprara, Barbaranelli, Gerbino & Pastorelli, 2003; Stoll, Fink & Earl, 2003) and are “full of both excitement and fear” (Stoll et al, 2003, p. 49) and “possess the reasoning ability and curiosity” to learn while lacking the “knowledge and experiences to see patterns and transfer ideas” (p. 50). Specific brain functions, which occur during adolescence, include self-control, emotions and regulation, (Spano, 2003). The potential for transference of
learning is particularly problematic in the “taxing and perturbing situations” (Bandura et al., 2003, p. 770), which characterise adolescence and accounts for stress, which may heighten risk-taking behaviour (Dowling et al., 2005; Lindsay, 2001).

The Curriculum Initiative and Its Evaluation

In early 2006, the Gambling Support Bureau in the Department of Health and Human Services (DHHS) Tasmania worked with three Tasmanian high schools to conduct a pilot of a new curriculum kit entitled *What’s the Real Deal? (WTRD?): Sorting out the luck, loss, myths and realities of gambling*. WTRD? was developed with considerable attention to other current school gambling education initiatives: in particular, *Dicey Dealings* (2003) in South Australia; in Queensland, the *Responsible Gambling Teacher Resource Kit* (Queensland Government, n.d.); and, international approaches and research (for example, Delfrabbro, 2004).

The Kit was designed by an external designer with oversight and input from the Gambling Support Bureau. Four units of work were designed within the Tasmanian curriculum structure at the time. The authors were commissioned to complete an evaluation of the Kit. The resultant study (Gardner & Williamson, 2006) was conducted to focus on three main purposes: first, to identify and describe the factors that affected the perceptions that teachers and students developed while working with the WTRD? units; second, to critically examine these data; and finally, to suggest how the WTRD? Draft Kit might be developed to build on its strengths and address any limitations identified.

The Study

Initiatives are rarely implemented as originally articulated (Fullan, 1999; Gardner & Williamson, 2005; Parlett & Hamilton, 1972). The authors’ intent, therefore, was to gain insights into “how the curriculum actually works in action” (Marsh & Willis, 2003, p. 314). Accordingly, “a close-up” (Hamilton, 1976, p. 288) study in which data gathering from teachers and students formed a key component was adopted. Potential student and teacher participants were selected using a stratified systematic sample (Burns, 2000) to achieve samples of students and teachers from each of the three schools, and where appropriate, from Year 7 and 8 classes.

*Six teachers*—two teachers at each of the three schools—agreed to take part in the study. Of the pairs of teachers, one was the teacher who had leadership or coordination responsibility for the trial of WTRD? in their school. The second teacher had taught one or more WTRD? units to their class/es. The six teachers were interviewed individually except in one school where they asked to be interviewed together because of time constraints. Five of the six teachers completed questionnaires and three teachers kept a log.
Forty-one students comprised the sample who completed questionnaires; 33 completed both pre-tests and post-tests while another four each completed only a pre-test, and a different four students each completed only a post-test. This rate of participation, while only one-third of the total students who participated in the trial of WTRD?, is not unusual for this kind of research (Burns, 2000). From within this group of 41 students the focus group interviewees were drawn. At each school these groups ranged in size from five to six students. At one school, where the curriculum was implemented with both year 7 and year 8, two focus groups were conducted; the other two schools involved only their year 8 students in the trial.

The study used a combination of qualitative and quantitative methods (Burns, 2000). Use of multi-methods—questionnaires (pre-test and post-tests), logs, focus group interviews and individual interviews—enabled some triangulation of the data (Denzin & Lincoln, 2000). This approach comprising a combination of methods is consistent with practices described in evaluation literature (Burns, 2000; Miller & Crabtree, 2000; Scanlon, 2000; Williamson, Fraser, Tobin, Canute, Lake & Watts, 1987).

Themes that emerged from analysis of the data from the questionnaires (including student pre-test and post-tests, and logs) were identified using a quasi-grounded theory approach (Strauss & Corbin, 1998). The interviews provided richer data. Students were interviewed in focus groups so that the researchers could access a range of student opinions, and to permit checking understandings with some respondents (Fontana & Frey, 2000). Teacher interviews were conducted individually to enable data to be acquired that might add richness to the data gathered from written sources (Burns, 2000).

The report provided to the DHHS contained considerable comment on the Kit’s layout, ease of use as reported by teachers, and student learning reported both by teachers and as indicated by student responses to the questionnaires (pre-tests and post-tests), student logs and focus group interviews.

**The Findings**

The findings reported in this paper are those that appeared to offer feedback that had particular relevance to pedagogy, implementation and curriculum design.

Issues raised by the teachers included:

- The matter of working with several units in the Health curriculum in which strategies, for example, harm minimisation and risk-avoidance are crucial;

- The benefit of the intersection of WTRD? with other health curriculum materials (e.g., smoking, alcohol and drugs) but the possible negative outcome through potential repetition of content;
- The strengths of links between curriculum learning areas but the complexities of incorporating WTRD? into a range of learning areas, for example, “trying to coordinate teachers across the school to fit WTRD? around all their subject areas”; and,

- The practical approaches to teaching WTRD?, with little requirement for written work, which were embraced by the teachers in responses to having to teach the work during the students’ tutor group times when students might normally be undertaking less formal work.

One point of interest emerged in the form of one teacher’s comments about the students’ abilities to predict the overall results of ‘head and tails’ (confirmed by the student pre-test and post-test results); although, the students displayed little knowledge about the runs (of heads or tails) that could occur and the irrelevance of a run on any subsequent results. This teacher also noted that the students knew more about gambling than anticipated by the teacher.

At the conclusion of teaching some of the WTRD? units the teachers generally considered that the suitability of the curriculum materials for their classes was high.

Issues that arose from the students’ responses:

Students typically demonstrated understanding of the overall results of a specified number of coin tosses (head or tails); however, at least one teacher mentioned the issue of students’ understanding of runs and inability to predict the result of the next toss. (It should be noted that there were two ‘games’ in which the students participated: first, the coin tossing exercise, which was to demonstrate how long term probability counters short term volatility; and second, ‘chuck-aluck’ which was to demonstrate vividly the ‘house edge’. These activities were part of a series that were intended to demonstrate both that luck does not count for anything in the long term, and that the ‘house’ always wins.)

While this characteristic inability to understand may not be surprising given the complexity of probability and statistical theory and the students’ stages of cognitive development, nonetheless, the understanding both of runs and of the independence of each toss of the coin is crucial for decision-making in gambling-type activities.

When students were asked ‘What is gambling?’ their answers included:” It’s a risk…sometime fun…you win money…you can [emphasis by authors] win money.” Similarly, the question ‘Why do people gamble?’ resulted in the following answers from some students: “They want to get more money;….they need…money;….they might like the rush;….the thrill of it;….the risk;….they might be addicted to it.” Students’ reports about their exposure to aspects of the risks and excitement of gambling in some of the classroom activities in WTRD? provided them with an idea of what gambling is. Other research findings point to the possible roles of action and excitement, or the reduction of
anxiety, depression of boredom in driving people’s participation in gambling (Delfabbro, 2004).

When asked about their ‘favourite part of learning in WTRD?’ they referred to “the games…gambling games…feeling what gambling was like…like what could actually happen…trying gambling without risking anything…acting stuff out…so we know what it might be like…pretending…listening to what it might be like.” The possibility of winning, and having “fun” and “luck” were the concepts that the students appeared most reluctant to reject.

Chances of winning or losing, risks and effects or gambling, primarily its addictive potential, were the main ideas about which students reported they needed to learn. They typically considered that early high school was a suitable time to begin learning about gambling. Generally, students did not make readily any links to other subjects they were studying at school.

Interest in learning about gambling and progress towards the intended learning goals generally was reported by students. Specifically, students typically reported being “very” interested or “a bit” interested when they were informed their classes would be participating in the pilot of the What’s the Real Deal? Draft Kit. Students typically considered they had learnt through completing their WTRD? work: most reported learning to “some” extent; a “lot” or “a little” attracted the majority of the remainder’s answers. Only two students reported that had learnt nothing; they reported knowing a “fair bit already.” All but one of the 37 students who completed the post-test agreed that WTRD? either contained what they needed to know or was to some extent what they needed to know. The question ‘Should you learn about gambling at school?’ resulted in a variety of responses, although these were almost unanimously in agreement with learning early and before students were old enough to engage legally in gambling:

Yes, if you don’t know about it you might go and do it and not know the risks…why people might gamble…understand the consequences…it helps you when you get older.

Yes, you may get the wrong information about it from parents.

Yes, it can be fun so we shouldn’t just be told that it’s bad…now we know some things about it are bad.

This finding was not dissimilar to that of Dowling et al., (2005) who indicated some support for effective health campaigns and interventions to be targeted towards the apprentice group represented in their study. These responses indicated that students were not of the opinion that gambling was only a negative activity in which to become involved. Positive and negative aspects of gambling were identified by members of the sample.
Students typically reported an increased understanding of myths of gambling (e.g., luck, lucky numbers) and knowledge about related mathematical concepts (e.g., odds of winning any prize or a major prize, the results of coin tossing). The attribution of gambling success or gambling failure, however, is complex and influenced by a range of factors that can vary amongst individuals. Reference to “skill and luck” as factors in winning contrasts with ascription of gambling failure to factors external to the gambler (Blaszczynski et al., 1999, p. 10). Despite reports by many students in the sample about understanding the myths and the maths, their answers in the pre-test and post-test indicated an increase in the number of students who viewed gambling as a source of “fun”. In addition, while there was a trend to dismiss the influence on winning of the need to think positively, students were only slightly less likely (according to the post-test responses) to think first, that they would have to have good luck at least once, and second, that their use of lucky numbers would be more likely to lead to a win. The question of skill, indeed the use of the word ‘skill’, is crucial to consider in light of these findings. Delfabbro (2004) expanded on this theme:

The important message for gamblers is that there is nothing they can do to beat the house odds, and that any short-term increases above the expected odds are only due to chance. The term skills should be more clearly defined as an illusion of control, namely, strategies or systems which give the player the impression that he or she improves the odds above the maximum determined by the house. (p. 7)

Students’ responses indicated that they increasingly were aware of: why people gamble; the range of gambling activities, the risks (loss of money and effects on personal and family life); signs of unhealthy gambling; and, groups/people who were interested, in any way, in gambling. For example, the question ‘What would you do if someone you knew was gambling too much?’ obtained the following responses from the students: “Talk to them and say ‘Hey, I think you’re gambling too much’” and “Warn them about what they are doing with their life…talk about it.” These responses pointed to students’ capacity to view a scenario in a rational manner; however, the realities of lives do not reflect this level of rational thought (Delfabbro, 2004). The substance of desirable consequences, or goals, is crucial according to Miller & Brickman (2004) who specify the importance of “increased understanding…receiving rewards, status and affiliation” and the desire to avoid consequences such as “pain, loss of status, or loss of affiliation” or in the words of Bandura “outcome expectations” (cited in Miller & Brickman, 2004, p. 11). Gaining imagined benefits or avoiding potential problems influences people’s actions.

The idea of winning money may be influential, but not be uppermost, in the minds of adolescent gamblers; enjoyment and excitement and outstaying peers at one machine may be more important as indicators that these gamblers have got “value for money” (Delfabbro, 2004, p. 12). The possibility that the students’ experience of gambling activities may have increased the attractiveness of gambling, and its “familiarity” (Delfabbro, 2004, p. 3) to students formed part of one of the ambiguous findings.
The difficulties of curriculum design in the areas of gambling, therefore, are compounded by two points, first, what content should be presented, and second, what form should the presentation take (Delfabbro, 2004). Learning theories point, for example, to occurrences of “reinforcement generated by subjective and physiological arousal associated with winning”; cognitive theories suggest “illusions of control…[or] irrational thinking” (Blaszczynski et al., 1999, pp. 9-10). Bandura et al. (2003) highlighted the importance of the mediating effect of “perceived self-efficacy” on “anxiety arousal” (p. 771) during individuals’ performance of unknown and potentially threatening activities. In stressful times during adolescence, this combined effect is crucial, however adolescence it is in its most vulnerable phase of development.

In class discussion about information about gambling it was noted by the students that the odds of winning in one form of gambling of about 85 percent was perceived by the students to be more attractive than the associated fact that gamblers could expect to lose 15 percent of one’s money. The students considered the latter a more powerful message. Delfabbro (2004) highlighted that wins will occur intermittently by chance, so that a person participating in gambling will continually have their perseverance rewarded and reinforced from time to time; such intermittent reinforcement is very powerful in shaping behaviour. Delfabbro stated a more comprehensive understanding that requires curriculum and pedagogical consideration:

People [should not] enter venues in the mistaken belief they will lose only 13%. In other words, the 87% return should be clearly explained using expressions such as: ‘This is the percentage you should expect to have retained after gambling for X spins.’ The value of X could be many thousands of spins, and an estimate of how long (in hours) this would take should also be provided. (2004, p. 8).

The question ‘Why do people gamble?’ resulted in student responses such as: Because your friend might want to go to the pub and play the pokies so you do too…sometimes the pressure.” The high school students considered peer influence central to decisions to engage in gambling. The power of peers has been found to be influential in other studies (Bandura et al., 2003; Blaszczynski et al., 1999). Additionally, in research that focused on Australian apprentices in the building industry, peer influence, indeed their approval and engagement in similar behaviour, and socially acceptability were particularly influential on regular gamblers and gamblers experiencing at least one gambling-related problem (Dowling et al., 2005).

When students were asked ‘What ways could you get help for someone that was gambling too much?’ they replied in ways that potentially pointed to positive pressure from peers: Try to give them opportunities to go out and do something else…go to the movies so they might not think ‘I like doing this’…distract them.” Some students indicated that diversions needed to be placed in the way of their friends’ potential engagement in gambling.
Seeking help for someone who was gambling too much, for example, from a counsellor was less frequently mentioned by the students than either attempting to distract them or talking with the person themselves. This result was not dissimilar to the report by Dowling et al., (2005) that young people typically do not seek gambling counselling. Indeed, when young people recognise and accept they have a gambling problem certainly is important in their seeking help; as are “the fear of identification, the belief that gambling can be controlled, self perceptions of invincibility (from which the belief that an individual will be one of the winners despite knowing the gamblers typically lose [Delfabbro, 2004]), the negative perceptions associated with therapy, and the guilt associated with gambling problems (Gupta & Derevensky, cited in Dowling et al., 2005, p. 22). Issues of “control”, increased expectations of winning after experiencing sequences of losing, have been investigated without consistent results being found (Delfabbro, 2004). There are variations in the reasons people choose to gamble, and subsequently in the influences that may lead to their involvement in problem gambling.

The large majority of students (30 responses) did not consider that their work in WTRD? had helped them to learn in other subjects; that is, there was no transfer to other subject areas. This set of responses accorded with the teachers’ observations about the difficulty of planning, teaching and evaluating across curriculum areas because of time constraints. (It should be noted that during the pilot, schools mainly chose to use only Unit 1). Those students who perceived links between WTRD? and other subjects identified Maths (5 responses), English (4), Wellbeing (3), Health (1) and Humanities (1).

Implications for pedagogy, implementation and curriculum design: Discussion about addressing the complexities inherent in teaching students about gambling

‘Middle schooling: For which adolescent?’ is the title of a chapter in which Cormack (2005) stated that an argument such as “because adolescents are like this…they need a phase of schooling that.’ shapes the ways adolescents are understood and treated in classrooms, school and the community (p. 272). Any attempt to teach one curriculum to an entire group of learners is fraught with assumptions about similarities amongst learners’ prior knowledge, experiences and a range of influences from outside the school. Teachers’ roles in designing a variety of learning experiences to cater for a range of student abilities is crucial to enhance student learning; however, in contexts in which intensification of teachers’ work has been typical (Churchill & Williamson, 2004; and continue to be the norm (Gardner & Williamson, 2004) support and time for teachers to undertake inclusive planning is rare. The time and opportunity for essential collaborative teacher planning, at least partially, in official working hours, should enhance implementation and specifically pedagogy in classrooms (Collinson & Cook, 2001).

Findings of this study and in the wider literature supports assertions that: first, adolescents do not all report the same thoughts about gambling; second, that certain ways of thinking about gambling strategies and outcomes can be both healthy and helpful and unhealthy depending on contextual factors; third, that the reasons people start gambling may well be different from why they continue; and, finally, that gambling cannot be
defined in terms of only negative attributes. These finding pose challenges to an approach to address a broad social problem with a ‘quick-fix’ curriculum strategy which typifies the educational policy process (Bascia & Hargreaves, 2000; Bridgman & Davis, 2000; Spillane, Reiser & Reimer, 2002). This type of strategy does not take account of the fact that once in schools and in individual classrooms additional challenges to policy and curriculum texts occurs in the form of mediation by teachers and students (Gardner & Williamson, 2005; Helsby, 1995; Marsh & Willis, 2003).

Time for teachers to work collaboratively to learn and to teach is crucial (Collinson & Cook, 2001; Stoll, Fink & Earl, 2003). Teachers in this study were working in schools in which an overload of reforms has endured for more than one decade (Churchill & Williamson, 2004; Churchill, Williamson & Grady, 1997; Gardner & Williamson, 2004). Time for the teachers in this study to work together in their respective schools would likely have contributed to an improvement in their students’ perceptions of stronger links between WTRD? and their other work at school.

The importance of evaluating the use of new knowledge and skills, and student learning outcomes is well-documented (Guskey, 2000; Massell & Goertz, 2003). When policy is ‘symbolic’ (Hill, 1997; Lingard, 1996) or where governments remain largely unaudited (Davis, Wanna, Warhurst & Weller, 1988) evaluation may not serve any useful or educative purpose. Too often in the typical educational policy process, evaluation may not be of interest to policy-makers unless it produces information the policy-makers wish to hear. In the instance of evaluating WTRD?, the report of the evaluation (Gardner & Williamson, 2006) has been provided to the Department of Health and Human Services, Tasmania. The Gambling Support Bureau is in the final stages of preparing the new curriculum materials for WTRD?.

There has been ongoing communication between the researchers and the Gambling Support Bureau officer who worked to support the evaluation process. Since the evaluation the Gambling Support Bureau has worked with teachers and the Tasmanian Department of Education to address the evaluation recommendations, and has modified the kit accordingly, in particular addressing the points about the positive experiences students may have playing the games. For example ‘key messages’ for students have been incorporated, extra teacher notes, and a de-brief activity after the Chuck-a-luck game. Additionally, professional development work with teachers will address this issue to minimise the chances of students developing false expectations about gambling.

This scenario—entailing communication between curriculum designers, teachers, and evaluators (policy-makers have not been part of this process at the same time as the evaluators)—has some potential to be a productive and iterative course of action. It is clear, however, that the need for education about gambling—pressure from policy-makers to include gambling in the school curriculum, the interest of young high school students to learn about gambling and the need to educate young people about gambling before they reach the legal age for gambling)—does not take into full account students’ readiness to learn some of the concepts they need to make the best possible decisions.
about their engagement with gambling activities, or the variety of beliefs held by individuals about the pros and cons of gambling.
Acknowledgement

The authors wish to acknowledge:

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References


What is in a Profession and do Teachers Belong? A UK Perspective

Jannie Goepel

Introduction

This paper is concerned with what defines a profession and examines the tensions and contradictions of being a professional. Through an examination of literature I give an historical context to the development of professionalism and identify the most significant elements of change.

Within this general context, I examine the role of teachers as professionals including the political and social factors which have affected teacher roles and status over the last forty years. This includes the loss of autonomy through the introduction of regulation, the introduction of competition, and the marketization of schools. I also evaluate the UK government’s attempt to raise the status of teacher professionalism, through the introduction of Green Paper: Teachers Meeting the Challenge for Change (DfEE 1998). This includes the requirement for teachers to engage in continuous learning.

Continuous learning includes the notion of ‘agreement’ and ‘agreement-making’ through emergent professional values such as collegiality, negotiation, collaboration and partnership (Nixon et al 1997). These professional values are implicit within the Standards produced by the Training and Development Agency for Schools (TDA). These Standards set out what is required in order to qualify as a member of the teaching profession, identifying the qualities required of professional behaviour and how these relate to professional relationships.

In examining the role of the General Teaching Council for England (GTC) and its Statement for Professional Values and Practice for Teachers, I outline a set of qualities that state the core beliefs, values and attitudes expected of the professional. With these values in mind I revisit the notion of agreement-making and how the professional qualities of the teacher facilitate professional relationships. It is in the expression of these qualities that the professional culture moves from ‘managerialism’ towards the emergence of ‘democratic professionalism’ (Knight et al 1993, quoted in Whitty 2001).

Professions: Defined and Redefined

There has been much debate concerning the definition of professions, and which occupations qualify. Law and medicine are seen as ‘the most powerful professions’ (Eraut 1994, p.1), with other less influential professions being described as ‘semi-professions’ or ‘minor professions’. What factors give rise to professional status, when do they occur and what are their characteristics? To address this, I examine the traditional perception of a profession.

The Traditional Model
Friedson (1994) identifies two different ways in which the concept of profession can be seen. The first refers to a range of esteemed and varied occupations that are known more for their educational prowess than their occupational skills. The second, concerns a limited number of occupations with common institutional and ideological traits (p.16).

Other writers (Goode 1957; Hughes 1959; Schon 1987; Jackson 1970; Elliott 1972) contend that the professional community is based on a shared identity, values and role definitions. This gives an authority derived from the expert knowledge of the professional and accepted by the lay person. Jackson (1970) contends that this competence in specialist knowledge creates a ‘distinct mystique’ (p.7). In return for this expert knowledge, society has given such professionals autonomy in their practice, which carries with it social standing and recognition.

Within the training to become professional is the exposure to experience, apprenticeship and a range of attitudes relevant to laymen, colleagues and competitors. It is through these experiences, as well as their formal academic training that professionals gain power. Authority is gained by those who have become qualified as competent by their peer professionals, though these judgements may not be understood by those who do not belong to the profession (Halsey 1970, quoted in Jackson 1970, p.9). This leads to the notion that professionalisation can be seen as a protective action, setting boundaries between those who belong and those who do not (Jackson 1970, p.10).

Whilst some writers have sought to identify the defining characteristics of a profession, Millerson (1964) states that professionalism is a dynamic process taking into account changes in society, the way occupations seek out and attain professional status and how individuals can become practitioners of the profession (quoted in Johnson 1972, p.7).

Hughes (1963) maintains that it is not whether an occupation is a profession but rather how far they exhibit characteristics of professionalisation (quoted in Jackson 1970, p. 5). These attributes of professional behaviour are described by Barber (1963) as:

1) A high degree of generalised and systematic knowledge
2) Being orientated to the interests of the community rather than self interest
3) Having a high degree of self-control of behaviour through codes of ethics
4) Having a system of rewards, both monetary and honorary that recognise work achievement (quoted in Jackson 1970, p.8).

However, Schon (1987) describes professional practice as being able to create solutions and responses when there are no rules. It is being able to devise workable strategies within ‘indeterminate zones of practice’ to manage the uncertainty, uniqueness and conflict of values. These are considered as crucial to professional practice (pp.6-7).

If the above factors define the nature of a profession, what does this mean for teachers? Can they claim to be professional and if so how is this expressed? What does the professional body of teachers look like? What are its characteristics and how is its status perceived?
Teachers as professionals

The rise of mass education has resulted in weakening the ‘distinct mystique’ as the tasks teachers perform are ‘within the general competence of those who have been taught themselves’ (Jackson 1970, p.14). Furthermore, it is thought that the importance of the client influences the status of the professional providing the service; therefore the perceived low status of the child as client contributes to teaching being seen as a ‘semi-profession’ (Johnson 1972, p.30).

Leggatt (1970) identifies the teaching profession as a large group of people, a high proportion of whom are women. A high turn over of staffing means that as a professional group they are ‘loosely organized’ (p.165). The nature of the work is seen as bureaucratic with little concern for autonomy. This is thought to be more acceptable to women who have traditionally been willing to accommodate authority as well as being more tolerant of lack of advancement within the profession (Leggatt 1970, p.164). The teaching profession in the UK is fragmented into private and maintained sectors, varying levels of schooling and the competing priorities of administrators, head teachers and teachers. All of these inhibit cohesion for teachers within their professional body and contribute to their poor professional status (Ibid, pp.168-169).

In England during the 1960’s, teachers had a considerable amount of autonomy. However, in the 1970’s the view that this autonomy had been abused was made known. As a result of this, the autonomy of teachers became regulated. Teachers no longer had the mandate to act on behalf of the state for the benefit of its citizens; but became subject to the rigours of the market as well as greater control by the state (Whitty 2001, p. 161). Headteachers became concerned with parents as consumers, developing competition with other schools in the neighbourhood, and with managing the budget. They became concerned not just with educational matters but with functioning within the marketplace and ensuring economic viability. The pressures this created meant that management decisions were tilted towards commercial rather than educational or social considerations (Gewitz et al 1995, pp.91-92). In this ‘managerial regime’ the concern is for efficiency rather than professional standards, The manager makes good business decisions and requires the freedom to do so (Clark and Newman 1992, quoted in Gewitz et al pp.92-93). The emphasis is on output rather than on process.

This emphasis on achieving targets is driven by the state taking on a clear strategic role but withdrawing from the detail of how such strategies are achieved. Teachers are given direction about what they are required to achieve rather than leaving it to professional judgement. This emphasis on outcome implies that the state is disinterested in how these outcomes are achieved, however the required outcomes themselves dictate what teachers do. Therefore the state is able to influence what is involved in teacher’s ‘professionalism’ (Whitty 2001, p.162). Such ‘de-personalised authority’ does not allow for teachers to shape their own work. Instead their work has been increasingly moulded by the need for economic efficiency and suitability for achieving the state led targets. What do these changes mean for teachers and how does this affect their professional practice?
Ozga and Lawn (1981) and Aronowitz and Giroux (1986) consider that teachers are losing their professional autonomy, and are subject to a changing perception about their role as reflective practitioners and critical thinkers. It is argued that teachers are becoming ‘deskilled’ through being removed from planning about curriculum and teaching strategies based on knowledge of specific groups and individuals. Such ‘craft’ skills are being replaced with the re-skilling of teachers with management ideologies and control strategies (Apple 1981, quoted in Ozga and Lawn 1981, pp.142-143). In this way the teacher as ‘educator’ gives way to the function of processor, resulting in a loss of individual professional self image (Ozga and Lawn 1981, pp.143-144).

Having discussed the nature of a profession, and having traced the development of teaching as a profession, I examine the ‘new professionalism’ for teachers as outlined by the ‘New’ Labour government in England.

The New Professionalism

In 1998 ‘New’ Labour introduced a vision of ‘new’ professionalism for teachers in England. The expectation of the Green Paper (DfEE 1998), was to modernise the teaching profession, increase its status and to facilitate the recruiting, rewarding and retaining of high quality teachers. Teachers in a modern profession are expected to demonstrate characteristics such as high expectations of themselves and of all pupils, accountability, personal and collective responsibility for improving their skills and subject knowledge, working in partnership with other staff in schools, welcoming contributions from parents, business and others outside the school anticipating change and promoting innovation (Thompson 2001, pp45-46).

Thompson (2001) argues that because this ‘new’ professionalism was not devised by those within teaching and is externally imposed, it is unlikely to be taken up by the teaching profession. It is the issue of professional ownership which will determine whether the performance culture reprofessionalises or deprofessionalises teachers. Performance management can be seen as an opportunity to strengthen the teaching profession as schools are expected to become places of ongoing, collective professional learning. Headteachers are encouraged to take responsibility for school based professional growth and development, with leadership and innovative practices being encouraged (p.61).

It is this emphasis on community and collective responsibility for pupils’ learning which is crucial, and changes the way teacher learning is approached. It validates teachers’ professional discussion and collaboration and thereby changes the relationships between teachers, breaking down their isolation, giving them the scope to share teaching strategies, experiment with new ways of teaching, receiving feedback and developing the curriculum. (Lieberman and Miller 2000, quoted in Thompson 2001, p.62). It is by the defining of their own reform agendas that teachers can use performance management to counter the deprofessionalising effects of imposed reform (Fullan 2000, quoted in Thompson 2001 p.62) and move towards ‘professionality’ (Nixon et al 1997, p.12).

Agreement-Making within Teacher Professionalism
In establishing teaching as a learning profession, this necessitates teachers to be engaged in continuous learning. (Nixon 1992, quoted in Nixon et al 1997, p.16). In particular they become involved in a process of learning about difference and how this may be accommodated within the act of agreement-making. Agreement-making requires the teacher to demonstrate emergent values such as collegiality, negotiation, collaboration and partnership (Nixon et al 1997, p.16). They need to become skilled at achieving new agreements with regard to the purposes and processes of learning due to the breakdown of many of the traditional ‘agreements’. These agreements are between teachers, between pupils, between pupils and teacher, between teachers and parents, and between teachers and other agencies. It is this need to reach agreement that has become a defining characteristic of the new professionalism (Nixon et al 1997, p.25).

What this new professionalism looks like when fully fledged is not yet known. However the Training and Development Agency for Schools(TDA) has published a document stating what a trainee teacher must know, understand and be able to do to be awarded Qualified Teacher Status (QTS). It is assumed that these standards provide a guide to the characteristics the TDA considers teachers should display in order to join the ranks of the profession. The Standards are divided into three inter-related strands:

1) Professional values and practice
2) Knowledge and understanding
3) Teaching.

It is the professional values and practices strand which will be analysed in further detail as it outlines the required professional qualities for the new teacher.

**Developing the New Professionalism**

‘The teaching profession has never been in better shape’ (TDA 2006a, p3). This ambitious statement introduces the Foreword to the Training and Development Agency for Schools document *Qualifying to Teach: Professional Standards for Qualified Teacher Status and Requirements for Initial Teacher Training*. In this document the TDA outlines the high standards that trainees must achieve in order to enter the teaching profession. It reflects the changing nature of the profession and is intended to prepare teachers to help shape the future (Ibid p.3). It sets out the expectations of new professionalism in the context of preparing new teachers for the profession, and complemented by the drive to provide a strong culture of professional development among practising teachers, the new professionalism is being forwarded with the intention to improve its image and status (DfEE 1998, p.6).

Practising teachers are required to have high expectations of themselves and their pupils, to accept accountability, to take personal and collective responsibility for improving their skills and subject knowledge, to base decisions on the evidence of good practice both nationally and internationally, and to work in partnership with other staff in school, as well as parents and businesses (DfEE 1998, p.14). They are required to become not only teachers in the traditional sense but ‘managers of learning’, using other resources such as additional adults and technology to enable
children to achieve. The government is highly critical of some teachers who have been resistant to criticism and change and urges a 'culture of ambition and achievement' to become the 'culture of the entire profession'. This view has become the driver for modernising the teaching profession and is fundamental in the raising of standards (Ibid, p.14).

Taking into account the implications of the government’s Green Paper (1998) the TDA recognises that pupils, parents and carers are entitled to have high expectations of teachers and therefore the standards for joining the profession must also be high (TDA 2006a, p.5).

Teaching is one of the most influential professions in society. In their day-to-day work, teachers can and do make huge differences to children’s lives: directly, though the curriculum they teach, and indirectly through their behaviour, attitudes, values, relationships with and interest in pupils.

(TDA 2006a, p.5)

The TDA standards relating to professional values and practice underpin all other standards, and trainees must meet these requirements in all they do (TDA 2006b, p.7). They are seen as essential elements for gaining professional status and are therefore taken for the purposes of this paper as standards to be attained by trainee teachers and adhered to by practising teachers (TDA 2006a, p.3)

From Values to Qualities

The model of agreement-making outlined by Nixon et al (1997) identifies emergent professional values concerned with professional relationships with pupils, parents, other teachers and agencies. Many of these strands can still be identified within the professional values and practice outlined by the TDA (2006b) such as collaborative teaching and course planning, team planning and consultative management, sharing values and vision. However, the emergent professional values of collegiality, negotiation, collaboration and partnership appear to have been further developed into the qualities required of the individual to make informed judgements, to balance pressures and challenges, taking into account the background and circumstances surrounding the child’s learning as well as presenting a positive attitude towards pupil achievement (TDA 2006b, p.5).

There is still a clear expectation for the trainee teacher to work together with the pupil, parents, colleagues in school, other professionals and with other members of their own profession, but rather than an emphasis on developing skills of agreement-making within professional values, the trainee is expected to gain understanding of another’s perspective and thereby develop distinguishing behaviours which are characteristic of professional excellence and facilitate such working relationships (TDA 2006b, p.13).

In outlining the standards for professional values and practice the TDA (2006b) states that trainee teachers should demonstrate all of the following:

S1.1. High expectations, respect and commitment
S1.2. Consideration for pupils
S1.3. Promoting positive values
S1.4. Communication with parents and carers
S1.5. Contributing to the school
S1.6. Working with others
S1.7. Commitment to professional development
S1.8. Working within the law

These professional values demand the developing teacher to understand what is required by the standard, give allegiance to it and demonstrate both understanding and compliance in their behaviour (TDA 2006b, p.8). What then is the nature of the standards and how do they influence and shape the character of teacher professionalism?

Examining the Nature of the Standards

The notion of understanding, upholding and demonstrating is integral to each of the standards set out. For example, S1.1 is concerned with ‘High expectations, respect and commitment’. Within this standard the teacher must understand and respect their ‘pupil’s social, cultural, linguistic, religious and ethnic backgrounds’. The assumption is that gaining such understanding will dictate the behaviour required of the teacher, in this case ‘to support learning and to teach in ways that engage and challenge pupils’ (TDA 2006b, p.8). Other standards require different understandings such as the ‘range of interests, preferences and attitudes of pupils’ ‘the values and attitudes that they want pupils to develop’, ‘the ethos of the school’, ‘how other adults, both within the classroom and beyond, can contribute to teaching and learning’ and so on (TDA 2006b, pp 8-14).

It would seem that these understandings require the teacher to gain a perspective other than their own and to use this to not only make agreements with others, but to inform and change their own behaviour in order to assist and forward such relationships. The implication of the TDA standards is that teachers are no longer viewed with the expectation of having ‘expert knowledge’ but rather with the expectation of developing relationships with others, beginning with an understanding of the other’s perspective (TDA 2006b pp.8-15). Such understanding should be expressed through the required professional behaviour of the teacher in such qualities as:

- Consideration
- Communication
- Respect
- Commitment
- Positive attitudes
- Being a role model

These qualities are located within the individual demonstrating the required professionalism. They are different from values which are held and attitudes which may fluctuate. They are an intrinsic, distinguishing characteristic which define the nature of the practice of a professional and are different from subject knowledge or skills relating to professional expertise (Forsyth 2006). They can be seen explicitly and implicitly within the standards for professional values and practice. It is implied
that these qualities form the basis for teachers to exercise their professionalism, to embrace professional relationships; and through whatever agreement is made, to behave in a way which strengthens their professional status (TDA 2006b, pp.8-15).

The language used to express this professionalism is more akin to the ‘bureau professional’ or welfarist vocabulary, but yet is distinctly different. Although concerns such as collegiality and service are expressed, the teacher is required to take on an increasing awareness of the circumstances and perspectives of those with whom professional relationships are expected, including the rights of parents and children within a legislative context. They are held accountable for such understanding through the monitoring of the resultant behaviour. It is by gaining such perspectives that teachers are called to act in ways deemed to be professional such as ‘addressing learning needs’, ‘teach in ways which engage and challenge pupils’, ‘demonstrate values that reflect and promote the purposes of education’ ‘collaborate with and manage other team members’ ‘make judgements about the effectiveness of their teaching’ and ‘to identify ways to bring about improvement’ (TDA 2006b, pp.8-15). These phrases identify a strong emphasis on performance, output and achievement which is also a fundamental component of the standards. The imprint of raising the educational achievement of all pupils is clearly evident (TDA 2006b, p.8). In this regard the standards display an approach more in keeping with the new managerialist approach.

Exercising qualities such as respect, communication, consideration, positive attitudes and so on, demands a professionalism which involves the use of ‘discretionary judgement within conditions of unavoidable and perpetual uncertainty’ (Hargreaves 1994, quoted in Whitty 2001, p.162). However, in contrast, the move towards standards can be thought of as working against teacher autonomy and discretion (Whitty 2001, pp.162-163). These two strands can thereby be seen as creating a sense of competing and conflicting obligations and loyalties, and with this, greater external accountability (Osborn et al 2000, pp.49-50).

Whitty (2001) also proposes that different forms of professionalism are developing for some sectors of the profession with greater freedoms and autonomy for those who demonstrate loyalty (p.163), although it could also be suggested that most professions are becoming fragmented due to some members embracing change while others resist it. Certainly the strand of ‘bureau-professionalism’ with its emphasis on collegiality and service has been challenged by the ‘new managerial regime’ of standards and measures of performance. By imposing standards for teachers to be admitted as professionals, the government signals their allegiance to the ‘marketised culture of schooling’ (Whitty 2001, pp.163-164). They outline their expectations of the professional and through performance management regulate those who are considered worthy of leadership. Those who do not meet the standards of performance management are subject to continued regulation and accountability, whereas those who do meet such standards are given greater discretion and autonomy in the expression of their professionality (Ibid p.164).

Nixon et al (1997, p.16) refer to the notion of the ‘reflective practitioner’ as outlined by Schon (1982). Whereas the modes of agreement-making present an opportunity for difference to be accommodated through reflective practice, the standards for professional values and practice consider reflective practice to be more concerned
with professional development and engagement in new knowledge and ideas as well as their own practice and pedagogy. Teachers are expected to improve their own teaching by evaluating it, and from the effective practice of others as well as from evidence. There is a definite expectation of teachers to express their sense of collegiality and commitment to their fellows within the profession and thereby contributing to the professional body. The strand of professional development is also a significant element of improving the teacher’s performance and continues the government’s drive to raise standards and demand accountability. It is seen as a clear mark of the new professional (TDA 2006a, p.5).

Through this analysis of the Standards of professional values and practice, it can be seen that professionalism and the way it is expressed is constantly changing and evolving. As it changes, it carries residual cultural elements into the dominant culture. Also within the dominant culture are elements of the emergent. Williams (1980) states that the dominant culture is not static but that the residual and emergent cultures are part of a dynamic process, including a complex struggle over meanings and values (quoted in Nixon et al 1997, p.21).

The dominant professional culture of new managerialism within the Standards of professional values and practices is plainly evident, in particular the requirement for teachers to take on a ‘customer-orientated ethos’ (Gewirtz 1995, p.94). However, residual cultural elements of bureau-professionalism also remain. Given that characteristics of new managerialism and bureau-professionalism co-exist within the current professional culture, what is the emergent cultural element and how do modes of agreement-making feature within this development?

The Future of Professionalism

The General Teaching Council for England (GTC) was launched in 2000. This professional body is intended to give teaching the same status as other self-regulating professions. In its Statement for Professional Values and Practice for Teachers published in 2005, the GTC is at pains to state that this is not a set of guidelines but rather the beliefs, values and attitudes that constitute teacher professionalism. By referring to the high levels of individual judgement and skill that teachers display in meeting the challenges of their profession, qualified teachers are given certain autonomies and freedoms to act with discretion.

Tim Brighouse (2002) comments that the GTC’s new Code of Professional Values and Practice should ‘highlight the sort of quality which teachers themselves can recognise’, qualities such as energy, a sense of humour, intellectual curiosity and generosity of spirit. He identifies the role of the teacher as learner, and commends the role of the GTC in bringing together the work of the TDA and Continuing Professional Development (CPD) under the same banner. Brighouse states that ‘teachers need to be in control of their own destiny’ (p.16). In looking to the future, he observes that the teaching profession has now left behind the period of ‘uninformed prescription’ by government, as well as the subsequent phase of ‘informed prescription’. He suggests that teachers ‘stand poised to enjoy the status that comes with informed professionalism’ (Ibid p.16).
The GTC in their own commentary on the core beliefs, values and attitudes of the profession identifies the following:

- High expectations
- A spirit of intellectual enquiry
- Tolerance
- Honesty
- Fairness
- Patience
- A genuine concern for other people
- Willingness to work in partnership
- Good judgement

It would seem that the future of professionalism lies in the teacher developing characteristics or qualities that inform their actions. Indeed the TDA (2006b) and the GTC (2005) consider that such values ‘are the foundations of the profession’ (Brighouse 2002, p.16)

While the government favours an approach based on accountability through performance management and managerialism, professional self governance through the GTC promotes a professional qualities approach. It could be suggested that this emphasis on professional qualities constitutes aspects of the emergent culture within professionalism. It is certainly clearly evident in both the Standards for professional values and practice for trainee teachers (TDA 2006b) and the Statement of Professional Values and Practice for Teachers (GTC 2005). It is the professional qualities required of both the trainee teacher and the qualified teacher that appear to be the vehicle through which professional standards are set and maintained.

The practice of agreement-making remains but is further developed into an emphasis on professional relationships with the expectation that these are facilitated through the exercising of professional qualities on the part of the teacher. This process contributes to the development of professionalism (TDA 2006b, p.14). Whitty (2001) discusses what this professionalism might look like and who might be involved in its development. He contends that developing an alternative conception of teacher professionalism relies on broadly-based political support in order to counteract the effects of the ‘low trust’ relationship between society and its teachers (p.169). The government has also increased state regulation through new managerialism, but also given greater autonomy to teachers through the GTC. Thus a tension between state control and professional self governance is seen in terms of defining the nature of professionalism.

Knight et al (1993) contend that this tension can be resolved by ‘democratic professionalism’ (quoted in Whitty 2001). This approach seeks to ‘de-mystify professional work’ and to make agreements between teachers and others within professional relationships, particularly those on whose behalf decisions have usually been made by the state or the professions (p.170). It increases the significance of professional qualities within teachers to facilitate and build such professional relationships. With an emphasis on such qualities already an integral part of the standards for both trainees and qualified teachers it could be considered that this is already forwarding an emergent culture of ‘democratic professionalism’.
Conclusion

In this paper I have sought to discuss the nature of teacher professionalism by setting it in the context of the development of professions generally. I identify changes brought to the teaching profession through the introduction of ‘new professionalism’ and the implications of government imposed policy, in particular the expectation placed upon teachers to take on the rigours of the market, consumerism and targets (Gewitz et al. 1995; Robertson 1996; Whitty 2001; Thompson 2001).

I refer to the potential of teachers to take control of their own reform agenda through performance management and the giving of attention to the process of continuous learning. In addition, I evaluated the practices of ‘agreement-making’ as outline by Nixon et al. (1997). Within this framework of ‘agreement making’ I examined the requirements of developing teachers as outlined in the TDA Standards of professional values and practice (2006b) identifying emerging qualities. These require an understanding of another’s perspective and lead to expected behaviours. It is these behaviours which determine whether a trainee teacher can be admitted to the profession (TDA 2006b).

The Statement of Professional Values and Practice as outlined by the GTC for practising teachers has also been investigated with a set of core beliefs, values and attitudes being identified (GTC 2005). These characteristics or qualities are similar and complimentary to those required of the trainee teacher by the TDA and seem to point the way to the future of teacher professionalism.

I observe that whilst the dominant professional culture for teachers is that of new managerialism, the emergence of ‘democratic professionalism’ provides the way to unite the two strands of state control and greater teacher autonomy (Knight et al. 1992, quoted in Whitty 2001). I contend that the practice of ‘agreement-making’ remains as part of the work of teacher professionalism, but that it has been developed into a much greater emphasis on professional relationships. These are within the implied remit of the teacher to facilitate through the exercising of professional qualities. I put forward that it is through the development of such professional qualities that ‘the esteem in which the teaching profession holds itself and is held by the community’ will be improved (DfEE 1998).
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Learning to teach: An historical account of the construction of the primary teacher education curriculum in South Australia

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Abstract

Current concerns about what should constitute a curriculum for primary teacher education can be traced to the ways in which teacher education was established in the 19th century. This paper explores the historical construction of the South Australian primary teacher education curriculum with particular emphasis on the years 1940 -1970 an era in which the number of primary teacher education programs increased four fold. The focus of the paper is primary pre service teacher education which in the case of South Australia relates to the education of students from years 3-7. I will argue that a liberal/vocational studies dichotomy continues to dominate the debates about curriculum construction despite changing social and political contexts. As an example I will show how the teaching of English and literacy, key components in the primary school curriculum throughout this period- and today -have never been at the centre of the primary teacher education curriculum. This is a qualitative, historical study informed by Michel Foucault’s genealogical approach. It examines the assumptions governing the discourses of the teacher education curriculum as a way of connecting current practices with those that have gone before. The data includes teachers’ college handbooks, policy documents, teachers’ college principals’ reports and interviews.

Introduction

As Luke, Luke & Mayer (2000, p6) discuss in their editorial for the Teaching Education journal, education is a relative new disciplinary field and so ‘the establishment of teacher education as field, as profession, as reflective practice cannot be taken for granted.’ They claim that teacher education needs to look to the economic, social, cultural and technological realities facing today’s teachers and administrators. They ‘propose that teacher education be reframed as intergenerational succession planning, requiring self-critical and futures-oriented strategies (Luke, Luke & Mayer, 2000, p7). Such calls for a redesigning of teacher education have been common in Australia and other post industrial countries in the last decade. See for example Young, 1998; Smith & Weaver, 1998; Smith, 2000; Collins, 2004. Other calls for changes, rather than reconceptualisations of teacher education can be found in the many government reviews of teacher education completed in the last twenty years. See for example Quality of teaching: An issue for all (Dawkins 1990); A class act: Inquiry into the status of the teaching profession (Senate Employment, Education and Training References Committee, 1998); Teachers for the 21st century: making the difference (Department of Employment, Education, Training and Youth Affairs, 2000); Quality matters: Revitalising teaching: Critical times, critical choices: report of the review of teacher education (Ramsey, 2000). There have also been discipline reviews such as, Discipline review in mathematics and science (Speedy, 1989)

Despite these calls for changes and even redesign, the teacher education curriculum remains wedded to a model that is over a century old. As Luke, Luke & Mayer (2000, p 9) describe it ‘the representation and reproduction of [a] particular historical model[s] of “good teaching” as culturally generalizable and as universally practical’ is not a ‘generative’ model for teacher education. In this paper I will discuss the teacher education curriculum with regard to South Australia to show how despite changes within the teacher education curriculum, this reproductive curriculum model continues to predominate. As an example of the consequences of this model for teacher education students, the English/literacy curriculum is discussed. I will focus on the years 1940-1970 to make comparisons with what exists today and to show the curriculum continuities and discontinuities across time. I begin by briefly describing the research methods I have used and some of the historical background of the primary teacher education curriculum in South Australia.

Research methods

This paper draws on research from a larger project which examines the ways pre service teachers have been constituted in the discourses of pre service teacher curricula, government reports, principals’ reports and the media. My paper focuses on the teacher education curriculum and the discourses that have surrounded it. It is a qualitative, historical study informed by Michel Foucault’s genealogical approach which he first developed in, Discipline and punish: The birth of the prison (1977). I am aware that many other writers have used Foucault’s work including the concept of genealogy and as Baker (2004) says there is not a definitive Foucauldian research but rather there are many ways in which Foucault’s theories has been ‘made to work’ as part of the research process. My interpretation of Foucault’s concept of genealogy is also drawn from other writers that have gone before me.

Genealogy is a ‘methodological device’ (Kendal & Wickham, 1999, p29) which can be used to examine the assumptions governing the way people think or talk about an issue and as a way of connecting current practices with those that have gone before. Such an examination means interrogating the networks of ideas (or discourses) through which, and by which the object of the study (pre service primary teacher education curriculum) has come to be constituted. A genealogical study begins with the ‘problematisation’ of a current issue.’ In this case the current issue is the concern being expressed by the government, and more broadly the media about what pre service teachers are being taught within the teacher education curriculum.

However, for Foucault the present and therefore the issue being problematised is not an end point, because to Foucault, histories and problematisations are ongoing. Indeed ‘the present is just as strange as the past’ (Kendal and Wickham, 1999, p4). Foucault’s use of genealogy as a method for exploring and understanding the present does not equate with modernist assumptions of history as progress over time, or that issues of the present
emerge from the past. Instead Foucault uses history ‘as a way of diagnosing the present’ (Kendal and Wickham, 1999, p4). He is not concerned with grand narratives of history which strive for coherence and overarching principles (what he calls a ‘totalising history’). Rather Foucault’s work is concerned with the disruptions and discontinuities of the past which he describes as a ‘general history’ (Kendal and Wickham, 1999, p24).

In choosing to use a genealogical approach I aim to talk back to the assumptions about the historical construction of the teacher education curriculum and the liberal studies/vocational studies dichotomy. For example in the National Inquiry into Teacher Education and the government report *Top of the class* (House of Representatives Standing Committee on Education and Vocational Training, 2007) through the production of a ‘general history,’ in which taken for granted assumptions about what constitutes a primary pre service teacher education program will be examined and critiqued.

The data includes teachers’ college handbooks, curriculum documents (although there are few of these), media reports, the South Australian Parliamentary Papers (SAPP) which contain reports from the Director General of Education and the Principal of the State teachers’ colleges as well as government reports and policy documents. This data is analysed by using a discourse analytic approach which examines the thematic and linguistic choices through which teacher education curriculum is represented in speech written accounts and reports, teacher guidelines and recommendations for practice.

I will begin by providing a brief contextual overview of the teacher education curriculum since its inception in pre service teacher education in the teachers’ colleges in South Australia. I focus on some of the key discourses which I argue are part of the continuity of disciplinary norms that constitute the structure and form of teacher education in this state.

**A short history of the teacher education curriculum in South Australia**

Issues about the curriculum of teacher education emerge time and time again in the history of teacher education. In particular the notion of a liberal studies/vocational studies dichotomy that creates an unnatural division that takes little account of the social and political context for teacher education. In this way concerns about the nature of teacher education curriculum have existed since the introduction of teacher education in South Australia. These concerns have always been about a) the general education level of pre service teachers and b) their professional knowledge and skills. Discourses around these two issues are generally about a lack of general education or an inadequate skill base. For example as Hyams (1979, p48) reported, William Mitchell the philosophy professor at the University of Adelaide described South Australian teachers in 1898 as ‘the least educated in the English speaking world.’ However Hyams also makes the point that this criticism is some what harsh, given that all the states of Australia were in a similar position with regard to teacher education at this time.
The first teacher training school in South Australia opened in 1876 with 30 students. (Prior to this and also alongside of the training school an apprenticeship model of teacher training operated. This paper focuses on the curricula in the teachers’ colleges.) Entry requirements were good character, good health, an age between 17 –36 years and an ability to pass an entrance examination in 8 specified subjects. (SAPP 1877 No 21 p2). Potential candidates also had to spend one month in ‘pre training’ to see if they had sufficient natural ability (SAPP 1877 No 21 p5). In effect this was a monitor system prior to entry into the training school. These entry requirements provided a diversity of students but this changed in 1882 when a new entry requirement demanded that students have had some teaching experience. This was foreshadowed in Lewis Madley’s Report on the Training School to parliament in February 1879(SAPP 1879, Vol. 3, p40). By 1885 entry requirements ‘preclud [ed] all except pupil teachers who had completed their four years of apprenticeship, or those persons, between the ages of nineteen and thirty six years, who had been engaged in at least six months of teaching and who could pass the customary entrance examination’ (Hyams 1976 p211, SAPP 1885, no. 34 Education Regulations 1885, p9). So in effect what had been set up, as a largely pre service teacher training program became an adjunct to an apprenticeship model.

Students studied general, professional and practical subjects. The general studies included the ‘basics’ of reading, writing, arithmetic, geography, history, grammar, spelling and composition studied to a higher level than that demanded by the entrance examination. In effect these were studies at a secondary education level. Students could also study mathematics, science, grammar, literature, a foreign language and music. Students were streamed after one month’s study. Division 2 students worked at lower levels for a third class certificate. Division 1 students focused on more advanced studies passes in which could earn them a second class teachers’ certificate ((Hyams 1972: p161 & SAPP 1877 No 34 p25). To gain a first class teachers’ certificate one needed to pass at a high level the required mathematics and science subjects (mostly taken at the university) and to be recommended by the Inspector for the certificate. This meant that teaching ability as well as academic ability was taken into consideration (Inquiry into the Education Act 1875 minutes 1883, pp3-5). General studies ‘were designed to further personal education of students and to provide them with background knowledge [for teaching]. Professional studies included the theory and practice of education, principles of teaching and school management. Students also had to be familiar with the primary school subjects and how to teach them.’ (Education regulations 1885 SAPP 1885 No 34 p9) A half-day a week was spent in observations and teaching experience at the attached Grote Street Model and Practicing school. The course length was six months or one year depending on students’ ability to pass the examination, which was offered after six months training. If students failed they could resit the examination six months later. It is interesting to note here what seems to be an after thought with regard to the primary school curriculum. At this time familiarity with the primary curriculum was taught at the practicing schools rather than at either the training college or the university. In this way a hierarchy of knowledge and skills was set up from the beginning of teacher training with a differentiation between subjects taught in schools, in college or at the university-the level of the place of instruction paralleling the class of teaching certificate and the level of pay to which the graduate was entitled.
In another apparent reform of teacher education in 1909 the University of Adelaide took over the training of teachers in South Australia in conjunction with Teachers’ college in a rather unusual model which did not last very long. However it is interesting to note that in this situation the emphasis of the curriculum was on a good liberal studies education for teachers. In his report to parliament Andrew Scott, Superintendent of the college outlined the aims of the College.

The aim of a University Training College, it seems to me, is not to turn out mere teachers by asking what subjects they have to teach, and then steering a straight course for these alone. The true aim should be to develop true men and women of keen intelligence, real independence, genuine enthusiasm, culture, and refinement, who may be able not only to teach the younger generation so much of elementary school work but also to profoundly affect their lives and characters (SAPP 1907, Vol. 3 p29).

The university was, as before focusing only on the general or liberal studies component of the teacher education curriculum. Alfred Williams, the Director General of Education in South Australia at this time recognised that more would need to be done to tackle the issue of the practical/professional elements of the teacher training. The next curriculum reform took place very quickly in 1910 when it was decided that all teacher trainees would attend the Observation School before the University term began. ‘Here they were given lectures and demonstration lessons and were ‘required to teach ‘criticism lessons’ before their peers so that their attempts could be discussed in seminar fashion afterwards’ (Theile, 1975, p89). At this time too Williams was keen for academic and professional training to run concurrently so teachers from the Observation School gave lectures on teaching methods during university term time and a half day a week was provided for teaching in schools. As reported in the parliamentary papers for 1910:

From January to March two days per week will be devoted to teaching in schools affiliated with the Training College. From March to November this time will be reduced to three hours per week and from November to December the students will give their time to observing teachers at work, to actual teaching and to criticism lessons. (SAPP, 1910. Vol. 3 p9).

By 1921 entrants into the Adelaide Teachers’ college (the University College was no more) had secondary school education at least to year 11. However as the Principal of the college, Dr Schulz in his 1921 report to parliament wrote, the teacher education curriculum still consisted of ‘university subjects’, ‘professional subjects’ and ‘practical work,’ examples of which he described below.

*University subjects* – All students attended university lectures in at least one half subject but more took up from one to two subjects while several completed (with distinction) as many as three full subjects. The range of topics studied included, Education, Latin, Greek, French, German, English literature, English history, Economics, Pure mathematics, Applied Mathematics, Physics, Chemistry, Physiography, Biology, Banking and Exchange, Accountancy, Commercial geography.

*Professional subjects* – In addition to the university subjects, students attended courses of lectures in the more immediately “professional” subjects. Education, Psychology, Hygiene, Primary and Infant school methods of teaching, Geography, Nature Study, Civics, Elocution, Drawing, singing, sewing (women) and physical culture (men).
Practical work—the practical work—consisted of a series of demonstration and criticism lessons (given in the earlier part of the year at Gilles Street and Flinders Street Schools) and in teaching practice (during the rest of the year) at 18 city and suburban schools. This work was principally under the College Lecturers in Method… (SAPP 1921, Vol. 2, p37).

It is interesting to note what are described as ‘professional subjects.’ Education and Psychology seem to relate to the broad study of Education whilst the others such as Civics, Elocution and Drawing relate to the school curriculum. Where then are subjects such as English and mathematics as they taught in primary schools? They may well be included as part of the ‘Primary and Infant school methods of teaching’ or they may be part of the ‘practical work’ undertaken in schools, but given their primacy in the primary school curriculum of the time it is a major gap.

Twenty years later in 1941 Dr Schulz continued to discuss the teacher education curriculum in similar terms. In describing the new entrant to the Teachers’ college he said,

Generally speaking, his (sic) university studies may be said to bring him (sic) many of those experiences which are in themselves the process of growth of his (sic) culture and character generally, his college activities those which give professional equipment, and his (sic) practicing school work those which develop his professional skill to teach and control (SAPP 1941, No.44, Appendix F).

Schulz goes on to write that the integration of the College, University and practicing school work that is important to the development of the teacher, again separating these as attending to different aspects of teaching practice, and noting that,

College life is in short not a matter of just three separate directions of development, but a totality of experiences which develop a personality more or less directly in all its aspects and as a whole. Nevertheless, for purposes such as the present report, it still remains convenient to give a certain recognition and a measure of separate consideration to each of the three aspects (SAPP 1941, No.44, Appendix F).

The work on the self the pre service teacher was required to do to ‘develop a personality,’ was the work of bringing together the liberal and vocational aspects of education provided by the teacher education curriculum. A South Australian government inquiry into education set up in the early forties made mention of the liberal/vocational studies dichotomy that had been in evidence in teacher education for over seventy years pointing out how the professional subjects (the vocational aspect) were given so little recognition in the teacher education curriculum as a whole.

90. Unfortunately the teacher’s course of preparation falls into two blocks of study: the academic, which is supposed to give him his general education, and the professional, which is supposed to give him only a narrow specialized training. Teacher-students, it is commonly thought, are educated at the University by the taking of the academic subjects but are merely trained at Teachers’ College by the taking of professional subjects. The present dualistic scheme has certain bad results…. Teachers feel, and we think rightly, that this arrangement fails to give due recognition to the value and importance of their professional studies (Education Inquiry Committee, First Progress Report, 1945, Chapter II quoted verbatim in the S.A.Teachers’ Journal, June 1945, Vol. XXXI, No. 5pp 23-29).
This report was released as the Bean report in 1949. It was a radical document in many ways not the least in the area of teacher education. It advocated three year courses for all teacher training and also made recommendations about ‘the nature of the courses of training for teachers.’ These related to the need for general education for all teachers, the recognition of teacher training courses by the university, a proposal for a first degree in education for primary teachers and a Teachers’ Certificate for teachers’ college graduates. Three year courses for all pre service teachers did not become a reality until 1971. The Teachers’ Certificate was established in 1947 and in that same year the AUA (Associateship of the University of Adelaide) introduced a sub degree award, which consisted of six units of a BA degree and could be completed by three years of university and teachers’ college enrolment. Students were not required to matriculate to undertake the AUA (Karmel, 1970, p397). The award gained little acceptance in the educational community. Both the staff of the college and the teachers’ union questioned the professional content of the award, which they regarded as negligible, and members of the university community questioned its academic standing (Hyams, 1979, p133).

The introduction of a first-degree course for primary teachers did not occur until 1967 and not at the University of Adelaide but at the newly established Flinders University. From 1957 through to 1969 there was a gradual decline in primary teaching students taking any university studies, from 75% pre 1957 to 43% in 1969(Karmel, 1970, p397/8).In 1954 the Adelaide Teachers’ college introduced their own General Studies strand which was partly the reason for the decrease in number of primary pre service teachers taking university studies. However it needs to be said that although these changes gave higher status to teacher education courses the curriculum was little different from what had gone before.

Towards the end of the fifties and throughout the sixties there was a significant growth in primary teacher preparation courses as four new teachers’ colleges were established. This was partly due to the increased population in South Australia and partly to the increase of students moving through the secondary school system. The end of the Qualifying Certificate examination in the final year of primary school removed the academic barrier to secondary school which in turn forced secondary schools to look at the curriculum on offer and make it more appropriate for the great diversity of students now continuing their education to a secondary level and beyond. Wattle Park Teachers’ College in 1957 was the first new college established but this was soon followed by the Western Teachers’ College in 1963, Bedford Park in 1966 and Salisbury in 1968. Teacher trainees grew in the period 1959–1968 from 500 to 5000(Theile, 1975, p216).

After Dr Schulz retired in 1948 Dr Harry Penny took over as Principal of the Teachers’ college. Whilst Schulz viewed the integration of both the liberal studies and vocational aspects of the pre service teachers as the development of the teacher as a whole he did not appear to view the dichotomy as a problem for the teacher education curriculum as did Dr Penny.
The liberal/vocational studies dichotomy-a problem for the teacher education curriculum

In 1967 the South Australian Education Department had issued a new circular regarding teacher preparation. It stated that:

The main aims of a teacher preparation programme are:-
1. To provide a general, liberal education;
2. to provide a deep insight and understanding in at least one area of knowledge;
3. to provide professional knowledge and understanding in the theoretical bases of the disciplines of education;
4. to provide understanding and competence in methods and techniques;
5. to provide for the personal development of the teacher;
6. to provide mastery of the subjects to be taught (E.D. Circular No.61, 1967).

This circular was developed as more of the colleges were moving to three year preparation for all teachers (although this was not actually achieved until 1971) and so it can be assumed that pre service teachers had 3 years to meet the aims of this Education Department document. However it can be seen in the aims that the liberal vocation studies divide is still alive and well. Primacy is given to providing a ‘broad general, liberal education’ and to a deep understanding in at least one area of knowledge.’ ‘Mastery of the subjects to be taught’ comes last.

The colleges of the time largely embraced these aims and their curricula reflected them. However it was not without debate. In a thesis written as part of requirement to qualify for a Masters degree Young (1971) argued that teacher education programs could provide ‘a sound liberal education [or] alternatively, the programme can provide adequate and appropriate professional training…attempts to provide both will fail to provide either satisfactorily’(Young,1971,p1-2). He goes on to describe the difficulties experienced by one college, Bedford Park to establish a program that took account of all of the Education Department’s aims in particular the difficulties of meeting the aims for pre service primary teachers. From 1967-1969 the college courses were focused largely on the academic or liberal studies with one course in Education (Young, 1971, p11).Aim 4 ‘to provide understanding and competence in methods and techniques' and aim 6 ‘to provide mastery of the subjects to be taught’ were dealt with as part of ‘practice teaching experiences.’ That is they became the responsibility of the schools. For primary pre service teachers, one course called Psychology and teaching of the basic subjects was offered. It was designed to provide students with,

knowledge and theory concerning children’s cognitive growth, including
language acquisition and concept development, so providing a basis for examination of both
curricula and teaching methods in the basic primary school subjects (Bedford Park Teachers’ college annual report, 1969, p56).

The Courses of Instruction in South Australian schools were widely used in these courses (Young, 1971). However this was a very small proportion of the total teacher education program, one ninth of the total. This also represents tremendous amount of work for one course to do. The idea of a liberal education as more important than the professional work
of teachers continued to prevail with many arguments put for the retaining of this. For example, in a 1970 staff seminar paper W Mithen wrote,

> The basis of a teachers’ college curriculum must be in the direction of the academic, the scholarly, the theoretical, rather than of practical and vocational…we will not make our student teachers; they must do that for themselves in schools (Mithen cited in Young, 1971, p21).

The argument focuses on academic rigour and implies that professional studies (vocational studies) cannot be rigorous; an idea that still persists in teacher education today. Minister Nelson in setting up the latest review of teacher education said in a press statement;

> I am concerned that there are problems in the training of teachers in Australia.”

Thats not to suggest that all those that are leading teacher education faculties are not of a high standard, but there is no doubt in my mind that there is a problem in terms of standards, scientific and academic rigour and indeed the resourcing of education faculties (Nelson, 2005).

This argument also suggests that for example the teaching of reading or mathematics have no theoretical or scholarly basis. The results of such thinking are that some courses in the teacher education curriculum have higher status than others; those with a ‘scholarly, academic’ bent. Besides the liberal studies that also included studies of the disciplines of education; philosophy, psychology, sociology and sometimes history.

Mithen’s (cited in Young, 1971) argument about the ‘making of student teachers’ seems to hark back thirty years to Schulz’s notion about the making of the personality of the teacher and how the student teacher him/her self brought together the two elements of the curriculum through what was afforded in their teacher education program.

Despite such arguments there was also change around this time with other teachers’ colleges bringing the professional studies into prominence. For example Dr Harry Penny presented an analysis of the dualism between what he called the ‘training’ and ‘education’ of pre service teachers. He said:

> In plain words the university [Adelaide] was insistent that the best preparation for the teacher was a general education; the Department was concerned that teachers should be both ‘educated’ and ‘trained’…the antithesis was wrongly conceived and stated sixty odd years ago, and no resolution will be possible until the nonsense about ‘education’ and ‘training’ is at last cleared away (Penny, 1968, p29).

He recognised that it was not useful to put liberal studies and vocational studies in opposition to one another and gradually in the next decade there was a change with more time spent on the professional studies although there was much debate (as there had always been) about what constituted professional studies. These debates can be traced to Durkheim and what Ziman (1968) called the ‘the public knowledge ‘of the subject education. Musgrave (1970) in a keynote address to The National Seminar on the Education in Teachers’ colleges said,

> Education is seen as a theory of practice to which a number of established disciplines with epistemologically different bases are relevant. These are usually seen to be philosophy, history, psychology and sociology (Musgrave, 1970).
The professional studies courses in the teachers’ colleges in South Australia had largely consisted of these disciplines for over forty years but in South Australia in the late sixties there was an experiment to integrate these disciplines. All five colleges decided to introduce interdisciplinary education courses for the professional studies component of the diploma. As Cross (1970) reported at the National Seminar on the Study of Education in Teachers’ Colleges all five colleges experienced difficulties adopting an interdisciplinary approach. These difficulties related to ‘combining disciplines with different conceptual structures’…‘staffing such courses’…and ‘the immediate effect of the courses on students.’ (Cross, 1970, p2/3). The two key debates about 1) the balance between general and professional studies and 2) the components of professional studies continued throughout the seventies and eighties resulting in a variety of course combinations. However whilst professional studies became a more important part of primary teaching awards in South Australia some aspects of professional studies namely what were called methods subjects continued to be neglected in the colleges and largely dealt with through the practicum. In this next section of the paper I will provide an example of such courses with a brief discussion of subject English.

**Low status subjects- ‘methods’ subjects**

‘Methods’ or school curriculum subjects have had low status as part of professional subjects. Clearly this has been as a result of the debates about what is appropriate for a teacher education curriculum. The debates that pitted liberal studies against professional studies and the later debates about what constituted professional studies all had an effect on the place of ‘methods’ subjects in the teacher education curriculum. Later the arguments shifted to the nature of the subjects. As described above liberal studies subjects were considered more academic and scholarly. The idea that ‘methods’ subjects were not theoretical or rigorous as mentioned above, also contributed to their low status. Another reason for this low status seems to be about who taught which subjects. In the early days of the teachers’ college the liberal or general studies were taught at the university and the professional subjects were often (although not always) taught by less qualified people at the teachers’ college. The so called ‘methods’ subjects were taught as part of the practicum and were thus taught by teachers who were usually less qualified than the college lecturers. Thus a hierarchy of subject importance was established.

English/literacy has since the beginning of public primary schooling in South Australia been an important subject and the subject to which most time has been devoted. According to the Courses of Instruction between 1940 and 1970 around 40% of the primary curriculum in schools was devoted to the teaching of English/literacy. During this time very little time was spent on teaching pre service teachers about English/literacy.

**The place of English/literacy in the teacher education curriculum**

The two most recent government reports about teacher education, *Teaching reading* (2005) and *Top of the class* (2007) are both concerned in part about what students learn about the teaching of English/literacy. As can be seen from the above historically little
time was spent on such courses. An examination of the Adelaide Teachers’ college Handbooks 1940-1955 mentions the subjects to be studied at the University of Adelaide (the general or cultural studies) but very little or nothing about the professional subjects to be taken at the college. From 1940-1946 nothing is mentioned in the handbook. From 1947 -1955 the following paragraph is repeated.

Information regarding the subjects for the various college courses will be outlined by the individual group lecturers in the preliminary lectures. Make sure you know what you will require for your own particular college course. If in doubt about any of these subjects do not hesitate to make enquiries from your group lecturer (Adelaide Teachers’ college Handbook, 1947, p46).

My interviews with students from this period bear out the dichotomy of the liberal studies vocational studies curriculum and the minimal time spent on learning about the primary curriculum including English and how to teach it. This teacher attended Adelaide Teachers’ college in the mid fifties.

…We learned most of our methodology in a practical way in the Demonstration [Dem] Schools and that is why methodology taught in college was so general and so weak.

Q. What about English?
A: Right, I’ve been thinking about this. No, and I don’t think we were actually taught any. We were taught general methodology but I can’t remember being taught English methodology except on the spot in Dem schools. I know that the C students [early childhood group] were taught a lot. As a result of that your methodology tended to be the methodology you had learnt at school, modified a little bit by the latest theories. But no, I can’t remember having any English. Remember I said I thought the methodology courses were strange. We spent most of our methodology courses studying reports.

Q: Really?
A: English reports mainly. What direction teaching should take and so on but very little practical stuff in methodology. When we went teaching in the Dem schools of course the methodology was very much emphasised so you picked up a lot of methodology from your Dem schools and from when you went practice teaching from the Dem teacher. Again it was very much left to the Dem teachers to teach methodology.

An examination of the time spent on the professional subjects also bears this out. For example from 1957 – 1961 the Wattle Park Teachers’ college Handbook lists English as being taught in Principles of Primary Education Parts 1 & 2. English is included with Mathematics, History and Geography (in later years called Social Studies). At two lectures per week for the subject as a whole, English is one third of the course and possibly one third of the contact time was spent on it. Across two years this could amount to 30 hours contact time (less than the typical contact time of one 4.5 course at the University of South Australia currently). Between 1966-1970 the contact time devoted to English rose slightly to 38 hours although it was now only taught in one year of the program. Western Teachers’ college 1963-1969 devoted similar contact time to the teaching of English at the primary level.
The curriculum for the teaching of English at primary school was not described at all in the teachers’ college handbooks 1940-1957 and only briefly from 1957-1970. For example the 1962 Wattle Park Teachers’ college describes English as part of the subject College Principles of primary education as:

A broader consideration of modern educational thought and practice than is given in College Principles of Primary Education, Part 1 with particular reference to English, Mathematics and Social Studies:
(a) The nature and value of English teaching in the primary school: the scope and content of the course; the purpose and methods of teaching reading, poetry, language (oral and written), spelling and grammar.

There are no textbooks listed for the English aspect of the subject although three texts appear in a list of ‘reference books’ as:
Education Department of South Australia: *Course of instruction for primary schools*, 1958
Schonell, F.J. *Psychology and teaching of reading*, Oliver and Boyd (no date)
Grassam, E.H. *Getting ready for reading*, Ginn (no date).

The English curriculum at the Wattle Park Teachers’ college is described similarly with some changes in the references listed although Schonell and the Education Department Courses of Instruction are always mentioned. At the Western Teachers’ college 1963-1968 (a new course was developed in 1970 English was not taught in the first year of the new course) has virtually the same aims as listed above for Wattle Park TC although it lists Schonell as a text book rather than a reference along with Reeves, J. *Teaching Poetry*, Heinemann, 1958 and Cutforth, J.A. *English in the primary school*, Blackwell (no date). Reeves and Cutforth are also listed as reference books for Wattle Park TC in 1964-1967. Interestingly Western TC does not list the Education Department Course of Instruction for study.

Current concerns about what pre service teachers are taught about teaching English/literacy are focused on the amount of course time available for this given the crowded curriculum of pre service awards and in the Australian Government Inquiry on the methods of teaching in particular the teaching of reading. It is interesting to note that in the current awards at the University of South Australia there is now more time devoted to professional studies than in the past but that there has been a change in the nature of those professional studies and in one award less time devoted to study of the primary school curriculum subjects. The teaching of reading is included in subjects on the teaching of English. The study of Education with reference to the disciplines is still a major part of the primary teacher curriculum in the university today. There is a major (8 subjects) largely in the discipline areas as Ziman (1968) wrote about them although History is not represented.

**The primary teacher education curriculum today: Standards for South Australian teachers**

Although the debates around the primary teacher education curriculum have changed in some ways the vocational/liberal studies debate still rages in South Australia but one
wonders for how long this will ensue given the *National Framework for Professional Standards for Teaching* developed through the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA). The South Australian Teachers Board (TRB) is the regulating authority in the state and as such is working with the other states to achieve alignment with the national framework. According to their website there was a consultation phase from May-July 2006 about a code of ethics and the professional standards. The draft document relating to entry to the profession is on their website and this site was last updated on 27 October, 2006. The core principles of this draft document are Professional relationships, Professional knowledge and Professional Practice. There are three standards under each of these principles and then some examples of characteristics of the standards. The Professional relationships principle standards are; professional and collegial learning, learner respect, and parent/caregiver and community partnerships. The Professional knowledge standards are; learning processes, learning content, learner context and the Professional practice standards are; planning and teaching; feedback and reporting, learning environment. In this document all principles appear to be given equal weighting. It is not the purpose of this paper to map these standards on to current teacher education curriculum. Suffice to say that the place of what was called ‘liberal studies’ and the ‘education studies’ of professional studies seem to have less emphasis than what current programs provide. However that is not to say that we should be uncritical of these standards. They too need to be deconstructed.

**Conclusion**

This paper has explored the liberal/vocational studies dualism which I argue has been at the heart of primary teacher education curriculum in South Australia for over a hundred years despite some changes in the balance of this. Prior to the development of the teachers’ colleges and during the first fifty years of the colleges opening, the majority of pre service teacher education followed an apprenticeship model. The college when first set up was trying to develop an educated teacher through liberal studies but as the colleges began to educate more of the teachers the tension between liberal studies and vocational studies increased. The balance has changed over the years but the tension still exists as the previous and existing curriculum models show. The introduction of national standards for teacher registration will necessitate change. As part of the process of that change I would argue that teacher educators need to go back and examine the historical bases for the curriculum.
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Playing with time: history and the extended present

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Abstract

In this paper we consider how the concept of time is developed in schools. We argue that the teaching and learning of history (despite the emergence of the new history in the 1970s) is still taught and learnt with a temporal bias and it is often positioned in the past. So too, history/SOSE\(^1\) student-teachers are exposed to temporal bias in their tertiary education (as is evidenced in ‘Arts Faculty’ history courses). We suggest that there needs to be greater connectedness and balance between the dimensions of time in the teaching of SOSE with specific reference to the teaching of history and futures perspectives. We offer a new conceptualisation of history which we refer to as ‘history as the extended present’ this conceptualisation positions history in multiple temporal domains (the past, present and possible, probable and preferable futures) and emphasises the relevance of teaching and learning history to students life worlds.

The temporal dimension: An introduction

The ability to think about and operate within the temporal dimension is complex and the processes of learning about time and our relationship with it begin at an early age and continue into adolescence and early adulthood. Time perspectives emerge from cognitive processes that separate human experience into past, present and future temporal frames. Time perspectives are a powerful influence on human behaviour and they are learned and modified by a variety of personal, social and institutional influences. These temporal frames are used to encode, store and recall experienced events. They also used in the forming of expectations, goals, contingencies, and imaginative scenarios (Harner, 1982).

Throughout and beyond their education people will develop notions of conventional time, non-conventional or operational time and adaptation. Conventional time systems allow people to adapt to the natural environment and to work within a social system (Zimbardo & Boyd, 1999). Children are taught about conventional time in a school's curriculum, traditionally implemented as part of the Mathematics KLA. Conventional time provides a precise reference system for describing the order of any two events, describing or deducing a duration, or arranging for some future appointment such as a meeting. It is represented as clock time, incorporating days of the week, the annual calendar and intervals of historical time. Non-conventional, or Operational time, is described as the way in which people use time concepts to interact within the world. Children develop these skills concurrently as they conceptualise conventional time. Friedman (1982, p. 3) describes a hierarchy of temporal problem-solving, listing abilities which must be learned in order for a child to master understanding and operability of time concepts. These are:

- Judging length of time, using cues and tools, such as clocks, calendars, etc

\(^1\) The acronym SOSE refers to Studies of Society and Environment. SOSE is a Key Learning Area [KLA] introduced across most Australian States and Territories in the early 1990s. In NSW SOSE is labelled HSIE (Human Society and Its’ Environment. It is interesting to note that some States are now moving away from using KLAs as curriculum organisers and instead reinstating the disciplines (History, Geography and Economics) as curriculum organisers.
Judging length of time in the absence of time tools
Ordering events
Sequencing series of events, using inferential information
Distinguishing Past, Present, and Future
Representing Natural and Conventional Periods and Orders
Other types of Problem Solving (such as the ability to wait).

Temporal perspectives are the overall span of a person’s thinking across past, present and future life domains. A person’s temporal orientation is his/her predominant thinking about one of these time frames. For example, it is recognised that the future dominates human adult consciousness. This is distinctly different to a child’s past temporal orientation. Many theorists argue that there are benefits of integrating past and present experience with future expectations in order to strengthen personal morale, enrich one’s sense of self, and cope effectively with adversity. This is what Zimbardo and Boyd (1999) refer to as having a balanced time orientation, or a mental framework that allows flexibility in the temporal orientation a person operates within, depending upon contexts, resources and personal and social assessments. They warn of temporal bias, which involves a person’s overuse or underuse of any of the orientations of past, present and future. Currently, Australian education provides a temporally biased environment which advocates a rich understanding of the past, but limited, uninformed and uncritical futures dimensions. Similar comments about the preparation of history/SOSE teachers could be made and as teacher educators we need to be aware of the ways in which we position ourselves temporally and how this influences the teaching and learning opportunities we provide our student-teachers.

History in schools

The teaching and learning of history in schools is, and has been for decades, a highly and very publicly debated issue. Specifically, such debate has focused on what should be taught, why, how and by whom. Indeed, we are currently in the midst of a ‘history crisis’ founded on a perceived loss of national identity. Examples of this perception include television advertisements asking members of the public who Australia’s first Prime Minister was, newspaper articles pointing to Australians’ ‘historical knowledge deficit’ and the recently mooted history test for immigrants wanting to gain Australian citizenship. Politicians and the media are quick to point the finger of blame at schools, criticising what school students appear to know about history and discussing what they think students ought to know (Taylor & Young, 2003). They subsequently argue for changes to the school history curriculum as the solution to this perceived history crisis. This was evidenced in recent discussion about mandating a study of Australian history across all State and Territory schools (Packham, 2007).

This history crisis, leads us to ask many questions about why we should teach history, and what should be taught. To provide context for these questions, we first investigate dominant conceptions of history and how they have either contributed to, or challenged, perceptions of history as the past.

How have conceptions of history changed over time?
Conceptions of history have changed over time and these changes have significant implications for the school history curriculum. Below we discuss three major conceptions of history: grand narrative history, the ‘new’ history and history as the ‘extended present’.
**Grand narrative history**

This definition of history is known as grand narrative history and it was the prevailing conception of history through much of the early and middle 20th century. It relied on the reproduction of accepted and unquestioned grand narratives or stories about the past to maintain social control. Through a process of historical memory and historical amnesia a particular version of the past, one that is posited as the ‘truth’ is transmitted to members of the public. This version becomes institutionalised and is generationally socially reproduced. One way in which grand narrative history has been transmitted is through the school curriculum. If we were to examine the school history curriculum of the 1950s for example, we would find a school history that closely mirrored academic history. It relied on grand narratives of racial and cultural majorities and promoted a uniform national identity that ignored or marginalised the experiences of Australia’s ethnic and social minorities (Ahonen, 2001). Grand narrative history empowered particular individuals and groups and by association subjugated others.

**The ‘new’ history**

In the 1960s and 70s, amidst much social change (racial desegregation in the United States, international backlash against the Vietnam war and the sexual revolution for example) there were attempts to reorient the focus of the school history curriculum away from ‘history as an academic discipline’ towards an emerging recognition that school history is distinctly different to academic history. The emphasis of school history became “the use of ‘inquiry’ to gain an understanding of the problems of historical interpretation” (Seixas, 1993, p. 238). Rather than being seen as vesicles for historical knowledge, students were encouraged to enter the interpretive fray and develop their own, evidenced historical perspectives. History was no longer seen as an investigation of the past but as a dialogue between the past and the present; and different interpretations of historical events were encouraged. An example of this is the rise of Aboriginal Studies in SOSE classrooms in which issues such as Australia Day, which is traditionally associated with the arrival of the First Fleet, was examined from an Indigenous Australian perspective as ‘Invasion day’. This became known as the ‘new history’.

Whilst this re-visioning of history has certainly started to break open what history is and why it is important it has also been problematic. Globalisation, the advent of new technologies, changing populations and fluctuating national borders have seen the erosion of national identity. If you consider that political power is premised on particular and often conservative notions of nationalism the problem becomes clear. How can you wield political power when there is no longer a grand narrative of nationalism to transmit to voters? At an international and national level, governments have responded to this problem by mandating conservative changes to the history curriculum. In the United States, National History Standards were introduced in 1994 whilst a National Curriculum was introduced in the United Kingdom in the same year. Both sought to exert greater control over what history was being taught and why. European governments instituted similar changes and through a process of policy-borrowing the Australian federal government has sought to exert greater control over the history curriculum through attempts at a National Curriculum (which failed in the early 1990s) and the implementation of Civics and Citizenship education across all States and Territories.

Civics and Citizenship has, in some states been embedded within the history curriculum. Some people see these moves as a rejection of the new history and a revivalism of grand narrative history. Social commentator Phillip Adams is highly critical of the ways in which
politicians have oriented themselves in this ‘history crisis’ and he offers the following comments on Prime Minister John Howard:

He rejoices in the history of Gallipoli and tells us that military mess was, somehow, the making of us, that something called the Anzac spirit flows through our veins … Yet he feels no grief for the ongoing (problems) of Aboriginal history. Anzac history is, for him, living history, but that ‘other’ history he dismisses, denies and even ridicules as “black armband” (history) (as cited in Taylor, 2001, p.11).

This evidences the importance traditionally attributed to history in terms of its role in the construction and maintenance of a cohesive national identity. Given this, it is not surprising that the Australian federal government and State governments have made concerted efforts to maintain or revise this role through the school history curriculum and the dominant conception of history it promotes. Indeed concern about the dominant conception of history in Australian schools gave rise to the National Inquiry into the Teaching of History – *The Future of the Past* (Taylor, 2000) and more recently *An Overview of the Teaching and Learning of Australian History in schools* (Taylor and Clark, 2006). The findings of the National Inquiry into the teaching of history recommended a more central role for history in the curriculum and whilst a series of projects focusing on the effective teaching and learning of history in primary and secondary schools has emerged, there is still much conjecture about what conception of history should be championed and how it should be positioned within the school curriculum. School history is therefore currently in both the public eye and on the political agenda.

*History as the ‘extended present’*

Whilst Adams’ fears of a conservative revival are founded, we believe that, at the beginning of the 21st century, school history is at a unique crossroads. It could, as Adams suggests, be reinvented in traditionalist ways or it could as we propose, be reinvented in ways that allow students to view history through various temporal frames. We suggest that a reinvention, or repositioning which will increase student engagement in learning of history, is in what we refer to as ‘history as the extended present’.

This occurs where a study of history is a study of time, not in the functional sense of time as days, months and years but time in a conceptual sense where students can view the past, present and future/s through intersecting and often conflicting narratives. In this sense, history is not just about the past and about the acquisition of historical knowledge or truths. Rather, it is about experiencing the past, present and future/s as complex, connected and personally and socially relevant. The term ‘extended present’ highlights our focus on how the past has informed and continues to inform the present and how the present seamlessly blends into the future. Rather than seeing this conception as a linear progression from past – through the present – to an inevitable future; we argue that a study of history should be multi-dimensional and focus on multiple visions of the past and present and examine how these varied visions inform possible, probable and preferable futures.

For the learner, there are three main concepts and capacities which underpin the development of the extended present: connectedness, responsibilities, and comparisons. In the first instance, through lenses of time, we want students to acknowledge the connectedness which occurs between the different time frames. We, as living in the present, are connected to those who came before us, in many ways, and we learn this through histories, both personal and collective. We are similarly connected to those, with whom we live in the world, and we can learn this, through histories, as well as in scanning our social and cultural worlds. More abstractedly, we are connected to those who will come after us, and we can develop these understandings through the interweaving of futures and histories.
Directly emerging from this thinking, then, are ideas related to the notion of responsibilities. We have responsibilities to keep the legacies and lessons of those who came before us alive. Similarly, we have a responsibility to both present and future generations to equip ourselves with as much information as we can to make decisions both personally and globally. Within history, there are many precedents, which can contribute to our thinking and planning of various events. Further, the unprecedented events we act upon in the present become historical precedents for future generations. We have explicit responsibilities to our future peoples, and drawing upon our connectedness to past and future generations. Consciousness of the legacies we leave for future generations, and thus, our responsibilities, is integral to the decision making processes we are involved in, within the immediate present.

We believe that history is an integral part of the curriculum, in schools. Currently, however, as a domain of learning, it has lost its connectedness with students living in the world today. We need to make the relevance of historical events and constructions explicit, and clear to our learners. Thus, the third dimension of history as the extended present draws upon the rich comparisons which can be made between the different time frames of past, present and futures. Developing the notions of connectedness, and responsibilities, we can track a variety of developments in our world, through time. We can compare the ways in which people have lived, or physical worlds which have existed, and draw upon the perceptions students have of their life worlds. Further, we can come to understandings about why our world has evolved in the ways that it has, as well as drawing upon these analyses and syntheses to develop possible scenarios for the future.

For reader ease Table 1.1 below summarises the three conceptions of history we have discussed and provides some simplistic points of comparison.

*Table 1.1: Varying conceptions of history*
It is important to note that elements of all three conceptions of history are evident in the teaching and learning of history across Australian schools. How you perceive history has consequences for the ways in which you teach and learn history. As a teacher and learner of history you need therefore, to develop a conception of history that is consonant with your informed beliefs about the past, present and future/s. To do this you need to consider carefully what you think history is and why you think it is important.

What is history and how are time perspectives embedded within the teaching and learning of history?

Many people think they know what history is. History, they might say, is about people in the past. Historical knowledge is simply knowing about people in the past (Taylor & Young, 2003). Defining history is however, far more problematic than it first seems. For example, Taylor and Young problematise the notion of simply knowing about the past by explaining that the levels of historical knowledge include:

- what actually happened in the past
- what historians claim they know about the past (or 'the five Ws' - who did what, where, when and why?)
- what teachers of history know about the past
- what students know about the past (gained both outside and inside the classroom).

Furthermore, the following questions arise:

- How did these people come by this knowledge?
- Did they get it from books, from documents, from eyewitness accounts or from direct experience?
- How reliable are these sources when stacked up against each other?
- How complete is the evidence? Is it all there? Can it all be there?
- Are the sources used significant?
- How were they chosen?
- Does the significance of these sources change as times and interpretations change?
- And what do we mean by know? Can we really 'know' something that happened in the past - to other people - that we did not experience or witness ourselves?
  We might say that we can see through the eyes of others but do we see the same objects in the same way have the same ideas about events unfolding in front of us and them, or share the same values?
- Is it possible to reconstruct exactly what happened and see it from the viewpoint of the participants? (2003, p2)

It is also important to view history in a holistic temporal sense, that is, to see history as a bridge between the past, present and possible, probable and preferable futures. This understanding of history acknowledges that debates about the past and present seamlessly merge into discussions about the future. In this sense past historical moments are still operating in the present either as a legacy or as a set of practices that are applied or rejected. These moments are also operating in the future as new ways of making sense of the world are discussed and debated. With this in mind, it is hard to simply ‘know’ about the past, present and future/s. Rather, one has to engage with a variety of narratives or stories about the past, present and future/s and make sense of these in the context of their own lives. Historical
knowledge is therefore multi-perspectival rather than mono-perspectival. Ahonen (2001) argues that it is exploration of marginalised narratives or perspectives that provides history with a critical community of inquiry. In this sense historical knowledge is not fixed or definitive, rather there are multiple and often competing ‘truths’ about the past. She is however, quick to point out that it is harder to govern a critical community than one that has a uniform identity – hence politicians preference for a conservative conception of school history.

So if history is not just about the acquisition of historical knowledge (and the recall of facts) what is it about? It is about the development of historical consciousness. Historical consciousness is “the process by which certain events and their stories do or do not enter into the collective memory as public history and family stories” (Guttman, as cited in Taylor and Young, 2003), and the school history curriculum is the vehicle through which the historical consciousness of children and adolescents is developed. How do teachers encourage the development of a critical historical consciousness amongst their students? We argue that the development of a temporal orientation that acknowledges various time perspectives and various conceptual perspectives (is multi-perspectival) is an important part of developing historical consciousness. So too, is being able to make sense of these perspectives or as Taylor and Young (2003) describe it – being historically literate. They argue that historical literacy provides students with the conceptual tools students need to be able to effectively learn history. Furthermore, an historically literate student is one who utilises these conceptual tools in a judicious manner to interpret the past, present and future/s in ways that personally, socially and politically empower them.

History and Futures education – a temporally equitable focus?

What is Futures Education?
Slaughter (1995) suggests that futures education is a forward looking history, and many of the concepts from the futures field draw from rich and critical historical perspectives. Education about the future has come to prominence over the last few decades. This is evident in educational discourse and in national policy documents and State and Territory curriculum documents. This is because education needs to take account of rapidly changing social, economic and environmental world conditions and prepare young people for what will undoubtedly be a turbulent century. Indeed, one of the key roles of schools is to develop and prepare young people for ‘the future’ (Gidley, Bateman, & Smith, 2004). But what do we mean by preparing young people for the future? We argue that students need to develop tools, concepts and understandings about multiple futures so that they can become empowered in terms of shaping their personal and shared futures, rather than passively being transmitted a grand narrative future.

The development of these skills is important given that research into young people’s images and ideas of the future lead to the disturbing conclusion that for many, the future is a depressing and fearful place where they feel hopeless and disempowered to make a difference in their lives (Gidley, 2001; Hicks, 1996). Despite this fear, many students have a natural curiosity about Futures Education [FE] because it intersects with their own life interests in many ways (Slaughter, 2004, p1). FE explicitly attempts to build on this interest and counter these fears by offering a profound and empowering set of learning strategies and ideas that can help people think and act critically and creatively about the future, as opposed to trying to predict it.
When speaking of young people's views of the future a distinction must be made between 'personal futures' and their future images for their country or the world. These can be categorised as follows:

**Personal futures:** engages a person in reflection about how he/she envisages the future, specifically for that person’s lifetime. These futures consider aspects of human life, regarding health, education, professional life, economy, location, dreams, fears and aspirations. In this arena, a person draws upon his/her personal history and engages his/her understandings of the world in which he/she lives to critically identify, plan for and shape a range of forecasted futures.

**Local futures,** a person (or people collectively) draw upon his/her/their understanding of their local environment and external resources to begin thinking about how this locality will look in alternate futures. In this arena, a local environment may be understood as many things: a school, a suburb, a state or province or even a continent. It is the aspect of futures education in which people begin to work collectively to envisage and engage in productive planning and discourse about the status of the community being focussed upon and possible futures that may be worked towards. Within a school, local futures provides an opportunity for the community connected to that school, including students, teachers, families, councils and other interested parties, to identify changes and continuities and work towards the most suitable scenario. It may form the basis of a shared community project.

**Global futures** invite participants to explore and understand the world in which they are personally and collectively living. It stimulates students’ thinking about the ‘big picture’ and exploration of the deep structures of our world. These deep structures include an examination of our physical, spiritual and cognitive world, and how they came to be the way they are presently. Explicitly, a variety of worldviews may be developed and explored. Building on from these deep structures is the understanding that we are connected to those who have come before us, and will be connected to those who come after us. Futures education promotes the idea that each of us, individually and collectively, has a role to play in identifying and contributing to the shaping of the world, which is our global community.

**Why is futures education important?**

The above categories point to the importance of futures education as futures education helps students to develop futures (foresight) literacy which is the ability to be able to engage with the world using critical futures perspectives. This involves students understanding that there is not only possible option as to how ‘the future’ might be. Rather, there is a multiplicity of futures and students are encouraged to think about alternate scenarios. In schools the framework you can use to discuss these alternate scenarios is to view futures in terms of possible futures, probable futures and preferable futures. These terms can be defined as follows:

**Possible futures** are the entry level for thinking about what is possible for personal, local and global futures. Possibilities are only limited by the scope of the mind to imagine alternatives to those already suggested. In this way, every person who engages in futures thinking is able to provide a possibility. The possibilities are used in a variety of ways. A possibility is identified and ‘backcast’ in order to conceptualise how such a scenario could/would occur. Such possibilities are informed by understandings of the present and past, and are challenged by the values and priorities held, individually and collectively.
Probable futures: A higher order skill of futures education is the ability to discern probable futures. Using multiple texts, experiences and ways of knowing about the world, and how deep structures underpinning our world are envisaged, we can use a variety of critical strategies to gauge the likelihood of possible futures occurring. In mathematic literacy, we develop understandings in chance that some things are more likely than others. In futures education this language is also developed, and what makes one future more likely than another will be informed by a number of factors, such as environmental issues, financial issues, educative issues, governance, the local and global agendas and limits of humanity.

Preferable futures are those scenarios identified individually or collectively as ones which should be worked towards personally, locally or globally. And, as discussed in probable futures, what is recognised as preferable will be informed by a range of factors such as perceptions of the world, values held, and whether these scenarios are accessible and achievable. Many preferable local and global futures are very strongly connected to many personal voices and scenarios. In preferable scenarios, futurists and futures educators deconstruct assumed futures in order to critically identify what it is that is required for future generations.

Linking futures and past histories . . . the notion of the extended present

Rather than describing the present as an instant moment, Boulding uses varying lengths of the time to view the world from different viewpoints. For example, she attempts to build connections between generations by highlighting the changes which occur within a person's 200 year present. Boulding refers to this as the 'extended present' (as cited Polak, 1973) and suggests that a child’s natural extended present stretches from his/her grandparents through to the time when his/her grandchildren will be living. Narratives and recounts are therefore a rich tool in developing connections between generations, as living histories.

One of the main rationales of futures education is promoting learning which nurtures connectedness between personal lives, the lives of others and the physical environment in which each person, culture and community live. The extended present acknowledges the people who have come before us, and highlights the journeys those people have undertaken in contributing to the world as it is now, and has been for some time. The extended present does not assume that change will occur in the instant of a minute or a week, but allows people to manage reflective thinking and planning for changes in the world over a much larger time span. The extended present acknowledges a period of transition from what has been to what will be.

Conclusion

This paper has presented a conception of history (history as the extended present) that addresses the temporal bias that so often permeates the teaching and learning of history in schools and tertiary institutions. If we conceive of history as the extended present and focus on facilitating the development of three core student skills – connectedness, responsibility and comparison, we believe that students will become more innately interested in the past, present and future/s and how these temporal frames shape their lifeworlds. Further, we believe that students will also develop a more active role in determining our preferable futures and this is critically important given the enormous challenges we are currently face and those we are likely to face.
References
Slowmation: Exploring a New Teaching Approach in Primary School Classrooms

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Abstract. Digital animation is a complex process that has been used in commercial movies such as Happy Feet, Chicken Run, Shrek and in educational resources that are made by experts. A new teaching approach called "Slow Motion Animation" (abbreviated to “Slowmation”) has been developed at the University of Wollongong and simplifies the complex process of animation so that learners can make their own animations of science concepts. This paper explores the extent to which this new teaching approach was used by 10 primary teachers in their school classrooms. The teachers were introduced to the approach at a one-day inservice course in July 2005 and were involved in a follow up study over 12 months to investigate if they had used it in their teaching. Data collected indicated that 8 of the teachers used the approach in various subjects and to different extents. Two of the teachers became regular users with children in year 1 and year 4 making several animations. A focus group held at the end of 12 months identified two issues that inhibit teachers using the approach: (i) there are issues about classroom management when using slowmation with a whole class; and (ii) access to appropriate technologies.

Introduction

Wikipedia defines the process of animation as “the optical illusion of motion created by the consecutive display of images of static elements. . . .when the frames are strung together and the resulting film is viewed, there is an illusion of continuous movement due to the phenomenon known as persistence of vision.” There are three main forms of animation with various sub types that are categorised according to how the images are created, the materials involved and technology used (Taylor, 1997). The first form is called traditional or hand-drawn animation. This includes the many cartoons and feature length films that were made in the past 70 years which is sometimes called “cel animation”. In this form, diagrams are drawn or traced on to transparent acetate sheets so that they can be shown quickly to simulate movement. A second form, stop-motion animation, involves taking digital still photographs of objects or pictures as they moved manually to simulate movement. This form includes clay animation which was first introduced in the early 1900s and was made famous by “Gumby” and Will Vinton’s use of the term “claymation” in 1978 (Wells, 1998). A third form, the most recent and popular, computer-based animation, involve moving images that are created digitally on a computer using a wide variety of new techniques. Table 1.1 summarises these three forms of animation.

Table 1. Different Forms of Animation

<table>
<thead>
<tr>
<th>Form of animation</th>
<th>Feature</th>
<th>Types</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hand-drawn animation</td>
<td>Images are hand drawn and copied or scanned onto a computer</td>
<td>Cartoon animation</td>
<td>Flintstones</td>
</tr>
<tr>
<td>(cel animation)</td>
<td></td>
<td>Character animation</td>
<td>Jetsons</td>
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<tr>
<td></td>
<td></td>
<td>Limited animation</td>
<td>The Lion King</td>
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<td></td>
<td></td>
<td>Rotoscoping</td>
<td>Disney Cartoons</td>
</tr>
<tr>
<td>2. Stop-motion animation</td>
<td>Objects, models or images are created and small movements are made by hand and individually photographed</td>
<td>Clay animation</td>
<td>Wallace and Gromit</td>
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<tr>
<td></td>
<td></td>
<td>Cut out animation</td>
<td>Gumby</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Model animation</td>
<td>Chicken Run</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Object animation</td>
<td>The Muppets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Puppet animation</td>
<td>Harvey Crumpet</td>
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<tr>
<td></td>
<td></td>
<td>Silhouette animation</td>
<td>Monty Python (dada)</td>
</tr>
<tr>
<td>3. Computer-generated animation</td>
<td>Images are created digitally and manipulated on a computer</td>
<td>2-D and 3-D animation</td>
<td>Shrek, Cars, Happy Feet, Finding Nemo</td>
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<tr>
<td></td>
<td></td>
<td>Skeletal animation</td>
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<td></td>
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<td>Motion capture animation</td>
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<td></td>
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<td>Morph target animation</td>
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<td>Flash animation</td>
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<td></td>
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<td>Power point animation</td>
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</tr>
</tbody>
</table>

But no matter which of the three types of animation is considered, their use as a teaching approach in primary schools is extremely rare. A review of literature using ten different international databases that cover publications over the last 20 years using the four terms *claymation, clay animation, stop motion animation* and *stop frame animation* produced a paucity of research publications — ERIC (Educational Resources Information Center) produced three articles; The Association for the Advancement of Computers in Education (AACE) Digital Library produced one article; Proquest produced 191 articles; Expanded Academic ASAP Plus produced 26 articles; Informit 0; Australian Education Online 0; ISI Web of Knowledge 2; Science Direct 0; and ACM Digital Library 200 articles. Moreover, of the 423 articles about claymation, only three focus on its educational value, as 421 describe the procedures for making claymation, the use of new technologies or are advertisements in magazines. Of the three articles which promote the educational value of students performing claymation, one argued for the value of claymation to encourage visual literacy of preservice teachers (Witherspoon, Foster, Boddy, & Reynolds, 2004), one supported the use of clay animation to promote school students’ literacy skills (Gladhart, 2002), and one promoted the use of clay animation to encourage school students’ collaboration (Gamble, McLaughlin, Helmick, & Berkopes, 1995).

In Australia, several school-based action research studies using claymation have occurred in conjunction with South Australia’s Technology School of the Future. One project, *Clay Animation in the Primary Classroom*, was conducted at Hawthorndene Primary School and investigated the use of clay animation as a teaching and learning tool to enhance outcomes for disengaged and underachieving students (Murtagh, 2004). Titles of the QuickTime movies produced include a “Zoo Trip,” “Snakes”, “Hamburger” and “Elephant Sandwich.” The study concluded that “clay animation as a teaching and learning tool is an exciting, time-consuming, challenging, motivational process and above all, a lot of fun. It can impact in a positive way on learning, group skills and teamwork, self-esteem, confidence and leadership skills.” Another action research project, *Student centred curriculum – multi-literacies and disengaged learners*, was conducted at Tintinara Area School using claymation to assist year 4-6 boys to improve their literacy skills (Murray, Neville, & Webb, 2005). The boys wrote stories with a selected theme, put them on a storyboard, constructed clay figures and backdrop scenes, used digital photography and then completed written evaluations. The study found that the targeted group of boys needed more explicit teaching of narrative structure to enhance their stories and they became aware of the importance of planning and structuring their narratives. However, in both school-based projects, clay animation did not become a common teaching approach as there were difficulties in storing the clay models over extended periods of time, there was a need for adult assistance and the production process was very time consuming needing up to two school terms to complete (students worked on them at different times).

The use of computer-based animations to enhance student learning, however, is much more prolific in the literature as a consequence of large sums of money spent on experts designing animations to be placed on web sites or CDs as learning objects. Designed on a cognitive theory of multimedia learning, which explains that people learn better from pictures and words than words alone, many different types of computer animations have been created (Mayer, 2005). Importantly, Mayer explains that are two
approaches to multimedia learning: (i) technology-centred approaches which are underpinned by the functional capacities of new technologies and so accentuate the affordances of the technology; and (ii) learner-centred approaches which are underpinned by an understanding of student learning and how multimedia design can be adapted to enhance student learning. What is significant in regard to this chapter, is that both technology-centred approaches and learner-centred approaches to designing multimedia involve experts designing animations for learners to use and do not involve the creation of animations by learners. For example, the well funded National Science Foundation projects in the USA such as the Technology-Enhanced Learning in Science Center and the Concord Consortium have produced hundreds of computer animations to promote science education (Viadero, 2007). And in Australia, The Learning Foundation, which is an $80 million initiative of the state, territory and federal governments of Australia and New Zealand, have produced large numbers of animations that are freely available on a web site or CD for use in teaching science. But nearly all of these examples of computer-generated are made by experts and there is little evidence of animation being used as a teaching approach in schools especially in a way that supports learners being the designers and creators of animations.

The Development of Slow Motion Animation (Slowmation)

Slow Motion Animation (abbreviated to “Slowmation”) is a new teaching approach that has been developed over the last two years in science education classes at the University of Wollongong. This approach simplifies the complex process of making animations to enable learners to create their own comprehensive animations about science concepts (Hoban, 2005, in press; Hoban & Ferry, 2006). Slowmation is similar to clay animation involving students researching information, storyboarding, designing models, capturing digital still images of small manual movements of the models, and using computer programs such as QuickTime Pro™ to play the images in a sequence to simulate movement. In addition, a key part is that the students write scripts as the basis for a narration to explain the science concept. “Slowmation”, however, is different from claymation in five key ways as shown in Table 2.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Claymation</th>
<th>Slowmation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content/purpose</td>
<td>Tell a narrative</td>
<td>Explain a science concept</td>
</tr>
<tr>
<td>Materials</td>
<td>Clay or plasticine</td>
<td>A variety such as soft play dough, plasticine, 2-D pictures, drawings, existing 3D models, felt, cardboard cut outs and natural materials such as leaves, rocks or fruit</td>
</tr>
<tr>
<td>Orientation</td>
<td>Models are made to stand up vertically and moved incrementally as they are photographed with a digital still camera mounted on a tripod looking across at the models</td>
<td>Models are mostly made on the floor (flat) and moved horizontally as they are photographed with a digital camera mounted on a tripod looking down at the models (this is not always the case, however, as existing plastic models can be photographed in the usual way)</td>
</tr>
<tr>
<td>Pedagogical Prompts</td>
<td>The art of telling the story explains the experience</td>
<td>Prompts are included to explain the scientific concept such as audio narration, music, humour, diagrams, models, labels, questions, static images, repetitions and characters</td>
</tr>
<tr>
<td>Timing</td>
<td>12-24 frames/second to simulate real movement</td>
<td>2 frames/second to slow down movement</td>
</tr>
</tbody>
</table>

Most importantly, slowmations are played in slow motion at 2 frames/second, not 24 frames/second as in clay or computer animation because the purpose of slowmation is to show and explain a scientific...
concept slowly, not to represent a narrative or story in real time, hence the name “Slow Motion Animation” or “Slowmation”.

Over the last two years, slowmations averaging 3-4 minutes in length, which are like mini movies of science concepts, have been created by preservice primary teachers about many science concepts including day and night, seasons, tides, life cycles of various animals, particle motion, magnets, mushroom life cycle, plant reproduction, weather, movement of the planets, water cycle, simple machines. In a secondary science context, slowmations have been made of mitosis, meiosis and phagocytosis. Because slowmations are easier to make than traditional animations and are played 10 times slower, preservice teachers can represent their own understandings of science concepts in very comprehensive ways (Hoban & Ferry, 2006). For example, one slowmation explaining the causes of day and night goes for 5 minutes, includes 600 digital photos, targets movement of the earth in relation to the sun and phases of the moon, commences with moving 2-D images of day and night using cut out felt that is moved manually and then progresses to moving 3-D polystyrene models. Importantly, the animation is accompanied by the pedagogical prompts of music, questions, diagrams and captions explaining the science content. In all, it took a preservice teacher 25 hours to create at home in a room with a dimmer to simulate effects of changing light on the earth and moon.

Phases in Teaching with Slowmation
There are four main steps or phases when using slowmation as a teaching approach to a class of university students or school children.

Phase 1. Planning
The instructor and/or preservice teachers plan a topic or concept to animate which involves change. It could mean explaining to the students that they are making a “mini animated movie” of a science concept. This initially means that students conduct research on a particular topic in order to have enough information to identify a sequence with several stages, sections or episodes. Alternatively, the instructor may explicitly teach topic or concept to give students a “big picture” representation of the relevant concept. In a primary/elementary science context, this could include topics involving change such as the four seasons, seed germination, life cycle of a frog, the water cycle, life cycle of a caterpillar, why boats float, a rocket blast off, chemical reactions, particle motion, phases of the moon, development of a volcano, plate tectonics, mountain building, weather patterns, geological movements, digestion or movements in the solar system. Importantly, pedagogical prompts to explain a concept need to be decided but these may evolve during construction. The teacher needs to decide if the animation will be made by the whole class or in small groups.

Phase 2. Chunking and Sequencing
There are two layers of analysis to break up the concept into its component parts. First the topic needs to be analysed into 3-5 “chunks” or episodes that make up the whole concept or topic. Second, each chunk has to be further broken down into sequences or small movements to be digitally photographed for making the animation. Each chunk needs to be storyboarded showing the sequence of the incremental movements to explain the science involved. This analysis can guide an individual for making the animation or can be the basis allocating chunks to groups of students for a class project similar to a “jigsaw” approach. For example, a chunk could include one of the life stages of a frog, one of the four seasons, one of the stages of a rocket take off, one stage of a volcano developing, one part of meiosis or mitosis or one part of a chemical equation.

Each group needs to carefully plan the required number of movements for their particular sequence of the concept or topic in a storyboard. Once the sequences are established, specific roles can be
negotiated within each group. In a school situation roles can be allocated such as content expert, model maker, script writer, photographer, background designer and runner (who is the only one who can ask the teacher questions). It is important at this stage to again reflect upon how the concept can be best explained — should the slowmation only be photographs and text or should it just have a narrated storyline and music or both? It is recommended not to use too much text in the photos because too much text takes away from watching the animation and listening to the narration. Hence, it is advisable to script a narration for the whole animation but only include text as written labels to highlight key features. Also, further research may be needed to explain each section or to clarify or seek extra science information.

Phase 3. Construction
The construction phase involves making and photographing of the models using a variety of materials such as modelling clay, real materials or pictures. Decisions also need to be made as to whether the slowmation is going to be constructed on a blank cardboard sheet or white butchers paper to be rendered as part of a background. Usually, the models are made laying down on a sheet of project cardboard on the floor. A digital still camera needs to be mounted on a tripod and positioned over a sheet of cardboard so that pictures can be taken vertically looking down at the cardboard. The students make each of the small movements in the model manually and a photograph is taken of each movement. The photographer needs to take at least 40-50 photographs of each chunk. It is simpler if the photographs are taken in order of the presentation of the sections for the whole story. Another way is for each group to have their own camera and produce their own QuickTime movie which is collated when editing. Backgrounds can also be added to enhance the photos. An important aspect of construction is to insert arrows and labels to highlight the key features. If existing plastic models are used, the models can be moved standing up with photos taken at a slight angle to the horizontal.

Phase 4. Reconstruction
Once all the digital still photographs are taken, they need to be downloaded onto a computer, copied onto the desktop and imported into a computer program to put the whole process back together again. An animation program such as QuickTime Pro or Stop Motion Pro is needed to import the photographs. The procedures for using the technology are more fully explained in Appendix 1. QuickTime Pro is commonly used because it is simple to use, the playback speed is easily selected and varied (usually 2 frames per second) to produce a QuickTime movie that can be played on any computer, PC or Mac. The command “open image sequence” from the FILE menu allows you to select which sequence of photographs you want to import. It is important to remember that more technology does not always mean the best slowmation — less sometimes means more when it comes to a quality slowmation. The important question to answer is how is the concept best explained and what technology will enhance this process? A slowmation may just have music to create a mood, use of a narrative that needs to be scripted to match the different images presented or have text added as well. Once the initial animation is made, refinements need to be added to enhance and edit the animation. These can be made in several ways such as importing into iMovie, adding music, factual text as static images, transitions, other backgrounds or a narration.

An important pedagogical consideration is that different QuickTime movies can be made showing the process at different speeds. As the students have worked on different sections of the process, they need to know what the other sections were about. The value of a slowmation is that multiple QuickTime movies can be made easily to show the movie at different speeds for different purposes. Initially teachers can show a slowmation at 2 frames/second to give the overall change process and make another movie to be shown at 5 or 10 seconds per frame so each group can explain the details of their section to the rest of the class.
Methodology
The purpose of this 12 month study was to ascertain to what extent the primary teachers used slowmation in their classes. Ten primary teachers from five different schools were invited in July 2005 to participate in a one day inservice course to learn how to design and make a slowmation. Only one of the teachers who attended was a confident user of technology. The full day inservice course taught the teachers how to use the animation program, QuickTime Pro and they were also provided with resources such as a tripod and crayola dough to take back to their classrooms. A research assistant was employed to follow up the teachers in the classroom to interview them about their use of the approach. Each of the teachers was visited once to be interviewed during the 12 months, examples of any slowmations created were collected and 5 of the teachers were also involved in a focus group discussion at the end of the 12 months to review their opinions on using slowmation.

Results
Interviews with the 10 teachers were analysed for indications of use, non use, challenges and benefits of attempting to implement the teaching approach in their primary classroom. These data are summarised in Table 3.
Table 3. Outcomes of Teacher Use of Slowmation

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Initial Use</th>
<th>Multiple Use</th>
<th>Key Learning Area (subject)</th>
<th>Challenges</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. RFF</td>
<td>Yes</td>
<td>Yes, 10-15</td>
<td>Science and Maths (symbols and tables), PDHPE (Friend making), HSIE</td>
<td>Time management</td>
<td>Valuable for deep understanding “It made me think more about deconstructing the learning and making the children work through what they have learned.”</td>
</tr>
<tr>
<td>B. (Year 1)</td>
<td>No</td>
<td>No</td>
<td></td>
<td>Time constraints “with year 1 things take longer”</td>
<td></td>
</tr>
<tr>
<td>C (Year 4)</td>
<td>Yes</td>
<td>No</td>
<td>Maths Cross section of prisms</td>
<td>Time constraints “finding time in an already busy schedule”</td>
<td>Easily fitted into regular lessons “In the actual modelling of the shapes they had to look much more closely at the feature of this shape so it was made more meaningful”</td>
</tr>
<tr>
<td>D (Year 2/3)</td>
<td>Yes</td>
<td>Yes, 7</td>
<td>Science (changes of state, seasons, density)</td>
<td>Time constraints and clear instructions “Time wise it takes up a reasonable amount of time” “Need to demonstrate each step so that children actually understand what to do”</td>
<td>Reflective “It makes you think more about your teaching more and makes you think explicitly”</td>
</tr>
<tr>
<td>E (Year 3)</td>
<td>Yes</td>
<td>Yes, 4</td>
<td>Social Science (camp activities), Science (life cycles)</td>
<td>Early finishers if equipment limited “Providing the finished groups with something to do”</td>
<td>Lesson Planning “It does make you more aware of the fact that you do need to look at the small components of the topic” Worked well with Peer support task with year 3 helping kindergarten</td>
</tr>
<tr>
<td>F (Year 1)</td>
<td>Yes</td>
<td>No</td>
<td>Science (life cycle of frog)</td>
<td>Time consuming “too hard for stage 1 children”</td>
<td>Did not influence her lesson planning</td>
</tr>
<tr>
<td>G (Kindergarten)</td>
<td>Yes</td>
<td>No</td>
<td>Science (life cycle of silkworm using peer support)</td>
<td>Time and manipulation “Kindergarten had difficulties manipulating materials”</td>
<td>Worked well with peer support</td>
</tr>
<tr>
<td>H</td>
<td>Yes</td>
<td>Yes, 3</td>
<td>Maths (fractions)</td>
<td>Classroom management “I did some with small groups in the relief from face to face time”</td>
<td>“I could see endless possibilities in the classroom, it made me teach the kids methodically because they really had to be a lot more analytical”</td>
</tr>
<tr>
<td>I</td>
<td>No</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J (Year 1)</td>
<td>Yes</td>
<td>Yes, 4</td>
<td>English to represent stories</td>
<td>Classroom management</td>
<td>“the children got better and better, once they understood the process they were able to do it all themselves”</td>
</tr>
</tbody>
</table>
In summary, of the 10 teachers involved, 8 teachers tried it once in their teaching and 5 teachers used it several time during the year. Of the 5 who used it more than once, 2 teachers have continued to use the teaching approach multiple times and have assimilated the approach into their regular classroom practice. Of these two teachers, one was a year 1 teacher who made four slowmations with her class over the year. One important modification that she tried was that the year 1 children experienced too many difficulties when using crayola dough and so instead switched to using existing models. Hence in her third slowmation, the children used existing plastic toys of dinosaurs to animation when making a slowmation of the story, “The Triceratop Twins” and in their fourth slowmation, the children used plastic lego and dolls as they animated the story of “Jack and the Beanstalk.”

Particular challenges that the teachers referred to that inhibited them from using the process was the crowded curriculum and not having enough time to implement it, having access to the technology when needed (digital camera, tripod and computer) and the issue of classroom management when there is only one computer. For example, a problem identified was what to do with the other children when the teacher was working with the group that was taking the digital still photos. Several teachers commented on the benefit that it made them think more about their teaching in terms of how they plan their lessons and they saw the value for the children’s learning if they use the approach to represent a topic. Of particular interest from the interviews was that the slowmation teaching approach was used in five different key learning areas — Science, Mathematics, English, Physical Development, Health and Physical Education and Social Studies.

Discussion and Conclusion
Slowmation is a new teaching approach that has been developed over the last two years in university classes and until this study had not been explored by teachers in primary schools. This study invited 10 primary teachers who were mostly reluctant users of technology to participate in a one-day inservice course to explore if and how they used it in their primary classes. It is clear from the data analysed that most of the teachers used slowmation but to different extents. Of the 10 teachers, two became regular users and assimilated the approach into their regular teaching practice. Two of the teachers did not try it at all and three of the teachers only tried it once. A common problem that the teachers identified was that the process was time consuming, it involved some classroom management issues and the teachers need regular access to the technology. Although the amount of technology is relatively small (need one tripod, one camera and one computer with QuickTime Pro), teachers only need one of these items not to be available at the time and it will inhibit their use of the technology.

Of the five teachers who used the approach several times, the most frequent user was the relief from face to face teacher at one of the schools. His focus for his relief from face to face position was teaching technology so he found it very useful for the children to use the animation process. One interesting point is that the two teachers who have assimilated slowmation into their regular teaching have adapted the approach in varied ways. Teacher J decided that the use of crayola dough was too difficult for year 1 children so she decided to continue using the approach but not with soft dough material. Instead she decided to use existing plastic models and the last two slowmations that she made she used models of plastic dinosaurs and small lego dolls. Importantly, she noted that because her six year old children had made several of the slowmations, they had become familiar with the process and by the fourth time the children took control of the process which means that the six year old children took the photos as well as making all the manual movements of the models. The teacher had overcome the issues of classroom management by having the children allocated into pairs to use the technology whilst the other children continued with work set.
In conclusion, it is widely recognised that the primary curriculum in Australia is overcrowded and that teachers need time to try any new approach and some are reluctant to try any at all. Hence any new teaching approach that is introduced to teachers needs a good deal of time, reflection and trialling before it becomes part of their pedagogical repertoire. This study showed that a few of the teachers were able to assimilate it into their regular teaching practices. Another interesting insight is that the teaching approach was used in five different key learning areas which suggests that the approach possibly has widespread use. This study also showed that one of the major impediments of teachers that inhibits them trialling new teaching approaches is a lack of time. The primary curriculum in its existing form is impossible to complete with teachers having to implement the six main subjects. Also this study did not have the resources to provide ongoing support of the teachers when they returned to their classrooms which could have been another factor that limited their use of new technology. Further studies will need to occur to ascertain if the teaching approach is valuable for student learning and if the impediments to using the approach can be addressed.

Note
Slowmation won both categories of the 2006 Technology Leadership Awards presented by the international Society for Information Technology and Teacher Education (SITE) which is one of the three sub groups of the Association for the Advancement of Computers in Education (AACE). The author of this chapter won the category Exemplary Use of Technology to Teach Content in a Teacher Education Methods Course and his B.Ed. (Hons.) students won the other category Exemplary Use of Technology to Teach Content in the Induction Years in School. The author would also like to acknowledge the support of EmLab (Educational Media Laboratory) at the University of Wollongong, Australia for their assistance in developing slowmation.

References
Appendix 1

Making a “Slowmation” (Slow Motion Animation) Using QuickTime Pro
by Garry Hoban, University of Wollongong, Australia (modified 20-4-07)

A. Purchase QuickTime Pro at the online Apple Store [http://store.apple.com/quicktime/mac.html](http://store.apple.com/quicktime/mac.html) (a code will be sent via email to put into your existing QuickTime) by paying A$44.95 (PC and Mac versions) or US$29.99. QuickTime has a very good “Help” section and step by step tutorials are available at [http://www.apple.com/quicktime/pro/tutorials.html](http://www.apple.com/quicktime/pro/tutorials.html)

B. Taking the photographs
1. Make sure the students are aware that many small movements are best (make a simple animation on some post it notes and flip them)
2. Lay down a project sheet or butchers paper and build the models on the floor in the horizontal plane with the camera mounted on a tripod looking down at the models. Make sure the models/play dough are movable and not stuck to cardboard.
3. Make sure the camera is set on “LOW RESOLUTION” or the “SMALLEST SIZE” such as 640 x 480. If you are using more than one camera make sure that they are set on the same photo size.
4. Take the photos moving the materials one small bit at a time. A three minute slowmation needs over 300 photos.
5. Include labels of key concepts taking one photo which can be copied repeatedly for a static image later.

C. Making the animation
1. Click on QuickTime Pro
2. Select “File” and select “Open Image Sequence”. (For PCs select frame rate at 2 frames/second)
3. Locate Folder with digital images and click on first image
4. Click on “Open”
5. A new dialogue box appears, select the desired frame rate (usually 2 frames/second) and Click “OK” and the Quicktime movie will appear on the desktop.
6. Open the File menu and select “Save”. Write the title in the dialogue box and select where you want to save it, click “OK”. Make sure you “save as a self-contained movie” as this will make it independent with the photos compressed within the movie.

D. Making static images to suit a narration
1. Open the movie and play the movie until you get to the important photo that you need to stay longer on the screen. Use the stop button to stop the movie and go to Edit and select “Copy” and then “Paste” the photo about 10 times or as long as you want it to stop. Make sure you bring together the small edit tabs until they disappear otherwise you will keep unwanted images in the memory.
2. An alternative way is to open a photo in a graphic program and type in labels.

E. Adding a sound file— narration or music
1. Slowmations need a narration or text but not both. If making a narration open “File” and select “New Audio Recording”. Make sure that the microphone in the computer is turned on or use an external microphone. Click on the sound file and then the animation to record the narration. Delete the first second of the audio file (using the tabs) so that it matches the animation.
2. If adding a music file, Open “File” and select “Open File”. Locate the music needed and click on it. Make sure the length of the music matches the length of the animation
3. Click on the narration or music file, choose “Edit” and select “Select All” and then “Copy.”
4. Select animation and choose “Add to Movie”.
5. It is important that you click “save as” and save it as a “self-contained movie” to embed the sound track.

F. Saving the animation
1. When you click “save” there are two choices. You can save the animation as a “Self-contained movie” which means that the photos and sound file are embedded as a self-contained unit in the animation (and can be copied and shared) or as a “Reference movie” meaning that the animation is linked to the photos or sound on your computer but will not copy for sharing. Hence, you must “save as” a self-contained movie which is bigger than a reference movie.

G. Modifying the animation
1. Edit the QuickTime Movie itself with delete, copy and pasting in new photos directly.

H. Emailing an animation
1. Open animation and Choose “File: and select “Share”
2. Select size “small or medium”, click “share”
4. Movie is automatically attached to an email. Write email address in box and press send. (try around 500kb-1MB)

I. Downloading to an I-pod
1. Open animation and go to “File” and then “Export” Select “Export” and click on “movie to MPEG-4 and click “Save”
2. Copy QuickTime movie in MPEG-4 format into I-tunes
3. Syn to I-pod in movie section. Use forward and back arrows to repeat slowmation.
REDUCING ANXIETY FOR STUDENTS IN FIRST YEAR PRACTICUM

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“What happens to a dream deferred? Does it dry up like a raisin in the sun or fester like a sore---And then run?” (Hughes, 1951).

Abstract
The first practicum experiences can be daunting and fraught with anxiety. Our goal was to reduce anxiety in order to increase the opportunity for all students to participate fully and more successfully in their practicum. We believed that anxiety could be reduced with thorough preparation based on individual needs. Various studies, including those listed here, confirmed the importance of reducing student anxiety for the practicum experience as part of the curriculum of teacher education. (Campbell & Uusimaki, 2006; Clement, 1999; Sanderson, 2003). We addressed issues of equity by providing assistance for students with special needs, from different cultural backgrounds and for those who speak English as a second language. This paper describes several projects in each of the key preparation areas: personal development, basic teaching skills practice including critical reflection and discussion of issues of social justice. Additionally individual special needs for each placement were considered. Effectiveness was assessed in feedback sessions which gave us an opportunity to find out if students felt well prepared for practicum. When individual needs of students are met before practicum, we believe that we can increase equity for all students to participate fully in their practicum.

Introduction
As lecturers in the primary and early childhood teacher education programme at AUT University in Auckland, we have found that critical times for students in deciding to continue with their dream to be a teacher are during and after the first practicum. The first practicum experiences can be daunting and fraught with anxiety. As Romeo (2001) wrote: “High levels of anxiety can have debilitating effects upon a student’s school performance. Whenever anxiety levels reach such a degree that they interfere with the learning process, teachers need to be concerned with reducing it.” (p. 423). We are determined that stress before and during practicum should not be the cause for a student’s dream to ‘dry up like a raisin in the sun…and then run’ from their university studies. We therefore saw a need to provide students with strategies for slowing down so that their learning and personal development may speed up.

Therefore, our goal was to reduce student anxiety in order to increase the opportunity for all students to participate fully and more successfully in their practicum experience. Stress experienced by individuals must be addressed to enable students to successfully complete practicum and to develop personal change to cope with their level of stress. Various studies have confirmed the importance of reducing student anxiety related to the practicum experience. (Campbell & Uusimaki, 2006; Clement, 1999; Sanderson, 2003). This suggests that different coping mechanisms be included as part of the curriculum of teacher education.
Key areas we chose to address for reducing anxiety included:

- personal development and coping strategies
- communication skills and relationships
- associate teacher preparation and professional development
- stress management techniques
- basic teaching skills practice including critical reflection
- discussion of issues of social justice
- equity issues (special needs, ESOL)
- financial issues

**Communication skills and relationships**

Good communication skills with associate teachers and lecturers, and clear expectations seemed to help relieve stress before and during practicum. Walkington (2006) found that 17% of associate teachers in her study were not aware of expectations and 30% of associate teachers failed to review expectations with student teachers. Further, often associates did not give feedback after students delivered lessons nor allotted enough time to provide mentoring. Clement (1999) found that support of the associate teacher was identified as crucial by student teachers to assist with stress management. Often students would know what they needed to improve but were impeded from actually demonstrating those skills without input from associate teachers. For all of these reasons, good communication would assist in reducing stress.

The interpersonal communication/relationship between student and associate teacher and student and evaluative lecturer was a top priority. To target communication issues, we required students to contact their associate teachers approximately one week before starting placement to arrange a pre-visit appointment. During this visit, students would share three things with their associate teachers: their goals for placement, the specific requirements for the placement, and either a personal information sheet for the parent notice board explaining why the student is at the centre for early childhood students or a personal information sheet for the associate teacher in a primary school. All of these were discussed during lecture time. Through this visit, students would take the initiative for starting the conversation by having these three specific items prepared and ready for discussion.

Students were also given the contact number for their lecturer (university supervisor) in case the lecturer had not contacted them by the end of the first week of practicum. Lecturers were advised to contact students early by telephone to get a general sense of how the practicum was progressing in order to alleviate some of the stress of the evaluative visit later in the practicum. Lecturers and students were asked to view the visit as a snapshot to record observations, not as an indicator of pass/fail on the practicum. The observation notes were used to provide suggestions and guidance to help formulate goals for future student teaching placements. The lecturer also provided formative assessment of the written student teaching tasks so issues of concern are addressed before handing these in. Realistically, we realise that the lecturer’s visit can be one of the most stressful times for students during the practicum. This has been confirmed in various studies including Capel (1997) who suggested that it is very important that lecturers and associate teachers help students clearly identify student’s needs and coping strategies that work for them.
**Personal coping strategies**

Despite our emphasis on the collaborative relationship between lecturer and associate teachers with students, we still found that students needed help with developing personal coping strategies to alleviate their anxiety. Murray-Harvey, Slee, Lawson, Silins, Banfield and Russell (2000) focussed on the importance of the relationship with the lecturer and the associate teacher and how integrating student coping strategies into the curriculum of the teacher education programme enhances progress for students. They identified personal, professional, social and institutional coping strategies. Further, use of these strategies was critical to the success of the student teaching placement.

Personal coping strategies have been discussed during lectures and tutorial sessions. Students were encouraged to use relaxation, work/life balance, and other strategies that work for them. These might include physical activities such as sport or massage, regular use of vitamin supplements, proper eating and sleeping, prayer or meditation, and ensuring they have some ‘personal’ time.

Cameron (1995) in her book, “The Artist’s Way” identified several techniques for bringing out individual creativity which we believe helped to reduce stress. This information has been shared with students. Some of Cameron’s techniques include the use of morning pages (writing three pages of stream of consciousness early in the morning); artist’s dates (taking time out for oneself to explore inner creativity) and using positive affirmations. Examples of artist’s dates could include: visits to museums, taking a hike to observe nature and taking a salsa dance class. By exploring their own creativity, student teachers might then also encourage children to explore their own creativity.

Other strategies that we will add to our programme will be ‘mindfulness’ meditation and relaxation techniques, giving students a range of different methods to explore what works best for them. “Mindfulness is the final common pathway of what makes us human, our capacity for awareness and for self-knowing. Mindfulness is cultivated by paying attention...” (Kabat-Zinn, 2005, p. 11). Mindfulness involves seven key elements to remain aware of the present moment. These are:

- being non-judgmental of self, others and events as they occur
- cultivating patience with yourself and others
- enjoying the beauty and newness of each moment
- trusting in yourself and your own feelings
- paying attention to what is rather than striving for something else
- accepting things as they are

Techniques to improve the quality of breathing, positive thinking and elimination of negative thoughts were discussed as a means to focus on a particular moment and reduce stress. In the future, students will be given opportunities to share their personal strategies and discuss the importance of positive self-talk as a way to make it through individual personal crises or events. Students were reminded that the techniques explored during university classes, while not requirements, are opportunities for learning about and developing new strategies.

**Preparation of associate teachers**
Mc Donald (2004), in a New Zealand report, reminded us that practicum experiences are not homogenous across centres, and students have very different experiences depending on the centre and the associate teacher. The role of the associate teacher is crucial to the success of the practicum experience.

Capel (1997) called for the improved preparation of associate teachers. At the School of Education at AUT, associate teacher meetings are held each semester to remind teachers of the programme requirements, but most importantly to provide professional development to enhance the collaborative relationships that associate teachers have with their students. We held our first “off-site” meeting at a school in West Auckland, and will continue to explore ways to bring the training to the teachers rather than have teachers come to AUT.

Ideally, associate teachers would leave these meetings with ideas for assisting students to reduce their anxiety and develop their teaching skills. Romeo (2001) found that trial and error by itself did not help trainee teachers improve their practice. Student teachers needed to observe their associates and have follow-up discussions to review best practice. Modelling by associates would also serve as a reminder for those who already know the specific skill being demonstrated, but needed the opportunity to take small steps before having to go it alone (Romeo, 2001). Collaborative teaching was another way to achieve this. These practices also helped students build their own confidence which would help reduce their anxiety around the particular skills or situations.

At the associate teacher meetings, the role of the associate teacher as a supporter of “on the job training”, as a coach and as a mentor has been discussed. We asked associate teachers to remember that trainee teachers are adults whose teaching skills are at various stages of development. Students need associate teachers who can assist them with coping strategies, clear directions, opportunities for observations, and maintaining journals that both the teacher and trainee write in (Sanderson, 2003). Sanderson suggested that associate teachers needed to have an opportunity to share their ideas as well, so we incorporated this into our associate teacher meetings. Sanderson called for associate teachers to be honest, so we provided opportunities at our meetings to discuss those courageous conversations to share concerns with students while maintaining respect and giving positive affirmations as well. Solutions would be elicited from students and shared by associates. Time was set aside for associate teachers to ask questions or raise concerns about the programme and its requirements. In turn, associate teachers have been asked to provide time for trainees to ask questions, discuss planning and strategies for dealing with specific significant incidents.

**Preparation of student teachers**

We have found that students in the first year of the Bachelor of Education programme are a large diverse group ranging from International students who have just arrived in New Zealand with no local early childhood or teaching experience or qualifications to mature indigenous Maori and Pasifika women with lots of experience and no formal qualifications. Despite these differences, some basic teaching skills must be reviewed for all students.

One method we have introduced over the last two years is to use a video which was made specifically to prepare students for their first practicum in a New Zealand early childhood centre. The video was funded by a modest Teaching and Learning grant and made in collaboration with a year three communications student whose final project brief was to produce a community video. We are considering developing a similar video in a primary school setting.
We selected a centre that was local to the University and had two of our former students working as part of the staff. The brief of the video was to show a typical day concentrating on routines and staff child interactions. Centre staff members were interviewed on the video in between shots to discuss issues of being a student on practicum. The video has been an important tool in helping students to identify some of their concerns and to ease their anxiety before going into a centre. The video can be shown repeatedly if necessary and stopped at different points to promote and stimulate discussion. A number of the International students who are new to New Zealand were particularly interested to have an opportunity to see inside a centre.

This year we have produced a second video in collaboration with the same early childhood centre for further professional development. This second video focuses on quality interactions between adults and children in an early childhood setting. The video shows students examples of interactions between staff and children of different ages involved in different activities.

**Developing reflective practitioners**

While the definition of ‘reflection’ remains open to discussion, there is general agreement that it is an important aspect of the practicum, valued by both associate teachers and evaluative lecturers (McDonald, 2004). To move toward critical reflection as a “means of incorporating issues of equity and social justice into teaching and practice” (Howard, 2003, p. 195) we as teacher educators need to find ways to support our students as they engage with the families and staff from increasingly diverse communities.

One of the assessment requirements for year-one students on practicum is to provide three significant incident reports during their three-week placement. The students are asked to describe the incidents, and then spend time reflecting on what happened, how they felt and how the incident may impact on their future practice. We also required that students share each incident with their associate teacher. These incidents are then discussed and reviewed in groups at AUT once the practicum is completed; feedback is provided by fellow students and the lecturer. By building in opportunities for students to discuss their incidents in small groups we can encourage students to have courageous conversations about some of the more difficult aspects of the practice they have observed and experienced.

As Gay and Kirkland (2003) have noted, pre-service teachers do not find self-reflection an easy concept often confusing reflection with “describing issues, ideas and events; stating philosophical beliefs; or summarizing statements made by scholars” (p. 182). What is interesting about the significant incidents is that many students chose disturbing or challenging, rather than positive, events.

As part of the discussion on reflection, the students were asked to reflect on how their own experiences and ‘cultural, ethnic, social identity’ will influence their relationships with the staff and children in the centres. Lee (2004), in her best evidence synthesis report for the New Zealand Ministry of Education, has written on the changing nature of the New Zealand population including increased diversity of ethnicity and multiple cultural heritages and thus, an increasing diversity of families who access services in education. In New Zealand our students also are required to develop professional practice which honours te Tiriti o Waitangi (The Treaty of Waitangi) and is consistent with the early years curriculum as expressed in the Ministry of Education (1996) document for early childhood education, “Te Wh! riki”. Many
students, including indigenous New Zealanders, are particularly anxious about these aspects of the practicum and to ensure that they do not act inappropriately, these issues continue to be specifically addressed through ‘Mātauranga Māori’ and ‘Whanau, Family and Society’ papers taken during the first year.

Research in the United States of America which looked at developing critical reflection in relation to culturally relevant pedagogy has identified some of the difficulties that students face in developing personal and professional critical consciousness about diversity in teaching (Gay & Kirkland 2003; Howard 2003). In their article, Gay and Kirkland explored some of the strategies that student teachers employ when faced with discussions on race and ethnicity in particular (2003).

While the experience of pre-service teachers in New Zealand is not necessarily the same as in the USA, we can draw some useful parallels from their experience in working with ethnically, socially and culturally diverse students. As in the USA, teachers in New Zealand are predominantly female and white (Cameron & Baker, 2004).

In order to encourage students to explore these issues more openly, Gay and Kirkland developed innovative teaching methods for working with their teacher education students. We have found that for many students describing feelings about a particular event can be the most difficult aspect of reflecting, so in class we have spent time practicing describing feelings and responses to different situations. By linking their understanding of sociocultural theory and anti-bias practice, the students can develop their understanding of equity and social justice in relation to educational practice.

Through the paper ‘Whanau, Family and Society’ the students were asked to observe and write about examples of anti-bias practice while they are on practicum. These examples were often what they wrote about for their significant incidents assignment. Developing these and other strategies allowed us to engage more meaningfully in the process of critical reflection leading to a more honest and conscious critique of the students’ practice as well as our own.

In her article Edwards (2006) described some of the difficulties faced by practitioners in understanding the impact of sociocultural theory in practice and how it is often confused with ‘multiculturalism’. She also discussed the issue of practitioners in the field who trained over 20 years ago and whose practice had not kept up with recent changes in theory, for example, the significance of sociocultural theory in the development of our understanding of young children. If associate teachers are to be the role models for the students out on practicum then their understanding (or lack of it) of these ideas and theories has implications for the students and for future associate teacher meeting topics.

**Addressing special needs to maintain equity**

Many individuals face uniquely special needs that can make practicum more stressful. It is important that we support our students with special needs to make sure that they maximise their student teaching opportunity.

Murray-Harvey, et al (2000) reminded us that some of the highest levels of stress result from personal commitments and time management. This is especially difficult for students in our programme who are parents. One way that we support these students and others without their own transportation is by attempting to ensure that the location of their practicum is close to home.
For students with disabilities, we have been working closely with the Disability Resource Office at AUT University to design a Disclosure Form and action plans to support students with disabilities during practicum. Students come to a meeting to discuss their disability, what information should be shared with the associate teacher, and strategies to make the practicum more successful for them. This is currently a pilot project that we are monitoring for smoother student teaching experiences while maintaining privacy. The safety of the children in the class or centre is the top priority when developing plans for students with special needs.

Students who speak English as a second language often experience additional stress in relation to their self confidence in their oral/written English even though they have met AUT University School of Education requirements for English language proficiency. Concerns may revolve around accent, grammar or vocabulary. In conjunction with associate teachers, individual assessments are made and plans suggested. We often suggest to International Students that they choose flatmates who speak English as a first language and/or seek out social opportunities where conversational English is required. AUT also offers a variety of programmes to assist these students.

A celebration of all cultural backgrounds is a theme throughout our papers in the teacher education programme. We encourage students to share with children their backgrounds through food, art, dance or stories. In addition, we work closely with centres that have a Maori or Pasifika focus. Students have the option to choose a practicum experience in a culturally-based centre or language nest.

Finally, some students have the additional stress of financial concerns. While on practicum, they are unable to engage in their regular part time work so there is no money coming in at that time. Students are directed to the financial assistance office at AUT, but just offering a listening ear can help to alleviate a small portion of the stress that they feel.

**Wrapping it up and where to from here**

Broadbent (2006) suggested a number of ways to enhance teacher education programmes. Four of these have already been addressed in this paper: collaborative culture, connections, goals and knowledge. Supporting students in developing their personal philosophy was also seen as an important factor. In our programme, students explore a variety of teaching philosophies and are encouraged to find what resonates with them to help articulate their own teaching philosophy. It is possible that having a focus such as observing and practice teaching to begin to develop a personal philosophy may help to distract students from their feelings of anxiety.

Students have often found that what they have observed during practice is NOT what they believe is best practice. This discernment, when channelled appropriately, can help students to refine their personal philosophies. The early childhood education students are asked to present their developing philosophy through a group presentation using drama and music at the end of year one. Our primary teacher education students prepare a speech in their final semester outlining their personal philosophy and development over the course of the three year programme. This becomes a wonderful celebration of our teacher trainees.

Two other areas that Broadbent outlined in her 2006 article are significant for our future development. We have already begun using digital portfolios with our third year students as a collection of evidence of their practice as well as a place to receive quick feedback from
other students and lecturers through blogs and other shared spaces such as journals. If this project is successful, then year one and two students will be introduced to e-portfolios as well. Providing professional development through technology as it relates to education should help to reduce stress for students as they enter the profession. The second area would be a social justice component, by extending practicum opportunities or suggesting volunteer experiences in settings other than schools such as community centres, senior centres and special needs centres to broaden the students’ experiences.

**Assessing our success**

How do we determine which of our strategies have helped to reduce anxiety for students on practicum or supported them in pursuing their dreams rather than letting their dreams ‘dry up like a raisin in the sun’? In the first lecture following practicum, student teachers are asked to provide feedback by answering a series of questions regarding the success of their practicum and the quality of the preparation given by lecturers.

Two main themes emerged from the practicum feedback forms completed by the students. The first was the importance of a visit to the school or centre before the practicum starts. The second theme which we identified in the feedback forms was the increased use and variety of personal coping strategies.

Many students reported how the pre-visit was integral in establishing good communication with the associate teacher which served as a foundation for what many students described as ‘an excellent relationship’ with the associate teacher. Students reported that having such a good rapport with and support from their associate teacher was a highlight of the practicum experience. The preliminary visit has greatly reduced the number of students who had concerns about the support of their associate teachers. Also noteworthy is that in feedback forms from previous groups of students who were not required to visit the centre or school before the start of practicum, there were significantly more students complaining about the lack of support and poor communication of associate teachers.

The value of this early visit and the communication established with associate teachers was summarized in these quotes:

> “I met with her prior to the starting date of practicum, discussed my goals and assignments. That introduction helped me a lot.”

> “Yes, I went to the centre prior to the practicum which helped me to familiarise myself with the teachers and children before I actually started, so everyone was not surprised when I officially started practicum.”

The increased use and variety of personal strategies was the second theme noted in analysing the questionnaires. Student responses indicated that individual utilised different strategies from a list discussed in class plus ones of their own. Some strategies noted several times included: positive affirmations and self talk, personal time, deep breathing, prayer/meditation, exercise, and time out for personal activities as well as communication whether with friends, family or associate teachers.

Some quotes from students that demonstrated the importance of personal coping strategies included:
“I found personal time essential.”

“A personal coping strategy I used was to go for a walk when I got home everyday. Kind of time-out for myself. Also to be constantly reflecting on my own practice.”

“.….talking with classmates! Friends and flatmates.”

“A balanced work and social life definitely helps with confidence.”

In addition to these two themes feedback included some interesting comments about the value of a space and time for reflection and the usefulness of watching the DVD.

“I watch some relevant DVD in our classroom. This is useful for me understanding the context of New Zealand.” (This comment was written by a student who had been in NZ for two months.)

“The DVD showed me some examples of centres before my practicum. This was very interesting and made me look forward to going out on practicum.”

“There was not enough space where I could go and just be myself away from the kids and staff.”

However, despite this, a number of students commented on the encouragement they were given by staff to take their non-contact time to ensure that students had ‘time out’ from the children.

The majority of the comments from the students have been positive saying that they had been prepared well by the lecturers. However a number of the students also commented that however good the preparation, it could not totally prepare them for all situations.

Further possible development of the questionnaires could include specific questions to focus on the value of each of the strategies we have introduced: personal coping strategies, addressing of special needs, knowledge and skills information and preparation of associate teachers. We want to assess which specific strategies produce the best results for relieving anxiety and will use the data and information collected to guide future associate teacher training and curriculum development for our teacher training programmes.

At this point, though, through the feedback sessions and conversations with students we believe that students feel better prepared and therefore able to participate more effectively during practicum. By addressing individual needs, we believe we have increased participation and reduced stress for our students.
References


Teacher induction: What is really happening?

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Abstract

Retention rates and stress levels of beginning teachers are of concern. There is evidence to suggest that well-planned induction programs can assist beginning teachers to make the transition successfully into the profession, which may increase retention rates. This qualitative, year-long study aims to explore and describe the induction experiences of eight beginning teachers as they negotiated their first year of teaching. The participants of this study represented 10% of the final cohort who attended the same regional university and completed a four-year Bachelor of Education (Primary) degree. Data were gathered through email correspondence at the commencement of term one and then at the end of each of the four school terms. Data also included telephone interviews and a questionnaire at the conclusion of term four focusing on these first-year beginning teachers’ perceptions of their induction into the profession. At the beginning of their first year of teaching these beginning teachers indicated they may require assistance in teaching to cater to individual difference, assessing in terms of outcomes, relating to parents, relating to the wider community, and understanding school policies; yet most commented they would not require assistance in relating to students and understanding legal responsibilities and duty of care. At the conclusion of their first year only one beginning teacher was assisted by a mentor (veteran teacher) on whole school programming, and planning for improving teaching with opportunities to visit classrooms of more experienced teachers. This was also the only beginning teacher who received a reduced workload in order to meet with the mentor to discuss pedagogical developments. The inadequate support provided to beginning teachers in this study highlights the need for principals and school staff to re-assess their contribution to beginning teachers’ development within the school context, which includes providing time, funding, and clear guidelines for a quality induction.

Introduction

Many experienced classroom practitioners will reflect upon their first year as one of the most challenging: where the transition from preservice teacher to classroom practitioner is made. Beginning teachers that are successful in attaining a teaching position are usually expected to assume the same responsibilities as their veteran colleagues and are often assigned to the most difficult teaching placements (Carter & Francis, 2001). It is not unusual for beginning teachers to be employed in rural or remote locations far from their family network or the area in which they trained. In some instances, the beginning teacher does not survive
this transitional stage and decides to leave the profession having invested time and money in the completion of a four-year degree (Marsh, 2004).

Currently in Australia, many experienced teachers are reaching retirement age or are making career choices that remove them from the profession (Ryan, 2002). It is estimated that the need for teachers in Australia will increase in the next ten years (Green & Reid, 2004). This trend is not unique to Australia. Similarly, in the next decade it is estimated that in the United States, public schools will need to recruit more than two million teachers to overcome the retirement of the “baby boomers” (Villiani & Danielson, 2001). The New Teacher Support Initiative (National Education Association, 2002) in America claims that recruiting new teachers needed will be a challenge but, retaining them will also be a challenge as only 50% of new teachers today are choosing to stay in the profession beyond five years.

The predicted teacher shortage and the attrition rate of teachers from education systems will have implications for employers of beginning teachers (Marsh, 2004). It is therefore essential that well-monitored teacher induction programs effectively support beginning teachers as they make the transition from preservice teacher to beginning classroom practitioner (Ramsey, 2000).

Induction and beginning teachers

Jackson and Davis (2000) purport that effective beginning teacher induction is as important as an effective preservice teacher education program. Unlike other professions such as medicine, beginning teachers are placed into classrooms on their own and are expected from day one to undertake the duties and operations of a more experienced teacher (Ramsey, 2000). In Australia, reports on teacher education have consistently called for reduced face-to-face teaching loads for beginning teachers and for ongoing support for the first twelve months of professional practice (House of Representatives Standing Committee on Education and Vocational Training, 2007). Quality teacher induction programs are noted to greatly assist the beginning teacher process (Ewing & Smith, 2003; Wong, Britton, & Ganser, 2005; Peeler & Jane, 2003).

There are many models for the induction of beginning teachers (Wong, Britton, & Ganser, 2005). But, as Wong (2005) claims, the process of induction is a “highly organised and comprehensive form of staff development, involving many people and many components” (p. 379). Wong further purports that the beginning teacher induction process should be coherent, sustained and focussed upon students’ learning with support being provided for the first two to five years of a teachers’ career.

Countries such as Switzerland, France, New Zealand, Japan, and China have recognised the importance of beginning teacher induction and have implemented well-funded, well-monitored induction programs that offer support to all beginning teachers for at least the first two years of teaching (Wong, 2005). Throughout Australia there is wide variation in the quality of programs and support for beginning teachers (House of Representatives Standing Committee on Education and Vocational Training, 2007). Education authorities in the various states have their own specific policies and procedures for inducting new teachers.
into the profession. However, across the states support for beginning teachers is invariably in the form of websites with some online information and further reference to school-based induction programs developed and implemented at the discretion of school principals.

In New South Wales (NSW) the Department of Education and Training (DET) has a website for new teachers that contains information mainly relating to the professional and legal responsibilities of teachers and their conditions of employment together with some curriculum resources (NSW Department of Education and Training, 2002). Additional information on the DET website is directed towards schools with a set of guidelines for supporting the induction of new teachers and suggestions that school-based induction programs should involve structured supervision, collegial support, mentoring and professional networking (NSW Department of Education and Training, 2002). Recently, the NSW Department of Education has also introduced, as part of the induction process, a formal mentoring program in areas where large numbers of beginning teachers are placed (House of Representatives Standing Committee on Education and Vocational Training, 2007). However, the planning and implementation of these programs is not centrally monitored but is largely the responsibility of principals. As such, there may be considerable variation in the ways in which these programs provide support for beginning teachers.

In Queensland, the Department of Education, Training and the Arts (DETA) has recently produced a sixty page Flying Start Induction Toolkit that will be distributed to permanent and temporary beginning teachers in 2007 (Department of Education, Training and the Arts, 2006). The toolkit will be supported by online resources and other professional links for beginning teachers. As in NSW, school principals in Queensland will be provided with information to assist in the development of their own school-based induction programs. Similar support for beginning teachers is evident in other states, however, there is little or no mention of how these programs will be monitored or funded to ensure all beginning teachers are provided with an on-going, quality induction program.

Mentoring is a component of the beginning teacher induction process (Wong, Sterling, & Rowland, 2005). The terms “induction” and “mentoring” are often used interchangeably, hence, teacher employment bodies may profess to have quality induction programs because beginning teachers are offered the assistance of a more experienced practitioner noted to be a mentor. It is well recognised that good mentors are important (Ryan & Cooper, 2000) and that quality mentoring programs can be significant in shaping a beginning teacher’s practice (Cochran-Smith, 1991; Ryan & Cooper, 2000; Staton & Hunt, 1992); however mentors must be trained to ensure they provide support that is linked to the process of induction (Wong, 2005). Furthermore, the support should be evaluated, on-going and appropriate to the needs of the mentee.

**Aim of this study**

It is evident from the literature noted that producing and retaining quality teachers requires a commitment on behalf of those who employ beginning teachers. For teacher employers, it is essential that all beginning teachers have the opportunity to be part of quality induction programs that are comprehensive, coherent,
sustained and are directly linked to their needs. This study aimed to explore and describe the induction experiences of eight beginning teachers as they negotiated their first year of teaching. The participants of this study attended the same regional university and completed a four year Bachelor of Education (Primary) degree. At the completion of their four year degree the preservice teachers were employed in a range of contexts across two different states.

Methods of data collection
This interpretive study sought to understand human behaviour through the perspective of the respondents and employed qualitative methods of data collection (Best & Kahn, 2003; Neuman, 2000). The data for this small-scale study were collected over a one-year period (Hittleman & Simon, 2002). This investigation included eight beginning teachers that completed a Bachelor of Education (primary) degree at the same regional university. The eight beginning teachers involved in this investigation were selected from those members of the final year cohort who indicated that they were successful in attaining full-time employment or fixed term full-time employment at the completion of their four-year Bachelor of Education degree. The beginning teachers were selected using simple random sampling as it was hoped that those selected would “reflect the distribution of relevant variables found in the target population” (Hittleman & Simon, 2002, p. 94). The participants in this study represented 10% of the total cohort that completed the Bachelor of Education in that year.

As a result of using simple random sampling a cohort of beginning teachers were selected for the study that had been employed in a variety of school settings in two different states. The cohort was of varying ages. It should be noted that although only 20% of the total cohort were males, the random sampling process produced an equal number of males \( n=4 \) and females \( n=4 \) for this investigation. Table 1 below provides an overview of the age, sex and school contexts in which the beginning teachers were employed.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Sex</th>
<th>Context: Gov/Non-Gov</th>
<th>School Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&gt; 40</td>
<td>Male</td>
<td>Gov</td>
<td>Rural/town</td>
</tr>
<tr>
<td>2</td>
<td>22-29</td>
<td>Female</td>
<td>Gov</td>
<td>Rural/town</td>
</tr>
<tr>
<td>3</td>
<td>30-39</td>
<td>Male</td>
<td>Gov</td>
<td>Rural/isolated</td>
</tr>
<tr>
<td>4</td>
<td>22-29</td>
<td>Female</td>
<td>Gov</td>
<td>Rural/town</td>
</tr>
<tr>
<td>5</td>
<td>22-29</td>
<td>Male</td>
<td>Gov</td>
<td>City suburbs</td>
</tr>
<tr>
<td>6</td>
<td>30-39</td>
<td>Female</td>
<td>Non-Gov</td>
<td>Rural/town</td>
</tr>
<tr>
<td>7</td>
<td>22-29</td>
<td>Male</td>
<td>Gov</td>
<td>Rural/town</td>
</tr>
<tr>
<td>8</td>
<td>&gt; 40</td>
<td>Female</td>
<td>Gov</td>
<td>Rural/town</td>
</tr>
</tbody>
</table>

The data were collected using information gathered from emails, telephone interviews and a questionnaire. The beginning teachers were asked open-ended questions as this allowed for an unlimited number of possible answers and the inclusion of the unexpected (Neuman, 2000). Each of the beginning teachers were contacted via email at the beginning of term one to gather data regarding the school contexts and to obtain initial data in regards to their induction experiences. They were then contacted again via email at the end of each term to discuss their
progress and document the induction processes provided by their school. Phone interviews were conducted and a questionnaire administered towards the end of term four. The phone interviews allowed for a more extensive discussion in a relaxed environment that was conducive to eliciting more frank and honest responses (Hittleman & Simon, 2002). The questionnaire provided an opportunity to elicit additional data (Neuman, 2000) that was directly related to the induction of the beginning teachers.

The open-ended email questions, the phone interviews and the questionnaire related to the induction processes experienced by the beginning teachers and were based upon The Public Education Network’s (2004, cited in Wong, 2005) attributes of a quality induction program. As Wong (2005) purports, the induction process should be comprehensive, coherent, sustained and focussed upon students’ learning. So, by asking the same or similar questions each term, it allowed for the preservice teachers to add information and document the induction process over the entire year. The responses gathered each term from each participant were analysed to note the emerging themes and document and compare the variations and similarities in the experiences of the eight beginning teachers.

Results and discussion

The first data were gathered at the beginning of term one. At this stage the beginning teachers had just been appointed to their schools and had been allocated to their classes. All eight beginning teachers noted in their emails that they felt apprehensive about teaching but seemed excited at having their own class. The participants commented that they had areas of concern in regards to beginning teaching and were hopeful of gaining assistance from their colleagues at their school. Table 2 below summarises the areas the beginning teachers felt they may require assistance.

Table 2: Areas of concern in which the participants commented that they felt they may require assistance as beginning teachers

<table>
<thead>
<tr>
<th>Areas in which the participants felt they may require assistance</th>
<th>Number of beginning teachers who noted this area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and implementing a program</td>
<td>5</td>
</tr>
<tr>
<td>Managing a classroom</td>
<td>7</td>
</tr>
<tr>
<td>Organising a classroom</td>
<td>3</td>
</tr>
<tr>
<td>Employing a range of teaching strategies</td>
<td>3</td>
</tr>
<tr>
<td>Teaching to cater to individual difference</td>
<td>8</td>
</tr>
<tr>
<td>Incorporating ICTs into teaching</td>
<td>4</td>
</tr>
<tr>
<td>Teaching across the six key learning areas</td>
<td>4</td>
</tr>
<tr>
<td>Assessing terms of outcomes</td>
<td>8</td>
</tr>
<tr>
<td>Reporting in terms of outcomes</td>
<td>5</td>
</tr>
<tr>
<td>Relating to students</td>
<td>1</td>
</tr>
<tr>
<td>Reflection upon own practice</td>
<td>6</td>
</tr>
<tr>
<td>Relating to parents</td>
<td>8</td>
</tr>
<tr>
<td>Relating to fellow staff members</td>
<td>4</td>
</tr>
<tr>
<td>Relating to the wider community</td>
<td>8</td>
</tr>
</tbody>
</table>
As can be seen in Table 2 above, eight beginning teachers felt they may require assistance in ‘Teaching to cater to individual difference’, ‘Assessing in terms of outcomes’, ‘Relating to parents’, ‘Relating to the wider community’ and ‘Understanding school policies’. However, most of the students commented they would not require assistance in ‘Relating to students’ and Understanding legal responsibilities and duty of care’.

At this stage 6 participants noted they were satisfied with their teaching placements and positive about the way they had been welcomed to their school. A typical positive response was noted by participant 7 who commented:

I arrived in the town on the Thursday before school started and I contacted the principal to introduce myself. He invited me to a welcome function for all the new staff on Monday at the school. I went along and all the staff attended. They seem like a great bunch. I got a school tour and was shown my classroom.

Two participants were not so positive about their initial encounter with the school. Participant 4 commented:

I rang my principal the week before school started. He said to come on the first pupil free day. I arrived at the school and was introduced to the staff. There was a staff meeting in the morning and I really did not understand most of what they were talking about. The Deputy then showed me to my classroom and stated that I could leave at 3pm on that day. I had questions but felt too scared to ask anyone.

The initial six positive responses may have been related to the beginning teachers’ adulation at being successful at attaining employment. By the end of term one, there were two positive responses and six negative responses. Participant 5 was particularly positive with the induction he was receiving at his school.

I feel very happy with the induction arrangements at my school. I am team teaching with a very experienced teacher. I have allocated release time so I sit with my mentor and discuss any areas that may be of concern to me. I program with her and so far we have discussed school policies, assessment in terms of outcomes, classroom management, working with parents and effective ways of working with the varying needs of students in the class.

Six beginning teachers indicated they were disappointed with their induction experience. A typical response came from Participant 1 who commented.

Induction… I don’t think my school has heard of that word. The welcome barbecue and the ‘meet the parents’ afternoon seems to be the extent of the induction process. I think everyone is just busy. I handed in my program in week 4 of this term. There was a positive comment at the end so all I can think is that they are happy with my progress.

While Participant 3, who was placed in the isolated/rural context, noted no one was available to induct him as all the staff were new.
Induction….what is that? Everyone at our school is new. Even the gardener is new. There is no one who can induct me…..we are just muddling through together.

Similarly, Participant 8 noted

I am under the impression that as a ‘fixed term’ appointment that I don’t qualify for induction. This has not been explained directly to me but I have not been approached at a school level or by the department.

By the end of term 2 the responses had become less detailed and many of the responses took several weeks to be returned via email. Those who returned late emails apologised for their lateness noting the demands of teaching as the cause. At this stage of the year, many of the participants had settled into their teaching contexts but did not feel supported within their school context. The beginning teachers were specifically asked about their relationships with their mentors. Six of the eight participants noted they had been allocated mentors but the relationships and styles of mentoring varied amongst the group. Participant 2 commented.

The Deputy Principal is my mentor. I feel quite reluctant to let him know when I am experiencing difficulty as I feel he will think I am failing.

However, Participant 5 was again positive with his mentor experience.

The principal is my mentor but I can approach anyone at my school. They are so willing to help. I know I only have to ask.

While Participant 4 commented

My mentor wants me to do everything her way. I am so frustrated. I know she has a great deal of experience but I think she believes everything I do is wrong. I would describe her as controlling rather than helpful.

At the end of term three, six of the beginning teachers noted they had attended a two-day induction program for beginning teachers. All six participants noted they enjoyed the two days and gained from the experience. A typical comment came from Participant 2 who noted:

During this term I attended a two-day induction in-service for beginning teachers. It was great to speak with other beginning teachers and know that my feelings of self doubt and the problems I was experiencing were the same as the others.

Participant 1 was also positive but noted the induction program could have provided more ideas for the classroom.

I really enjoyed the two-day induction program I attended this term. It was great to talk to other people in the same boat. I think the people who organised the program need to design it more so it meets the needs of the group. We talked about the Quality Teaching Framework and our professional identities. I don’t think they realise that we did all that stuff at uni.

Participant 5 did not attend a two-day induction program. This may have been because he was teaching in a different state or territory however; he maintained his positive attitude towards his induction into teaching. He noted at the end of term three:

I feel my school has done it (induction) well. I have attended in-service courses on a range of issues. I have been well supported by the staff and have been given assistance and direction by my mentor and the other staff at my
school. I feel I have had input into my induction and the staff value my opinion.

At the end of term four the beginning teachers were interviewed by telephone and sent a questionnaire via email. The telephone interviews revealed that although five out of the eight felt they had “survived” the year, only one beginning teacher felt they had been provided with a suitable on-going induction experience. A typical response was from Participant 4 who noted that schools should be funded so that well-planned induction programs can be provided for beginning teachers:

I have survived my first year of teaching and I am ecstatic. I love my class, I love teaching but there have been days when I have been close to giving it all away. How much effort would it have taken to provide some on-going support? Everyone at my school is lovely but they are busy. I have spoken to the staff and they have stated that schools needed to be funded so that the support beginning teachers require can be provided. I have spoken to some of my friends from uni and they did not even have a mentor. I found my mentor quite negative but at least I could speak with her if I had a problem. Something needs to be done to better support beginning teachers in their first year.

Participant 5 who felt positive about his induction experience throughout the year attributed his success in teaching to the staff that had supported him. He noted:

I have had a fantastic year. The staff have been great. I think my induction into teaching has been well-planned and maintained throughout the year. The parents have been very positive and the students have obtained great results. I think the year was a positive learning experience mainly due to the induction I received.

The final email sent at the end of term 4 asked the beginning teachers if they were satisfied with the induction they had received throughout the year and if the induction they had experienced met their needs. Seven of the eight participants in this study noted they were not satisfied with their induction and felt it did not meet their needs as beginning teachers. Participant 2 noted:

I would say I am not satisfied with my induction. I know everyone is busy but how much effort would it have taken to find the time to meet each week and ask “how are you going, can I help? It would have been nice to be asked what would you like to know in your first year?

The questionnaire asked for the beginning teachers to note the types of induction experiences they had experienced throughout the year and the school terms in which they were experienced. Table 3 below summarises the results.

<table>
<thead>
<tr>
<th>Induction activity</th>
<th>Number of participants who noted the activity</th>
<th>School terms in which they were noted</th>
</tr>
</thead>
<tbody>
<tr>
<td>The beginning teacher was welcomed to the school and the context of the school outlined</td>
<td>5</td>
<td>Term 1</td>
</tr>
<tr>
<td>The instructional philosophy of the school was outlined</td>
<td>2</td>
<td>Term 1</td>
</tr>
<tr>
<td>Assistance was provided for long term planning for improving teaching and leaning</td>
<td>1</td>
<td>Term 1 &amp; 2</td>
</tr>
<tr>
<td>Institutional support and commitment was provided incorporating administrator support and involvement.</td>
<td>4</td>
<td>Term 1 &amp; 2</td>
</tr>
</tbody>
</table>
As can be seen from Table 3 above, only one beginning teacher noted that he had been involved in all of the eleven induction activities; however, seven out of the eight beginning teachers noted that they had attended a beginning teacher conference in term 3. It also appears from the above table that the initial contact with the school was fairly positive with over half of the participants attending a welcome function at the school.

Summary and conclusion
The data indicated that the initial contact with the school and the way in which the participants were welcomed to the school met the needs of most of these beginning teachers. However, as the year progressed, the induction process experienced by the group differed greatly. It appeared that at the conclusion of their first year only one beginning teacher was assisted by a mentor (veteran teacher) on whole school programming, and planning for improving teaching with opportunities to visit classrooms of more experienced teachers. This was also the only beginning teacher who received a reduced workload in order to meet with the mentor to discuss pedagogical developments. Other beginning teachers, who noted they had been allocated a mentor, commented they were concerned about approaching their mentor or the mentor was ‘busy’ or ‘controlling’. Indeed at the conclusion of their first year of teaching only one beginning teacher noted they were satisfied with their induction into the profession.

The data also suggested that the beginning teachers welcomed the opportunity to attend professional development to build networks and support outside the school setting with seven out of the eight participants attending the professional development provided in term 3 of the school year. Indicating that beginning teachers recognise the importance of such events and are keen to be supported and guided. Evidence also suggested that the beginning teachers had individual needs in regards to the type of support and information they would like to acquire in their first-year of teaching.

Finally, although a small-scale study, the evidence indicates that there is little support offered from employment bodies to school personal and beginning teachers to ensure the smooth transition into the profession. If employers of beginning teachers in Australia are serious about teacher retention rates and quality teaching, they need to consider the induction models being implemented in countries such as Switzerland, France, New Zealand, Japan, and China (Wong, ...)
2005). Induction programs need to provide support at the school level. This support should include training for school staff in the delivery of quality induction programs, mentor training, funding for professional development and the inclusion of reduced workloads for mentors and their mentees. Furthermore, school induction programs need to be on-going, well-monitored and tailored to meet the individual needs of the beginning teachers as it cannot be assumed they enter the profession with the same knowledge, skills and practices. As noted by Ramsay, “Employers and the profession have a responsibility to provide high quality induction experiences. Beginning teachers have a right to expect them” (p. 22).
References


Mentoring for effective teaching of writing in the primary school

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Abstract
Effective mentoring in English is considered paramount to a preservice teacher’s development as it presents real-life contexts for pedagogical understandings. This study provided qualitative data (questionnaire) and quantitative data (survey) on 24 mentors’ perceptions of their mentoring for teaching English and in particular teaching writing. These mentors are cooperating teachers who had mentored second-year preservice teachers (mentees) from one Australian university. Qualitative data indicated that developing a good rapport in a mentor-mentee relationship keeps lines of communication open in order to assist the mentee’s learning. In addition, the mentor’s modelling of teaching writing, demonstrating specific writing strategies, and providing positive yet constructive feedback were considered successful mentoring strategies, while a mentee’s lack of content knowledge, inadequate personal writing skills, and not knowing how to multi-task with many students may contribute towards a mentee feeling unsuccessful as a writing teacher. Mentors advocated methods for enhancing mentoring practices, which included university-facilitated professional development, linking syllabus content and teaching approaches, and sharing pedagogical content knowledge with colleagues. The quantitative data presented mentors’ perceptions of their attributes and practices across five factors for mentoring (i.e., Personal Attributes, System Requirements, Pedagogical Knowledge, Modelling, and Feedback) with 67% or more of these mentors (n=24) agreeing or strongly agreeing they provided all the 34 items associated with the survey. The factor System Requirements had the lowest percentage range (67-71%) while Feedback had the highest range (83-100%). However, mentees may not agree with their mentors’ perspectives, hence, further research comparing the two perspectives may lead towards targeting more effective approaches for mentoring the teaching of writing.

Introduction
The response to the demands for better teaching of reading, writing, and mathematics (the 3Rs) has increased in Australia (Adkins, Grant, Summerville, Barnett, & Buys, 2003), and in literacy and numeracy the advocacy for improvement has been such that schools and states have scripted standards and testing towards these ends (Reid, 2005). Preservice teacher education appears to be a starting point for feeding reform measures into education systems, and tertiary education has a fundamental role for which it needs to draw upon practical and professional experiences in the field of teaching to connect current theories. Hence, the quality of input from current teachers in their roles as mentors will be paramount to the development of preservice teachers’ practical skills for advancing pedagogical practices in the 3Rs.

A return to teaching the basics and an attempt to relieve the estimate that a high percentage of students leave school without acquiring functional literacy (Lievesley & Motivans, 2000), does not mean returning to traditional ways of inspections and reports on teachers. Research into professional development has wrought more strategies for upskilling teachers for which mentoring has been very effective in accomplishing change in teachers and their work (Hargreaves & Fullan, 2000; Kochan & Pascarelli, 2003).
In the mid 1990s, the American Association of Teacher Education analysed data from a survey of teacher educators, school teachers and university and school administrators that identified mentoring as the most critical strategy for professional developing teachers (Anderson, 1992). International educators in the USA and the UK at the time (Bey & Homes, 1990, 1992; MacIntyre, Hagger & Wilkin, 1993) reported that mentoring should be the most common response to the school-based learning needs of beginning teachers. Policy makers as early as 1990 – The Schools Council Report: Australia’s Teachers - acknowledge that mentoring helped with careers and friendships but could also advance the pedagogical knowledge of recipients. Mentoring has become more widespread within specific curriculum areas. Researchers have investigated mentoring in global perspectives (Kochan et al., 2003; Cullingford, 2006); in school contexts (Carr, Herman & Harris, 2005; Fletcher, 2000), with teachers, preservice and first-year teachers (Cox, 2004; Hurst & Reading, 2002; Podson & Denmark, 2000), and within specific disciplines (e.g., Hudson, 2004) to show that mentoring can scaffold learning across any field. Below we have drawn upon and emphasised generic mentoring attributes and practices to investigate mentoring in a specific field, namely, learning how to teach writing. Mentoring in this sense can be called a pedagogy of colleagues.

Mentoring is acknowledged as a tool for professional transformation and gives credence to the relationship basis of the mentee (preservice teacher) and mentor (cooperating classroom teacher). Mentors whether they are appointed mentors, buddy mentors or peer mentors must build and maintain a relationship with the purpose of creating a psychological climate of trust (Jipson & Paley, 2000; Zhao & Reed in Kochan et al., 2003). This in turn leads to the intuitive acceptance of modelled attitudes and practices (Fletcher, 2002; Podson & Denmark, 2000). Questions, responses and interactive feedback must be carefully framed for sharing honest reflections on practices and to keep respect within this relationship (Cox, 2004). Without developing a mentor-mentee rapport, there is no connection to each other and transformation rarely occurs. The emphasis on the relationship within mentoring is the main distinction from its close but suspect neighbour, “supervision”, which often implies no modelling of practice, a more distant relationship, and a key purpose of “performance assessment”. Supervision by contrast is stigmatised by its imbued imbalance of “power.”

If the relationship is shared democratically then mentees are empowered and open to reconstructing practice or their theoretical frameworks rather than alienated from the task of reframing their own teacher identity or being so fearful of making a transition to a safer place of operation. This is especially noted in preservice and beginning teachers (Podson & Denmark, 2000) in the teaching of writing or other subjects. A mentee’s development in learning to teach writing should be equally based with the mentor as co-learners with the classroom students. Therefore, mentoring may be easily adapted one step further, that is, into the application of teaching performance. Conferencing and conversing (communication skills) are integral to mentoring processes (Fletcher, 2000; Millwater & Short, 1999; Routman, 2000) with the appropriate channel of communication as the main instructional conduit (Hurst & Reading, 2002).

Successful mentoring programs should have a balanced amount of structure to suit individual needs within the partnership. If there is too little structure then initial enthusiasm wanes, participants ask, What are we supposed to do?; meetings are little more than a nice chat; disillusionment occurs; and the loosely-structured mentor-mentee partnership does not achieve goals. On the other hand, if there is too much structure then preservice teachers often comment that mentoring feels contrived and stifled with too much paperwork, and excessive reporting and rules inhibit the relationship, wasting valuable time (Fletcher,
2000). Most importantly, mentoring must be flexible to address the mentee’s needs, but this will require mentors to have an understanding of specific mentoring practices favoured by current literature.

Preservice teachers can improve their performance skills through critical reflection for improving practices (Mullen, 2000; Tillman, 2000). Comparing and contrasting new and old lessons and observations of lessons are often fruitful activities if guided by an astute mentor (Podson & Denmark, 2000). Yet, a lack of communication can create problems for developing mentees’ understanding and knowledge of a subject (e.g., writing). The confrontative function (Cohen, 1995) of the mentor must be used to address problems directly. This honest and critical support is a bonus and generally welcomed by the mentee and/or the mentor (Carr et al., 2005; Cox, 2000). Indeed, collaboration and open communication can overcome most problems (Carr et al., 2005).

The purpose of this literature was to assist in understanding that the following inquiry investigates how the various components of effective mentoring could be used to support the professional development of teachers in their roles as mentors. The generic components of the mentoring process as explored were used to frame opportunities for mentoring preservice teachers in the teaching of writing. The aim of this study was to determine mentors’ perceptions of their practices for mentoring their preservice teachers’ development as teachers of writing. Appendix 1 outlines mentors’ attributes and practices for mentoring preservice teachers in this specific field.

**Data collection methods and analysis**

The mentors in this study are cooperating teachers who had mentored second-year preservice teachers (mentees) from one Australian university. This study uses both qualitative and quantitative data collection methods. The qualitative data collection involved mentors’ \( n=24 \) written responses to statements and questions related to their mentoring of preservice teachers for learning how to teach writing. These statements and questions included: Explain your rapport with the mentee while mentoring writing. What mentoring strategies do you think helped the mentee to feel successful with teaching writing? Were there any mentoring aspects you think made the mentee feel unsuccessful with teaching writing? What do you think may enhance your mentor skills in writing? Data were transcribed and coded for commonalities (see Hittleman & Simon, 2002).

A five-factor model for mentoring has previously been identified, namely, Personal Attributes, System Requirements, Pedagogical Knowledge, Modelling, and Feedback (Hudson, 2003). These five factors and items associated with each factor have been justified statistically with the literature (see Hudson, Skamp, & Brooks, 2005) and form the basis for the survey instrument used in this study. Hence, quantitative data was collected through this survey instrument (Appendix 1) and analysed using SPSS (a statistical analysis package) for means, standard deviations, and percentages across the above five factors for mentoring.

**Context for study**

Participants in this study involved 24 mentors (male=5, female=19) associated with an Australian university. The mentors’ ages varied (38% between 22 - 29 years; 38% between 30 - 39 years, and 25% between 40-49 years), as did their experiences for mentoring (42% had mentored between 4 to 9 mentees, 50% had mentored more than 10 mentees, while for 8% this was their first mentee). All mentors except one completed at least one English methodology unit at tertiary level with 87% completing two or more units. Finally, 88% agreed or strongly agreed that English writing was one of their
strongest teaching subjects, and 92% demonstrated at least one English writing lesson to their mentees, including 42% who had demonstrated 4 or more lessons.

Results and discussion
The following provides qualitative and quantitative data. The qualitative data focuses on mentors’ perspectives about: (1) the importance of developing a good rapport in a mentoring relationship; (2) mentoring strategies that may make the mentee feel successful; (3) practices that may make the mentee feel unsuccessful; and, (4) suggestions for enhancing mentoring practices. The quantitative data focuses on the five factors for mentoring, namely, Personal Attributes, System Requirements, Pedagogical Knowledge, Modelling, and Feedback.

The importance of developing a good rapport
Establishing a good rapport in a mentor-mentee relationship can aid in facilitating teaching practices, and it is important that the “lines of communication are always open” (Mentor 20). In this study, it was claimed that part of developing a rapport relied on the mentee’s “confidence for discussing ideas and experiences” (Mentor 3). Yet, six mentors believed they did not have a good rapport with their mentees while mentoring writing, mainly “because of the mentee’s attitude” (Mentor 18). Most mentors (n=13) expressed their rapport with their mentees in terms of the mentee’s enthusiasm or willingness for developing teaching practices, particularly if they were “receptive to suggestions and willing to try new ideas” (Mentor 24). Three mentors recognised the value of learning from each other as a result of a good mentor-mentee relationship, for example, “Lots of information to share – teacher also learned new information” (Mentor 21). Mentor 8 suggested she had to contribute significantly towards developing a rapport with her mentee: “My latest mentee was very structured in her approach and needed lots of coaxing to try different approaches”.

Mentoring strategies that may make the mentee feel successful
Mentors wrote about their mentoring strategies they believed helped their mentees to feel successful with teaching writing. Modelling effective teaching practices was the most prevalent strategy articulated by mentors in this study, including “a lot of observation lessons for developing [the mentee’s] understanding of how to teach writing” (Mentor 13). Other strategies reported by mentors involved more specific modelling strategies, to illustrate, “Modelling, being specific, I think it depends on the focus for teaching episodes. Graphic organisers, brainstorming ideas, modelling, stimulus pictures” (Mentor 15). Other specific mentoring practices included: “using criteria and set expectation sheets so [the mentee] knew what was expected” (Mentor 8), “Modelling good practice such as questioning, joint construction, guided writing and independent writing” (Mentor 14), and the “use of planning such as mind maps” (Mentor 5).

Further modelling was suggested as follows:
Set clear expectations, understanding curriculum and its needs, and developing confidence with own skills. (Mentor 17)

Modelling, shared development of lessons, scaffold planning, independent planning. (Mentor 19)

Observing lessons/looking at planning documents for that term so student could see the relevance and the need to teach these lessons. (Mentor 20)

Modelling strategies and then critically discussing them with mentee. Focusing on expected outcomes-making students aware of expectations (Mentor 21)
Getting the mentee to break down the genre for teaching and making an assessment tool before teaching the lesson. (Mentor 22)

Modelling different strategies and genres while explaining reasons for differing approaches. (Mentor 23)

Use web-modelling, writing introductions only, supportive material from reading schemes. (Mentor 24)

Mentor 11 suggested that any modelling would be beneficial to the mentee including “demonstrating a ‘bad’ lesson and comparing it to a well-planned successful lesson”. However, providing “positive feedback, clearly presented feedback sheets for lessons, encouragement of risk-taking” (Mentor 4) were considered ways to make the mentee feel more successful. Mentor 18 claimed that mentoring can be very difficult when a mentee has a negative attitude. Indeed, as preservice teachers are only at the learning stages for teaching writing, confidence may be lacking which would require “a great deal of support and encouragement” (Mentor 10). Although it is most important for mentees to “have a go” (Mentor 7), “lots of practical examples and strategies such as visual literacy” (Mentor 3) can assist in facilitating success for the mentee.

Practices that may make the mentee feel unsuccessful
Each mentor was asked if there were any mentoring aspects they thought may have made the mentee feel unsuccessful with teaching writing. Mentoring generally occurs when there is time to talk to the mentee, which is usually outside classroom teaching times. It is important for mentees to understand that cooperating teachers in their roles as mentors may not have sufficient time for full involvement in the mentoring process, as there are unpredictable circumstances within active school settings that can distract a mentor, and the first and foremost priority is a student’s health and safety. One mentor claimed that insufficient time for involvement in the mentoring process may lead to a mentee feeling unsuccessful as it could portray inadvertently non-commitment from the mentor.

Mentor 8 claimed that her mentee may have felt less successful for teaching writing as she lacked knowledge of “level 3 and level 4 outcomes”. This mentor explained that a lack of knowledge produced an “inability to articulate to students what she expected”. Mentor 6 also stated that a mentee would feel more successful with an understanding of the “Student levels associated with syllabus requirements and the low socio-economic clientele”. Three mentors pointed towards their mentees’ inadequate preparation, that is, “unprepared by the university training and background” (Mentor 10). While Mentor 11 wrote, “Not discussing aims of teaching writing and not discussing syllabus documents with the mentee” may produce unsuccessful feelings.

Teaching is an all-consuming occupation, particularly as teachers generally deal with more than one “client” at any one time, unlike the luxuries afforded in other professions. Hence, unsuccessful feelings may come from the voluminous task of catering for all students within a lesson, to illustrate, “I think the mentee became aware of how difficult it can be to attend to all students when writing and give suitable feedback” (Mentor 12). Although it is very difficult to determine what may cause a mentee to feel unsuccessful from a mentor’s perspective, other suggestions included, “a weakness in the management of completed work and reluctant students” (Mentor 21). The competency with basic skills may also lead to a lack of confidence, for example, “Background knowledge of grammar, punctuation/spelling etc. always plays a part when confidence is discussed” (Mentor 20). In addition, a lack of basic skills may impede the mentee’s success for teaching writing, for
example, Mentor 24 stated the mentee needed skills in “Handwriting on the blackboard”. Another also claimed that there tended to be a “focus on teaching skills rather than content due to weaknesses of intern’s teaching practices” (Mentor 19).

Suggestions for enhancing mentoring practices
Mentors responded with various suggestions on how they could enhance their own mentor skills and practices for a mentee’s learning to teach writing. These suggestions included: knowledge of a literature-based unit (Mentor 2) with understanding of the links between syllabus literate futures and approaches to teaching (Mentors 6, 12, 20); professional development from universities for the mentors (Mentors 4, 10, 14); conferencing strategies (Mentor 15); analyzing years 3, 5, and 7 writing skills tests and marking guides (Mentor 24); and, sharing strategies, approaches, content with colleagues (Mentors 7, 16, 21). It was strongly suggested by a few mentors that mentees “needed to have basic writing skills themselves” (e.g., Mentor 1). Finally, some mentors wanted more time with their mentees and longer practicum durations (e.g., Mentors 13, 22, 23).

Issues and concerns for practice
Some mentors had issues about the preservice teacher preparation for learning how to teach writing. The most prominent concern was the mentee’s content knowledge preparation, for example, “My mentee did not know how to effectively write lesson plans – the mentee’s own writing skills were average and at times had difficulty teaching subject matter they were not demonstrating themselves” (Mentor 1), and “Mentees do not have the necessary knowledge of individual student needs and capabilities. They also have to define expectations of students which mentees find difficult to ascertain and implement as a general rule” (Mentor 8). Yet, there were also concerns about ensuring mentees have basic understanding about school requirements in the subject area. To illustrate, “Our school has specific genre to be taught in each year level so any feedback applies to teaching note taking skills, information reports and visual presentation skills” (Mentor 4). Nevertheless, many of the concerns were “All are important but it can come down to time and experience and/or confidence with aspects of teaching writing” (Mentor 12).

Some mentees may have very limited pedagogical skills requiring significant mentor involvement: “I spent an inordinate amount of time assisting the mentee to understand the basic principles of teaching writing” (Mentor 16). Periodically, a mentee may be overconfident without ability, for instance, “I had a student [mentee] who was overly confident without the ability to analyse her own performance objectively. I feel that students and mentors require an extremely explicit list of standards and responsibilities” (Mentor 18). This call for more explicit standards was not uncommon among these mentors not only for the mentoring processes but also the responsibilities assigned to mentees for their preparation of learning how to teach writing: “I feel that students [mentees] should know how to break down a genre so they know what scaffolding to provide. They should also know how to do formal evaluation on writing such as assessment rubrics” (Mentor 22).

Timetabling writing lessons for mentees presented difficulties, particularly when writing lessons appear to “run over time” frequently. For instance:

A major difficulty is full completion of work both from a time aspect and from an understanding aspect. Students are always writing to a structure. There needs to be scope for writing as expression – just to tell the story or express feelings. This practice combined with knowledge of text types (and time to complete the task!) would enhance students’ own confidence and output (Mentor 21).

Mentors’ perceptions of their mentoring across five factors
A survey (Appendix 1) provided information about mentors’ perceptions on their specific mentoring attributes and practices across five factors, namely, Personal Attributes, System Requirements, Pedagogical Knowledge, Modelling, and Feedback. Surprisingly, 67% or more of these mentors (n=24) agreed or strongly agreed they provided all the 34 items associated with the survey (see Appendices 1 & 2). The factor System Requirements had the lowest percentage range (67-71%; Table 2, Appendix 2), while Feedback had the highest range (83-100%, Table 5, Appendix 2). Specific items that were recorded on the lowest percentage range include providing viewpoints about current teaching practices, and discussing aims, policies and problem solving for teaching writing (67%). It was interesting to note that 90% or more of mentors claimed they had provided mentoring practices on 16 items (Appendix 2). However, this perspective may not be related to the mentees’ perception of their mentoring in this subject area. Indeed, other research (Hudson, 2005) investigating mentees’ perceptions for science teaching indicated less than 25% of mentees agreed or strongly agreed their mentors provided the three practices associated with System Requirements. Further research to compare the two perspectives (mentors and mentees) may provide disparities between these two perspectives for teaching writing, which can lead towards a way for targeting mentoring processes more effectively.

**Conclusion**

This study indicated through qualitative and quantitative data mentors’ perceptions of their mentoring for teaching writing. The outcomes of this study showed the importance of: (1) developing collaborative and professional mentoring partnerships, (2) modelling the teaching of writing, and (3) providing constructive feedback on the mentee’s progress on teaching writing. Mentors confirmed the importance of developing a rapport in the mentor-mentee relationship in order to provide opportunities for the mentee to communicate. Yet, developing a congenial and professional relationship can require scaffolding and support from mentors, as they are the ones in a position of power with knowledge of the school culture, education system, and “ownership” of the classroom. Mentors will need to be perceptive on this balance of power and use strategies to encourage mentees to talk openly about teaching practices where necessary. Mentoring also requires flexibility in order to address a mentee’s specific needs.

Modelling teaching practices was articulated strongly by mentors as a way to demonstrate how to teach writing. Such modelling commences with planning using syllabus documents, organising resources, demonstrating knowledge on teaching strategies and text types, and connecting outcomes to assessments with thoughtfully designed rubrics. Mentees’ observations of such practices must be purposeful with mentees identifying and deconstructing processes that lead to effective teaching. In addition, mentees may be able to develop their conceptions of effective practices whether mentors’ modelling is effective or not (i.e., learning what to do and what not to do).

Finally, mentees may feel more successful when provided with constructive feedback that aims to build the mentee’s confidence and performance. Mentors generally indicated a need for explicit standards in mentees’ knowledge of writing structures before they enter a practicum. Consequently, successful practices for mentees need to include basic knowledge of grammar, text types, sentence structures, other writing components (e.g., metaphors, similes), and handwriting skills. Conversely, mentees may feel unsuccessful when mentors do not spend time discussing the teaching of writing. As mentees are new to the profession, they need to be aware of the limited time available to mentors, especially with the varied demands of planning, preparation, teaching (which is usually the majority of a school day), assessment, attending to duties, and communicating with parents, staff,
and students. Nevertheless, mentors themselves acknowledged through the survey that they needed to improve on providing viewpoints about current teaching practices, and discussing aims, policies and problem solving techniques for teaching writing. Developing these mentoring practices may be facilitated through university handbooks for mentors and professional development programs. In addition, mentees need to have realistic expectations about their mentors’ time, and focus on their own development of writing knowledge and skills before entering a professional school experience. Mentees may not agree with their mentors’ perspectives, hence, further research comparing the two perspectives may lead towards targeting more effective approaches for mentoring the teaching of writing.
References


Appendix 1

Mentoring for Teaching Writing

The following statements focus on mentoring for teaching writing during your mentee’s (student teacher’s) last field experience (practicum). Please indicate the degree to which you disagree or agree with each statement below by circling only one response to the right of each statement.

Key
SD = Strongly Disagree
D = Disagree
U = Uncertain
A = Agree
SA = Strongly Agree

During this last field experience (internship/practicum) for mentoring the teaching of writing, I felt I:

1. was supportive of the mentee for teaching writing. ………… SD D U A SA
2. used writing language from the current English syllabus. SD D U A SA
3. guided the mentee with writing lesson preparation. ………… SD D U A SA
4. discussed school policies with the mentee for teaching writing. SD D U A SA
5. modelled the teaching of writing. ………………………… SD D U A SA
6. assisted the mentee with classroom management strategies for teaching writing. SD D U A SA
7. demonstrated how to develop a good rapport with students while teaching writing. SD D U A SA
8. assisted the mentee with implementing writing teaching strategies. SD D U A SA
9. displayed enthusiasm when modelling the teaching of writing. SD D U A SA
10. assisted the mentee to timetable the mentee’s writing lessons. SD D U A SA
11. outlined writing curriculum/syllabus documents to the mentee. SD D U A SA
12. modelled effective classroom management when teaching writing. SD D U A SA
13. discussed evaluation of the mentee’s teaching of writing. … SD D U A SA
14. developed the mentee’s strategies for teaching writing. ……… SD D U A SA
15. was effective in modelling the teaching of writing. ………… SD D U A SA
16. provided oral feedback on the mentee’s teaching of writing. SD D U A SA
17. was comfortable talking with the mentee about teaching writing. SD D U A SA
18. discussed with the mentee questioning skills for effective writing teaching. SD D U A SA
19. used hands-on materials for teaching writing. ……………… SD D U A SA
20. provided written feedback on the mentee’s teaching of writing. SD D U A SA
21. discussed with the mentee the knowledge the mentee needed for teaching writing. SD D U A SA


During this last field experience (internship/practicum) for mentoring the teaching of writing, I felt I:

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<td>22.</td>
<td>instilled positive attitudes in the mentee for teaching writing.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
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<tr>
<td>23.</td>
<td>assisted the mentee to reflect on improving writing teaching practices.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
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<tr>
<td>24.</td>
<td>gave the mentee clear guidance for planning to teach writing.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
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<tr>
<td>25.</td>
<td>discussed with the mentee the aims of teaching writing.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
</tr>
<tr>
<td>26.</td>
<td>made the mentee feel more confident as a writing teacher.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
</tr>
<tr>
<td>27.</td>
<td>provided problem solving strategies for the mentee’s teaching of writing.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
</tr>
<tr>
<td>28.</td>
<td>reviewed the mentee’s writing lesson plans before teaching writing.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
</tr>
<tr>
<td>29.</td>
<td>had demonstrated well-designed writing activities for the students.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
</tr>
<tr>
<td>30.</td>
<td>gave the mentee new viewpoints on teaching writing.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
</tr>
<tr>
<td>31.</td>
<td>listened to the mentee attentively on teaching writing matters.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
</tr>
<tr>
<td>32.</td>
<td>showed the mentee how to assess the students’ learning of writing.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
</tr>
<tr>
<td>33.</td>
<td>clearly articulated what the mentee needed to do to improve the teaching of writing.</td>
<td>SD</td>
<td>D</td>
<td>U</td>
</tr>
<tr>
<td>34.</td>
<td>observed the mentee teach writing before providing feedback?</td>
<td>SD</td>
<td>D</td>
<td>U</td>
</tr>
</tbody>
</table>
Appendix 2

Table 1
“Personal Attributes” for mentoring the teaching of primary writing (n=24)

<table>
<thead>
<tr>
<th>Mentoring Practices</th>
<th>%*</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfortable in talking</td>
<td>96</td>
<td>4.42</td>
<td>0.58</td>
</tr>
<tr>
<td>Assisted in reflecting</td>
<td>92</td>
<td>4.00</td>
<td>0.42</td>
</tr>
<tr>
<td>Instilled positive attitudes</td>
<td>92</td>
<td>4.08</td>
<td>0.50</td>
</tr>
<tr>
<td>Listened attentively</td>
<td>88</td>
<td>3.95</td>
<td>0.62</td>
</tr>
<tr>
<td>Supportive</td>
<td>88</td>
<td>4.13</td>
<td>0.74</td>
</tr>
<tr>
<td>Instilled confidence</td>
<td>79</td>
<td>3.83</td>
<td>0.49</td>
</tr>
</tbody>
</table>

* %=Rank-order percentage of mentors who either “agreed” or “strongly agreed” they provided that specific mentoring practice.

Table 2
“System Requirements” for mentoring the teaching of primary writing (n=24)

<table>
<thead>
<tr>
<th>Mentoring Practices</th>
<th>%*</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outlined curriculum</td>
<td>71</td>
<td>3.71</td>
<td>0.86</td>
</tr>
<tr>
<td>Discussed aims</td>
<td>67</td>
<td>3.79</td>
<td>0.78</td>
</tr>
<tr>
<td>Discussed policies</td>
<td>67</td>
<td>3.67</td>
<td>1.05</td>
</tr>
</tbody>
</table>

* %=Rank-order percentage of mentors who either “agreed” or “strongly agreed” they provided that specific mentoring practice.

Table 3
“Pedagogical Knowledge” for mentoring the teaching of primary writing (n=24)

<table>
<thead>
<tr>
<th>Mentoring Practices</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assisted with teaching strategies</td>
<td>96</td>
<td>4.13</td>
<td>0.45</td>
</tr>
<tr>
<td>Discussed content knowledge</td>
<td>96</td>
<td>4.20</td>
<td>0.66</td>
</tr>
<tr>
<td>Assisted with classroom management</td>
<td>92</td>
<td>4.25</td>
<td>0.61</td>
</tr>
<tr>
<td>Guided preparation</td>
<td>92</td>
<td>4.08</td>
<td>0.65</td>
</tr>
<tr>
<td>Discussed implementation</td>
<td>88</td>
<td>4.04</td>
<td>0.69</td>
</tr>
<tr>
<td>Assisted in planning</td>
<td>83</td>
<td>3.96</td>
<td>0.69</td>
</tr>
<tr>
<td>Discussed assessment</td>
<td>83</td>
<td>4.08</td>
<td>0.65</td>
</tr>
<tr>
<td>Assisted with timetabling</td>
<td>79</td>
<td>4.04</td>
<td>0.81</td>
</tr>
<tr>
<td>Discussed questioning techniques</td>
<td>79</td>
<td>3.96</td>
<td>0.75</td>
</tr>
<tr>
<td>Provided viewpoints</td>
<td>67</td>
<td>3.88</td>
<td>0.74</td>
</tr>
<tr>
<td>Discussed problem solving</td>
<td>67</td>
<td>3.75</td>
<td>0.85</td>
</tr>
</tbody>
</table>

* %=Rank-order percentage of mentors who either “agreed” or “strongly agreed” they provided that specific mentoring practice.

Table 4
“Modelling” the teaching of primary writing (n=24)

<table>
<thead>
<tr>
<th>Mentoring Practices</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modelled classroom management</td>
<td>96</td>
<td>4.54</td>
<td>0.59</td>
</tr>
<tr>
<td>Displayed enthusiasm</td>
<td>96</td>
<td>4.33</td>
<td>0.56</td>
</tr>
<tr>
<td>Modelled teaching</td>
<td>92</td>
<td>4.42</td>
<td>0.65</td>
</tr>
<tr>
<td>Modelled a well-designed lesson</td>
<td>92</td>
<td>4.17</td>
<td>0.70</td>
</tr>
<tr>
<td>Modelled rapport with students</td>
<td>88</td>
<td>4.21</td>
<td>0.66</td>
</tr>
<tr>
<td>Modelled effective teaching</td>
<td>79</td>
<td>3.96</td>
<td>0.62</td>
</tr>
<tr>
<td>Used syllabus language</td>
<td>75</td>
<td>3.83</td>
<td>1.13</td>
</tr>
<tr>
<td>Demonstrated hands-on activities</td>
<td>71</td>
<td>3.83</td>
<td>1.05</td>
</tr>
</tbody>
</table>

* %=Rank-order percentage of mentors who either “agreed” or “strongly agreed” they provided that specific mentoring practice.

Table 5
Providing “Feedback” on mentoring the teaching of primary writing (n=24)

<table>
<thead>
<tr>
<th>Mentoring Practices</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed teaching for feedback</td>
<td>100</td>
<td>4.46</td>
<td>0.51</td>
</tr>
<tr>
<td>Provided oral feedback</td>
<td>96</td>
<td>4.46</td>
<td>0.59</td>
</tr>
<tr>
<td>Provided evaluation on teaching</td>
<td>96</td>
<td>4.46</td>
<td>0.59</td>
</tr>
<tr>
<td>Reviewed lesson plans</td>
<td>92</td>
<td>4.29</td>
<td>0.75</td>
</tr>
<tr>
<td>Articulated expectations</td>
<td>92</td>
<td>4.08</td>
<td>0.50</td>
</tr>
<tr>
<td>Provided written feedback</td>
<td>83</td>
<td>3.92</td>
<td>0.88</td>
</tr>
</tbody>
</table>

* %=Rank-order percentage of mentors who either “agreed” or “strongly agreed” they provided that specific mentoring practice.
Exchanging Online Stories: A Space for Both Learning and Leisure

Nicola F. Johnson
University of Wollongong

Abstract

The advent and popularity of The Sims and The Sims 2™ has led to the telling, reading, reviewing and exchanging of stories in cyberspace on The Sims 2 website (http://thesims2.ea.com/), namely a section called the Story Exchange. Those involved in reading and evaluating these online stories include a 15-year-old female named Sarah, who was interviewed about her experiences in playing The Sims, The Sims 2, and using the Sims 2 website, including the Story Exchange section. The paper reviews some literature about the possible interrelationships between gaming and curriculum, and it introduces notions about *plaisir* and *jouissance* evident in the practice of those saturated with consumer-media culture (Kenway & Bullen, 2001). From Sarah’s viewpoint, it seems to be apparent that the children, adolescents, and adults who engage with these online narratives on the Sims 2 website have determined quality indicators of the stories without guidance or instruction from external structures or authorities. I suggest that the Story Exchange section of the Sims 2 website is an example of a legitimate learning space that is an avenue of leisure, knowledge, and skill development, out of alignment with traditional structures and institutions of formal schooling. In the conclusion, attention focuses on what this might mean for primary and secondary education, and how formal schooling and informal learning activities (such as the exchanging of online stories) could be aligned.

Introduction

In this paper, I explore the notion of informal learning (Sefton-Green, 2004) that is occurring specifically with an online story exchange found on The Sims 2 website (http://thesims2.ea.com/). This particular type of informal learning is closely linked with leisure, as The Sims 2 is a simulation game that is a worldwide best seller.

After briefly introducing The Sims, I then relate the literature that explains the research and findings that indicate how gaming (including The Sims et al.,) and curriculum can link together. The types of pleasure evident in the praxis of those who write and share online stories are defined, following by an explanation of the methodology and methods used in this study, and the theoretical lens employed to analyze the study. I draw on my interview with Sarah in order to explore how The Sims 2 Story Exchange operates, and offer suggestions as to why the creation of cyberspace narratives is so popular. The paper concludes with implications for traditional schooling.

It should be noted that I am not discussing the Sims Online game. This is different to the Sims 2 website, and is different to The Sims 2, which is a software program. Also, when I use the term ‘exchanging’, I am referring to the online interaction of users who upload and share their stories on the Story Exchange section of the Sims 2 website, where they upload, and read others stories, i.e. exchanging.

The Sims 2 Story Exchange

The Sims 2 is a strategic life simulation computer game developed by Maxis and published by Electronic Arts. It is the sequel to the best-selling computer game in history,
The Sims. It was released on September 17, 2004 and sold a record one million copies in its first ten days. The Sims 2 has been released for Windows, Mac OS X, and several game consoles. Four expansion packs and three stuff packs have been released to date. In The Sims 2, players control computer characters known as Sims as they interact with their virtual environment, engaging in activities and forming relationships in a manner similar to real life. It builds on its predecessor by allowing Sims to age through six stages of life and incorporating an all-new 3D game engine. Its genre is a ‘life simulation’ game or a ‘god’ game (http://en.wikipedia.org/wiki/The_Sims_2, date accessed 27/10/2006).

The Sims et al., is a ‘god’ game in that it simulates the controlling of lives (life simulation genre), and as Nutt and Railton (2003) stated, players “can play God and create utopian communities, or rewrite aspects of their own lives to negotiate different imagined outcomes” (p. 589 - 590). What is interesting is that players of The Sims and The Sims 2 cannot specifically control the outcomes of their created simulated people. As people play the game, they generate narratives of agents within society and their relationships (Nutt & Railton, 2003). The Sims 2 Story Exchange section of the Sims 2 website displays stories that have been created by the Sims 2 players, who have created their own avatars in the Sims, and hence, original stories. The stories are constructed and based on what the avatars do in the software program itself, and storylines are written to accompany static images of the stories. These stories are created according to how their Sims live their lives, and though these outcomes are unknown, they are produced by the game player’s ‘everyday’ decisions s/he makes for the Sim and his/her family. It should be noted that when one plays The Sims 2, one does not have to construct stories with static or moving images and descriptions (much like a children’s storybook). One can simply just play the game!

Though the provision of an online help website is not a new phenomenon, the peculiarity of The Sims 2 Story Exchange section of the website is such that when Sims 2 players have designed an avatar’s personality, appearance, and what they want them to aim for in life (using the Sims 2 software), they are then able to upload their creation(s) onto the Sims 2 website. This enables others to download other people’s character creations, including for instance, the clothes that an avatar wears.

The ingenious idea behind all of this is that the stories themselves are shared online and can be installed in chapter form, whereby a ‘serial’ is created, and readers of the Story Exchange website eagerly wait new instalments (chapters) of highly rated stories. The people who create these fictitious stories based on the Sims 2 program are of all ages and backgrounds. Sarah, in particular has created stories, but at the time of the research, had not permanently uploaded and shared her stories on the story exchange. She had mainly focused on reading and evaluating others’ stories.

Other features of The Sims 2 website include an online shop where one can buy further addendums for their software. There is a technical support area, and free downloads, along with a detailed help menu. Cheat codes are also available online (the significance of which shall be alluded to later in this text).

Previous articles and research have been published relating to how gaming and schooling can be linked through curriculum focus. A brief review of this literature follows, as this article moves towards exploring how The Sims 2 story exchange feature might be utilized in schooling.

Gaming and Curriculum
Recent research has sought to identify and describe new literacies that have arisen or may arise with the nexus of youth culture and its engagement with online media. Authors such as the ones mentioned below have explored the genre of computer games as a new literacy and discussed the many facets that may make up a new technological literacy.

Ilana Snyder (1998) argued that writing and technology have always and will always be interdependent and inseparable. Additionally, Snyder claimed that text was no longer something “located exclusively on a page” (p. xx), but that new writing spaces had moved from page to screen. Snyder (2002) also argued that playing games involves negotiating fairly complex combinations of print and iconic representations within the game narratives themselves. In her qualitative study of six Australian teenagers, Catherine Beavis (2004) filmed and interviewed students about their multiplayer and online game playing. Beavis found that,

Online computer games immerse young people in highly complex and engaging worlds, worlds in which literacy and communicative practices are significantly reconfigured and extended by the contexts in which they occur (p. 204).

In earlier publications, Beavis (1998, 2002) argued that multimedia and digital technologies were changing traditional understandings of literacy, and claimed the need for educators such as English teachers in secondary schools to integrate popular texts such as electronic games and the like into the curriculum as a way of addressing the reality of students’ textual worlds. Suggestions made by Beavis include asking students to consider how playing a game is and is not like reading a book (Beavis, 1998, p. 250) and from there discussing values, ideologies, gender roles, and issues of identity, etc. Beavis did not argue for the complete displacement of traditional texts in preference for contemporary texts, but in actuality, aimed for the enrichment and diversification of “students’ range of narratives and textual experience, to create continuities between school and out-of-school reading, pleasure, analysis and critique” (Beavis, 1998, p. 252, emphasis mine). To summarise, Beavis argued for the reconceptualisation of education and literacy for the purpose of embracing positive elements of contemporary culture, and utilizing them in contemporary curriculum which would in fact offer a great deal more to youth than the traditional curriculum as it stands (Beavis, 1998, 2002).

James Paul Gee (2003) identified 36 learning principles he believed were present in good video games, which demonstrate how children are learning when they play video games. He implied that these learning principles should be implemented into classroom learning and teaching as children now bring along different experiences and different learning preferences to what children in schools had prior to the advent of computers and video games. The amount of learning present in the nascent stage of beginning a video game through to the mastery of it is huge, but yet, gamers are learning while not realizing it, and their thought processes are advancing to higher levels, though they may not be aware of that.

In 1999, Beavis and Gough completed a study of two Victorian secondary schools exploring the incorporation of computer games into the literacy curriculum and explained what that might look like (Beavis, 2002). Teachers commented on some boys who prior to the study were not considered academic, attentive, or school-oriented whose interest, involvement and collaboration increased due to the changes made to the literacy foci. The other point of interest was that those who were strong in traditional practices of literacy suddenly found themselves in ‘alien waters’ – many of these students were girls.

The traditional focuses of learning and teaching within schools need to be transformed to incorporate what appeals to the children of today as interesting, intriguing, and suitable for the way they learn. To support this statement, I introduce the studies of Toni Downes (2002a; 2002b) who explored children’s
use of computers in the home especially in the broader context of families. Downes (2002a) reported that children’s discourses reflected their interest in digital media, in comparison to print. One aspect of this was the increased productivity, for example, the affordance of word processors to make tasks easier and quicker. This study took the approach of ‘listening’ to children to describe what they did with computers in their homes, with emphasis placed on children as capable informants about issues that affect their lives (Downes, 2002a). Through interviews, it was found that children enjoyed the fact that computers enabled them to be entertained, and parents claimed that computers were beneficial, as they seemed to enhance motivation towards children’s schoolwork. In a three-year study of over 500 children, Downes (2002b) discussed the use of computers as a tool, a toy, and as a playable tool. She claimed that home computer use has blurred the ‘processes of play, practice and performance’, and therefore is in stark contrast to the pedagogy currently supporting computer use within schools. Conventional pedagogy separates knowledge into curriculum subjects, positions the teacher as the director of learning, emphasizes the step-by-step mastery of content, and the structure of the school day reflects clear distinctions between work and play (Lynch, 2001; 2002). Downes (2002a; 2002b) suggested teaching pedagogy needs to change to combine digital and traditional modes of learning which take into account the influence that computer use has had on wider society, and therefore on children’s preferred mode of learning and preferred engagement with computers. These preferences are brought to schooling environments (R. Johnson & Lynch, 2004). These studies conducted by Downes have implications for schooling and how formal education might cater to children who prefer, are used to, and are motivated to learn through digital and electronic media and to take advantage of and extend emerging literacies and orientations to knowledge and to learning.

If these aspects are evident in teenager game playing in western, English-speaking countries, then these sites where learning and leisure are occurring can be validated as legitimate praxis, and argued to be positive new learning spaces.

In 2004, Julian Sefton-Green argued for a ‘culture-shift’ to accommodate insights from research in the area of informal, out-of-school learning. He highlighted that there was not a shared understanding of what informal learning might look like and where this might take place. But, because children and youth were actually ‘making, authoring and communicating’ in their engagement with digital media, formal education needs to find ways of synthesizing learning across formal and informal domains.

Attention now focuses on the pleasure evident in playing games.

**Plaisir and Jouissance**

Leisure can be positioned as a combination of *plaisir* and *jouissance* – the definitions of which now follow. Roland Barthes (1975), a French theorist, was the first to use these words to describe two types of leisure or pleasure. *Plaisir* is a French word directly translated to the English word ‘pleasure’, or can mean the synonym ‘enjoyment’ (Grace & Tobin, 1998). *Jouissance* is a French word that accompanies *plaisir* but describes a different type of pleasure, of which English has no word for, so the word *jouissance* is untranslated in English. Kristeva, the French feminist influenced by Barthes (1975), amongst others, used psychoanalysis to discuss *jouissance* in the transgression of pleasures of the abject (Kristeva, 1982). The type of practice, play, and leisure evident in the autonomous activities that have formed these structures arguably constitute *jouissance* – pleasure that transgresses boundaries.
The terms *plaisir* and *jouissance* are part of the practice found in the field of teenagers’ computer use, and arguably comprises an important part of youth culture, which Kenway and Bullen (2001) described in their book, ‘Consuming Children: Education-Entertainment-Advertising’. The authors focused on adolescents and argued,

Aspects of today’s consumer-media culture, evokes *jouissance* in children. Children and youth are encouraged to delight in the impertinent and the forbidden, to transgress adult codes to live only in the present (p. 70 - 71).

And,

The *jouissance* which children derive from consumer culture is designed to ensure that they unreflectively consume rather than interpret such texts (p. 75).

In another publication, Bullen and Kenway (2002) gave examples of the practice of *jouissance*:

The boy who explores, experiments and improves with technology is not constrained by the fear of breaking the machine or the rules. His is a pleasure that disregards boundaries (p. 64).

They also related how some avant-garde cyber-feminist and girl-oriented websites suggest, “there are girls who do experience the transgressive pleasure of *jouissance* in and through technology” (Bullen & Kenway, 2002, p. 64).

As part of the accepted practices within youth culture, I believe youth explore the boundaries (part of the praxis of many a field), and sometimes experience *jouissance* as a result of transgressing those boundaries. Students do explore taboo topics (Grace & Tobin, 1998), and this is not a new thing. The literature has been included to address how traditional notions of curriculum (i.e. keep everything under control, do not let students transgress what is acceptable, they should not be questioning authoritative structures, etc.), need to change in order to include what students are doing, how they are learning, and provide safe spaces for students to construct identities – false or not – in part of the development of themselves as a person.

*Plaisir* and *jouissance* link together in that through enjoying what computers and cyberspace offer, participants are able to transgress the boundaries that have been placed on them by their parents and by the authoritative figures in their school. Through the exploration of what is not real (but could be possibly real if they were to venture into that field), the game players of life simulation games create *plaisir*, which is sometimes *jouissance*, because they are exploring fantasies, the imaginary, the unknown, the intangible, the untamed, and the uncensored in their form of chosen play.

As Beavis (1998; 2002; 2004) and Bullen and Kenway (2002; Kenway & Bullen, 2001) have expounded, providing the opportunity for students to explore what is considered taboo, may not only be beneficial, but also might provide *plaisir* or *jouissance* for those students who might enjoy an adventure that is unknown and unprescribed. Because it is not necessary to ‘fit in’ with authority figures and authoritative structures, it is essential to be able to describe how it may be beneficial for students to engage in this type of practice.

**Methodology**

I have focused on understanding the lived experience of a 15-year-old female’s use of, experience with, and engagement with The Sims 2 website. I did not focus on how Sarah played The Sims 2, though in the interview, reference was made to the game in order to describe the connections with the website. I sought to explore one aspect of a phenomenon and have drawn upon one hour-long open-ended
interview with Sarah in order to explain the phenomena and praxis found within the context of engaging with The Sims 2 Story Exchange. The study and this article does not claim to be generalizable, but instead offers insights as to what is going on in the field, especially from Sarah’s viewpoint.

I knew Sarah through a personal, family connection, and knew she was passionate about the Sims, and had spent a lot of time playing it over some years. Many a time, she had referred to the Sims (2) website and the stories that were available to read, which had been created by other Sims 2 players. As she had much of the available software, I wondered why she also spent a lot of time exploring this website because one does not need to have the Sims software to read these online stories. Out of interest, I had a look at the website and the Story Exchange section, and from there, devised some questions I thought I could ask Sarah, in order to develop my understanding of what was present there, and what caused her level of interest in the story exchange to be so high.

I contacted Sarah and informed her about my interest in the whole area, and asked whether she would be interested in being interviewed about the topic. Sarah had time to view the questions that I was intending to ask and gave her informed consent to be involved.

In the analysis, I draw on Pierre Bourdieu’s concept of **field**. Bourdieu (1992) defined a **field** as a “configuration of relations between positions objectively defined, in their existence and in the determinations they impose upon the occupants, agents or institutions” (p. 72 – 73). A **field** is Bourdieu’s metaphor for representing sites of cultural practice (Webb, Schirato & Danaher, 2002). Within each field (social space), there is that which is excluded, and that which is included. These contexts (fields) shape and produce praxis. The acceptable praxis in a field arises from the hierarchical ruling principles that predispose agents to value something over other things. However, “It appears as if everyone is free to play, everything is negotiable. If it were not, the ‘rules’ of the games themselves would not be accepted. Everyone plays, but differential structures ensure that not everyone is equal” (Grenfell & James, 1998, p. 25). Bourdieu likened knowledge of a field and its practices to knowing the ‘rules of the game’ (Bourdieu & Wacquant, 1992) or ‘how the game is played’.

The rest of this article focuses on a sub-field within the field of game playing, that of The Sims Story Exchange and what are the unwritten conventions, which must be adhered to when exchanging stories. These are discussed which highlight the autonomy of the players who play The Sims 2, who through using the software, have created stories, that they upload for others to read on the Sims 2 Story Exchange.

**Sarah’s Perspective**

Sarah is a 15-year-old female who has played The Sims for seven years. About three years ago, she started playing The Sims 2. Sarah regularly accesses The Sims 2 website and its Story Exchange.

The Sims 2 Story Exchange is a (web)site for learning and leisure. This is a sub-field within the field of simulation games, where this site supports the reading of others’ stories, the creation and writing of new stories, and encourages the rating and evaluation of stories. All of these activities are aligned with the computer game.

I asked Sarah what she thought about and would say to people who might criticize the reading of online texts. She replied,
[Reading online stories is] just like reading a normal book. I mean, they’re not all people my age that are writing the stories. There are some older people as well, people with kids, stuff like that, so they don’t use simple language. Some of the stuff is more elevated, and it’s not y’know just a picture and then couple of words like a picture book or something. It’s kind of more the story and then the pictures just help go with the text, give you something to be like oh ok, so, that’s what they look like, y’know. Yeah (Sarah, interview excerpt).

Sarah had made it known to me that she did not read many print books, but suggested she did a lot of online reading on the Story Exchange. I asked Sarah, “How ‘bout talking about the interest of reading online in comparison to reading books, and reading when you sit down and you’re not in front of a screen? Can you tell me about that?” She replied,

Well, um, reading online, sometimes it’s better because you can’t always get to the library to go and get a book that you want and you can’t always find one that you like, but with a story it’s pretty easy cause you just go on and then if you read a couple of pages and you don’t like it, you can just go and find another one really easily. You don’t have to y’know go to the library and get another book, and hope that you like this next one. But it’s also kinda frustrating because like I said, they upload it in chapters so they might have only uploaded to chapter 5 and you have to wait y’know a month or two before they upload the next one, and if they’ve been away on holiday or y’know just taking a really long time, it’s real frustrating cause I want to know what’s going on, I want to know what happens next [giggles] (Sarah, interview excerpt).

Sarah’s perspective demonstrates a pragmatic approach to the selection of library books, compared to the ease of being able to choose between various online texts. Because she can easily choose which online texts to read, and has an enormous amount of texts to choose from which not require library issue, she believes she is advantaged by reading mostly online texts.

Though electronic books have become more popular, they have not surpassed the popularity of traditional hard cover or soft cover books. This may have to do with the comfort level one sustains in being able to lie down on a couch or a bed comfortably and read a book, compared to having to sit with a laptop and associated cords wrapped around oneself (conveniently displaced by wireless internet). However, with this reading of contemporary texts, associated with created stories, what implications does this have in the future? These children who are used to sitting all day in front of their laptop while reading for leisure, from stories which are created by a game for leisure, may do away with the notion of hard cover and soft cover books being traditional. In the future, they may say it may be something they used to do in their childhood.

When I asked Sarah about the types of stories that were available to read on the Story Exchange, she claimed a huge variety of text types and genres. She enthused,

They have pretty much everything you can think of [laughs]. There’s a whole lot of things with expansion packs in the games that people have adapted on. Like the people who created the Sims created stories as well at the very beginning that haven’t been played through right to the very end, so people have made their own adaptions [sic] on that and carried it on which ever way they want or they’ve just created y’know completely their own things. And they’re also challenges that people have posted because they wanted more of a challenge than the actual game and then they’ve turned that into kind of like a story as well, which is like the legacy challenge, which is y’know, have to have a ten
This quote also demonstrates how players have reworked The Sims 2 in order to provide challenges, express their creativity, and negotiate other life trajectories. By this I mean that when a challenge is set, this usually relates to a message that may have been posted on the Sims 2 website discussion board, which sets criteria for how a story could be created which has not been done yet (posted on the website). This may involve the exploration of types of life pathways or trajectories that have not been ‘done’, or documented yet. For instance, Sarah referred to a challenge that an older player had set for herself. This player’s challenge was to create the ugliest Sims she could, and through the avatars giving birth, progressively get the children of the avatars to become uglier and uglier. Another challenge Sarah referred to consisted of an alphabet focus whereby upon creating 26 generations (which takes a long time to play, even though the game is not in real time), each new generation member’s name would start with the next letter of the alphabet. Sarah referred to these challenges as fun activities to “see if you can do it”.

In particular, the association of reading, writing and reviewing online stories is arguably a leisure activity, yet seems akin with general objectives of English curricula. When students can design and be involved in new learning spaces that suit their needs and make connections with the type of learning that suits them, and connect with other similar learners, it raises questions about how this positive aspect of combining leisure and learning can be perhaps used to enhance secondary English classroom programs. However, this idea or type of practice must be cautioned (Bullen & Kenway, 2002; Kenway & Bullen, 2001) so as not to destroy the pleasure found in this leisure. However, it could be used to enhance English programmes by introducing elements of pleasure from engagement with technologies, that are so much part of the everyday practice of digital insiders (Goodson, Knobel, Lankshear & Mangan, 2002). As engaging with these stories is a form of leisure for the game players, one has to raise the question as to whether putting things into school that are pleasurable out-of-school will in fact destroy the pleasure?

Sarah referred to constructs in The Sims Story Exchange community of what she considered to be really good in terms of originality, and editing of static images:

...there’s so many good ones out there at the moment and you need a really original idea for it to be rated highly, and you have to have all the pictures perfect and probably need some good photo editing skills (Sarah, interview excerpt).

Sarah also shared the rating system that the Story Exchange employs:

...when you upload a story, it’s, when it first comes up, it’s three stars. And then underneath the star rating of it when you go to read it, there’s a little thing where you can rate it yourself. Y’know, the person’s whose story it is can’t see what it’s rated, who rated their story what, but they can see what it’s rated and then, um so you click on it, however many stars you think it should be, and then if they get a certain amount it’ll go up. And so if y’know, so many people decide that it’s a really great story and they rate it five stars, then it’s rating will go from three stars to five stars, or if they decide that it’s really bad, they’ll move it down to two, sort of thing (Sarah, interview excerpt).

Those who participate in the Story Exchange are producing texts that are visually supported in the form of static imagery. Through reading and understanding others’ narratives that have been shared online, they are engaging with screen literacy and contemporary literature that is flavoured with popular culture. The learning involved in the game involves the working and re-working of static imagery and narrative text in order to create stories that are uploaded on to the website. The conventions of the field (rules of the game) have been created by those who are in the field and those who explore the game.
The indicators of quality that have been established were by the insiders, not by outsiders or external structures. The players who have determined the criteria are children, adolescents, and adults—not authorities, nor external structures. In contrast to Kenway and Bullen (2001) who argue that many adolescents consume texts unreflexively, this suggests that those who review others’ stories are making some value judgments.

I asked Sarah how she thought the website had influenced people to play the game. She replied:

I think its made people want to write stories and want to try these challenges like the legacy challenge, and so it just brings a whole new way of playing the game, cause at first, all you did was just y’know, make the family, live their life, and now its like well, maybe I could make a story out of what I’m doing rather than just playing it through, giving it more elements or more goals to try and achieve, that sort of thing (Sarah, interview excerpt).

Sarah seems to be suggesting that one reason for the perpetual creation of stories and activities in the game and consequently the website, is because of the conventions and the genres that have been set up as game challenges on the website.

Sarah explained how photo editing, photo taking (within the Sims 2 program), being competent with the program, and putting it all together is all intertwined with being able to successfully negotiate The Sims 2 Story Exchange.

People create stories using the Sims 2 and they, sometimes they’ll edit the photos y’know to try to fit with the storylines, so they use other programmes as well, not just the Sims 2. And then they upload it and it’s like a chapter in a book and then people can rate it out of well y’know 5 stars and they’ll read it and they might y’know, sign their guest book y’know, and say, I really like your story, or I think you could improve it by doing this, and yeah (Sarah, interview excerpt).

Another facet of viewing the stories on the Story Exchange is the enthusiasm that it sparks as a result of the creativity exhibited. Sarah stated,

. . . it’s really interesting to see some of the ideas that people have come up with and you’re like I never would’ve thought of y’know doing that in a million years, but then you see that one, and it kind of sparks new ideas, like ooh, I could change this to make it like that, and I could fit my own version of this, y’know (Sarah, interview excerpt).

For Sarah, reading others’ original online stories piqued her interest. It is possible that because they were written recently, and involved the use of a medium she appreciated (The Sims 2), that this made it more interesting and engaging for her.

There is leisure involved in the lifelike exploration of identities, of characters that can be constructed on a whim, life goals that can be readily chosen, and life histories that can be readily compared. This leisure may transgress boundaries that people are unable to transgress in real life, whether desired or not. As they are not dictated to by authority figures, they are able to explore and choose their own paths, with the avatars they create and simulate. They do not have to appease the authority figures or structures in their real lives, as they are able to construct alternatives and preferences that are only available in the Sim life (or virtual life). This is especially the case for adolescents who arguably have more limitations on their life choices than adults who have more freedom of choices they wish to make. The employment of cheat codes, which I would suggest tends to be utilized by gamers at some stage of their play, is also an example of jouissance, or bliss – perhaps because it is an example of being able to ‘beat the system’.

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of what adolescents may have little choice or decision on are hair colour, lifestyle, tertiary education, night life activities, location of living, house design, sexual orientation, life goals, clothes they wear, and pets. This of course depends on their family environment and many other influences. But within The Sims 2, they are able to make different choices and explore alternatives.

The stories on the story exchange combine static images (though movies can also be used), text, and original storylines created by people of all ages, cultures, etc. Is this not a way that directly engages with digital insiders whose learning preferences are such that they are multifaceted, i.e. they engage with images, texts, and sound simultaneously? This is not to put down the use of traditional print books/literature, or negate it, nor suggest that it is irrelevant (Beavis, 1998). However, it may be appropriate to introduce activities relevant to new kinds of learners, who are engaging in new learning spaces.

For example, players gain knowledge when playing The Sims 2 and reading stories on the story exchange. For example, in a story Sarah read online, she found out what Ivy League universities were, as they were explained in a narrative. It is possible that players of The Sims 2 learn about health, happiness, and balance because in order for their Sim to function well, the Sim needs to have enough sleep, nutrition, attention to hygiene and the like, as well as time allocated to the pursuit of their lifelong aspirations. Having a focus on needs, wants, fears, and aspirations is conducive to learning how real-life people also live day-to-day. The Sims 2 also has a category for ‘fun’, and if any of the needs are not met, or desires not fulfilled, the Sim ceases to function (which is exemplified in various ways, such as being depressed, and being sick). However, in regard to the structures and conventions that the game designers have inserted into the program, that then becomes the knowledge that is permeated throughout the game that the players must discover and accept in order to play the game successfully. As Nutt and Railton (2003) claimed, “The game creators, and the format of the game itself, rely on assumptions about shared knowledge and understanding of relationship patterns” (p. 579).

Conclusion: A Legitimate Learning Space

The rules of the game when using the Sims 2 Story Exchange reflect an adherence to conventions that have been constructed and developed by those within the field. The voluntary employment of quality indicators highlights how aside from authorities, quality assurance in terms of peer evaluation has contributed to the popularity and success of The Sims et al. As the players and readers are given a voice, it indicates that they feel part of the community of players. The Sims 2 players have constructed these ‘rules’, not by authorities, and not by software designers.

How can this be applied to traditional schooling and pedagogy? It implies that children are able to help generate quality controls in a peer group, which are ones they are happy to adhere to because it means that they are then part of ‘the’ community. It also means that the (web)site, though it is predominantly for leisure (as Sarah indicated) is a legitimate site for learning. In playing The Sims 2 and engaging with The Sims 2 website, learning occurs through reading, through responding to others, and through the creation of narratives that reflect what is being personally played within the game.

Some ideas were mentioned in the previous section about how The Sims 2 Story Exchange could be utilized in the school curriculum. However, while one might leap on the bandwagon and design a unit that utilized The Sims 2 in one’s language program, it remains apparent that sites of leisure can and should be created in schools so that plaisir and jouissance can be experienced within schools, and so
real-life narratives can be explored in a safe space (as Jane Kenway and Elizabeth Bullen suggested). As Sarah said, “People like to play cause of the god complex. You get to control how things turn out”. Sites of leisure and ‘controlling how things turn out’ should have a place within schools. The autonomy and choice that is exhibited when Sims 2 players read the Story Exchange demonstrates that they are committed to good literature, that they have considered what they think ‘good’ literature is, and that the leisure involved in reading this good literature is inherent in people of all ages, whether they read online texts or print books.

Author Biography

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References


**Websites cited**


Addendum: INTERVIEW QUESTIONS

How long have you been playing the Sims?
What interested you to start playing?
Tell me about the Sims 2 website.
When was the website launched?
What is the difference between The Sims and The Sims 2? Has this made an impact on the online popularity of the game? Has the features of The Sims 2 meant that story exchange is possible?
Tell me about the story exchange part of the Sims 2 website.
What do you think you have learnt in regard to your general knowledge, not computer/technical skills, since you’ve started using the Sims 2 website?
Tell me about the nature of the stories that you read. What are you interested in reading about?
Have you created your own stories? Have you uploaded your own stories?
How much time do you spend reading stories online?
Is this your main form of recreation? Do you prefer to play The Sims 2 over reading others’ stories?
Do you download others’ ‘Sims’? Do you use them in your stories?
How do you write the stories after you have been ‘playing’ the Sims? Does it chronologically record the steps you make, or do you have to write separate stories from what you have been playing? Do you simply have to add text to the static images in order to help others understand the direction of the story? Or, do you create your own story using static images you’ve created?
How do you create/decide which images to put into your stories? Does this replicate a comic strip?
Bullying the Victim: Implications for Social Justice and Inclusion in Schools

Brian Kean PhD
Southern Cross University

Abstract
Schoolteachers, counsellors and educational personnel are increasingly exposed to a broad variety of literature and programs in an attempt to reduce problems of bullying in schools. There is a trend in the overall approaches to the concept of promoting positive behaviour and an avoidance of more direct methods of intervention for prevention of incidents particularly with young children.

This research paper presents a single case analysis of bullying and uses reflection on Piaget stages of social development as a lens to focus on the age group 7-11, the Piaget’s period of Concrete Operations. Has increasing awareness of bullying and the implementation of anti-bullying policies and programs alleviated the problem particularly from the critical focus of interpreting bullying and teacher responses from the eyes of a victim? The paper clearly presents the voice of a victim in a bullying scenario. This single case study raises issues in terms of the child’s cognitive and social development that can be linked to strategies for intervention in the specific age group.

Alternative approaches to implementing generalised anti-bullying programs need implementation in order to create environments where teachers can provide effective education, continually improve school climate and address the psychosocial circumstances of children in need of support. Strategies for improvement in practice are recommended with a particular focus on being more age specific and matching stages of cognitive development and the child’s understanding of the social world.

Introduction

Bullying in society in general has become a serious Occupational, Health and Safety risk in the workplace and a widely recognised concern for society. In 2003, the Australian Government commenced an initiative to create safer schools with the elimination of bullying being a key component of the National Safe Schools Framework. The initiative recognised that bullying is a significant problem with young children and supported the development of school environments where children are protected and feel safe (Rigby, 2003).

In the past six years, schoolteachers, counsellors and educational personnel have been increasingly exposed to a broad variety of literature and programs aimed to reduce problems of bullying in schools. The impetus for this is often linked to mental health promotion programs. In the late 1990’s Shaffer and Craft (1999) found that while a number of programs have been implemented to disseminate knowledge concerning mental health including depression and suicide virtually no literature had be published concerning programs designed to train teachers or school personnel. As a result considerable government funding became available to develop such programs.
A key element of dealing with mental health problems in schools focuses on the reduction of bullying behaviours. Links have been made between bullying and the development of depression that can have devastating effects in adolescence and often lead to school failure, violence and suicide (Lewinsohn, Rohde, Klein & Seeley, 1999). The increasing focus on the role of teachers and schools in dealing with mental health issues is reflected in the implementation of the National Mental Health in School Project Mindmatters (Wyn, Cahill, Holdsworth, Rowling & Carson, 2000). The Gatehouse Project is another example of an attempt to develop a systematic approach to mental health promotion in secondary schools, focussing on clear classroom management, the development of more interactive teaching styles and the creation of school climates free from bullying and inclusive of children under stress (Patton, Glover, Bond, Butler, Godfrey, Di Pietro & Bowes, 2000). Significant other programs include the Aussie Friends Program for use in anxiety and depression, and the Resourceful Adolescent Program which aims to increase resilience to mental illness in older students through the building of mental health awareness and the development of social skills and problem-solving skills (Birleson, Sawyer & Storm, 2000). Victims of bullying are often referred to the medical model to treatment (Kean, 2005). Effective anti-bullying interventions may reduce the serious outcomes that often result in the victim receiving a psychiatric diagnosis of depression, anxiety, Conduct Disorder, Oppositional Defiance Disorder and even Attention Deficit Hyperactivity Disorder (Kean, 2005).

The general approaches focus on students who are different, suffering a family crisis, depression, from poor socio-economic backgrounds and other cohorts identified in research as being more at risk of bullying or being bullied. However the stereotyping of backgrounds does not necessarily assist with a complete understanding concerning the complex social interactions and strategies used by bullies which significantly add to the problems the victim is having as a result of social circumstances beyond her or his control (Sullivan, 2000).

Supplementary approaches to implementing generalised anti-bullying programs may need implementation in order to create environments where teachers can provide effective education, continually improve school climate and address the psychosocial circumstances of children in need of support (Zarcour, 1999). This paper reflects the voice of the victim in a bullying scenario. Strategies for improvement in practice are recommended with a particular focus on being age specific and matching stages of cognitive development and the child’s understanding of the social world.

**Bullying**

Generally simple definitions are given to the complex social interactions that result in bullying. For instance Rigby (2003, p. 3) noted that:

*Bullying occurs when somebody who is less powerful than another person or a group is deliberately and [typically] hurt without in any way deserving that treatment.*

Bullying is defined as a power differential where the bully has control over the social situation. The outcome results in devaluation of the victim through physical, verbal or social manipulation. In playground interactions distinguishing between normal social relationship problems and determining the reality of what is occurring can be
difficult unless the teacher observes the actual incident. Relying upon the reporting of incidents from students opens a range of subjective interpretations of what has occurred and determining the truth or reality is dependent upon the interpretation of the events by children. This creates circumstances where the bully supported by bystanders claim a different interpretation of the events to the perceptions of the victim.

The outcomes for children subjected to bullying include in the following:

- Loss of self esteem
- Increasing isolation
- Depression and suicidal ideation
- School phobia
- Frequent absences
- Pushing the child to the point of retaliation
- Family disharmony (Rigby, 2003; Sullivan, 2000; Zarzour, 1999).

Problem child behaviours that are linked to bullying either as the bully or the bullied continue into adolescence and adulthood unless effective intervention occurs.

Interventions for the prevention of bullying in early childhood

Rigby (2003) noted that educating children about bullying should result in:

- Development of knowledge and understanding;
- Establishing an attitude and value system based on developing empathy with the victim and a sense of responsibility for those treated; and
- Development of skills including the capacity to protect others, to control negative emotions and resolve conflict.

Children are also expected to refrain from bullying, help resolve disputes that could lead to bullying, restrain and discourage those who bully and supporting children who have been bullied.

Strategies to assist the victim include developing skills to respond assertively or ‘nonchalantly’, avoiding threatening situations and seeking help from others (Rigby, 2003, p. 14). The generalised anti-bullying strategies lack direct correlation of the suggested strategies with the social and cognitive levels of development in young children. Many of the programs suggest age appropriate intervention however analysis related to cognitive stages of development and the child’s social understanding appear to be underdeveloped (Sullivan, 2000; Zarzour, 1999).

Piaget’s stages of social development

The early childhood period has become central to intervention strategies to prevent bullying. However are the strategies suggested linked clearly with the stages of cognitive and social development of children in the early childhood period? Piaget’s stages of social development relating to the child’s understanding of rules, accidents, lying and justice provides a framework for evaluation anti-bullying programs and strategies against age related cognitive capacity and social development.
Piaget’s framework is based upon the observations of children defining stages of cognitive development and functional behaviour (Wadsworth, 1984). Table 1 provides a summary of Piaget's stages of social development through the stages of Sensori-Motor, Preoperational, Concrete Operations and Formal Operations.

Language in the preoperational stage of child development is characterised by egocentricity on the part of the child, reflected in communication that is a monologue and not truly interactive. The child makes limited use of questioning and what questions are asked are not interactive and are limited in the information that is exchanged. Piaget’s model of the pre-operational child's behaviour and thinking is best described as egocentric. The child cannot understand the role of another, particularly the parent, and has difficulty understanding reason or need for compliance in certain situations. In the preoperational period of social development programs that use strategies to develop empathy and understanding may have very limited utility. The stage of social development implies that adult supervision is constantly required to facilitate positive social inclusion.

In the Concrete Operations period, around the age of 6 or 7 years communication advances and the child starts to develop a deeper understanding of social interaction (Wadsworth, 1984). During this period cooperation begins to evolve. Children will observe the rules although clear guidance is required as to what the rules actually are. The child in this period also begins to understand intentions and has the capacity to begin to understand others. A sense of fairness is also developing and the concept of equality begins to frame the child’s understanding of justice.
<table>
<thead>
<tr>
<th>Cognitive Development</th>
<th>Rules</th>
<th>Accidents</th>
<th>Lying</th>
<th>Justice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensori-Motor (0-2 years)</td>
<td>Motor stage. Rules not observed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preoperational Stage (2-7 years)</td>
<td>Egocentric behaviour. Games in isolation; little cooperation or social interaction.</td>
<td>Intentions not considered. Children do not take on the view of others.</td>
<td>Punishment the basis of a lie. Lying is like being naughty.</td>
<td>Submission to adult authority. Arbitrary punishments considered just.</td>
</tr>
<tr>
<td>Concrete Operations (7-11 years)</td>
<td>Cooperation begins to exist. Rules observed, though little agreement on what rules are.</td>
<td>Intentions begin to be considered. Children begin to take the view of others.</td>
<td>Lie = not true. Unpunished untruths are lies.</td>
<td>Justice based on reciprocity. Equality becomes more important than authority.</td>
</tr>
<tr>
<td>Formal Operations</td>
<td>Codification of rules. Rules known to all; Rules can be changed by agreement.</td>
<td>Evaluation of risk and consideration of risk factors develops</td>
<td>Intentions form the basis for judging a false statement as a lie. Truthfulness and trust viewed as necessary for cooperation.</td>
<td>Equality, equity and fairness become central. Consideration of intent and circumstances applied to judgement.</td>
</tr>
</tbody>
</table>


As noted in the preoperational period constant adult supervision appears to be essential due to the child’s egocentric view of the world. This research study attempts to inform understanding of bullying in the period of the concrete operations through a single-case study design.

**Methodology**

The purpose of this study was to investigate the improvements in dealing with bullying with young children in schools that may support generalised programs for reduction of bullying.

The pilot study uses a single-case methodology. In the area under investigation this single-case study methodology has historical relevance to understanding behaviour and the Piaget’s stages that all children transit. The use of a single-case can be used to affirm or inform theories, identify their scope conditions, or the conditions under which they are most and least likely to apply (Bennett & George, 1997). A limitation of the methodology is that, ‘No one case study design is appropriate to all possible causal assertions, modes of theory-building, and research objectives’ (Bennett &
George, 1997, p. 1). The pilot single-case constructional research established possible recommendations for intervention and directions for future research. A clear limitation of the study exists as it involves a single child and his interpretation of the social world.

The single case study replicates the work of Piaget as the observations of child behaviour and the child’s interpretation of social circumstances forms a theoretical base to better inform practice. The age of the child involved restricts the analysis and findings of the study only to the period of Concrete Operations.

The method used for data collection involved allowing a nine-year old male to free write following two bullying incidents at school in the one-day. A period of one month was then left and the nine-year old male was given the opportunity to write his views on bullying in general. Parental observations and follow up with the school further informed the analysis.

Data analysis

On picking the nine-year old up after school the parent found the child crying, upset and in general distress. The initial discussions revealed that there had been two instances of conflict involving the child and others and that teacher intervention had occurred. After settling the child down in the early evening the parent asked the child to write about the days events.

The child detailed the days events and their feelings. He indicated that he was upset because of:

- Getting into trouble for something you did not do
- Your friends saying ‘ha ha’ you got in trouble
- Others hurting your feelings and the teachers doing nothing about it
- Hurting your body and the teachers doing nothing about it
- The teachers yelling at you for something you did not do
- [The bullying] Making you feel sad

The child’s account of the first instance of social conflict is noted below:

My best friend scratched me. My neck was bleeding. The teacher called me over and I told her who had scratched me. My friend kept away. The teacher called him over and my friend said he did not scratch me but that I had fallen over. He did not tell that he tripped me over.

The teacher said to my friend, “Well do you have anything to say?” My friend said it was an accident and the teacher did not do anything and said “Ok, run along now”.

Further investigation of the above event by the parent revealed that there had been other circumstances that led to the above conflict. The conflict had originally started over the playing of a game of handball. The nine-year old, who perceived himself as the victim of bullying, was excluded from the handball game by his friend and peers. To try to become engaged with the social group he had grabbed the handball disrupting the game. This led to the physical conflict. His absence of this explanation
in his own story discounts his own actions in causing the conflict. In terms of Piaget’s theoretical framework the incident illustrates that cooperation is beginning to exist with children in this age group however unless inclusion of all children within play situation occurs isolation of the child may lead to retaliation or attempts to break through the social barriers to be included in activities. This would suggest that schools developing, facilitating and modelling constructive play might reduce social exclusion.

As noted by Piaget, children in the Concrete Operations period observe rules but have little understanding of what the rules are. By facilitating constructive play, establishing and modelling the rules the social environments in playgrounds in this period may become more inclusive. The teacher’s investigation of the matter is somewhat superficial. The child who had tripped and scratched demonstrated an understanding of intentions surrounding accidents and used this understanding to avoid further questions by the teacher.

The child’s account of the second incident:

The several classes had gone to the hall for a presentation by an outside group. I was crashed tackled by a boy I did not know from another class. As I was on the ground two girls who were with others started calling me a “loser”, saying that I “can’t swim” and calling me names. I got up from the ground and pushed my way through the group surrounding me. To do this I pushed one of the girls calling me names. The two girls and the boy who crashed tackled me went to the teacher who had just come into the room and said that I had punched the girl. I was called out and yelled at and had to report to the Deputy Principal.

After I came back to class my friends all laughed at me saying “ha, ha” you got into trouble. This made me feel sad and I cried and was crying when my Dad came to pick me up from school.

The second incident of the day is the one that places significant stress on the child. The children involved in the incident were not from the child’s class and were also not well known to the child. To cover their bullying the bullying group use the child’s defence of himself against him. They exacerbate the bullying situation and defend themselves against accusation by reporting that the victim of their bullying as the bully. This reflects a social practice used in bullying in the Concrete Operations period through the systematic use of lying by the bullying group as part of their defence strategies. This implies that the simple reporting of an incident by one or more children should not lead teachers to automatically assume that what they are being told is the truth. Unless the teacher has directly observed the situation, triangulation of data is required to establish the reality of what has happened. Questioning of children who may have been witnesses to the event beyond the bullying group and the victim is crucial to determine the actuality of events. Descriptions of the events by those involved are likely to be manipulated by the power relationships within the bullying group and can be used to further devalue the victim.
What is a bullying – a child’s reflection

The child involved in this study is not considered by himself or by the parents as being subjected to systematic and ongoing bullying. The school involved had implemented a Peer Support Program to reduce bullying incidents.

One month after the incidents the child was again asked to write his views on bullying. In relation to bullying the child noted that:

- Bullies are people who don’t like themselves
- Bullies are people who think they are cool
- Bullies are people who think everyone likes them
- Some teachers are bullies

In terms of the child’s understanding of the social complexities and roles in bullying he noted that there are:

- People who watch the bullying
- People who are having the bullying (Victim)
- People who are doing the bullying

The child’s analysis reflects the developmental process in the Concrete Operations period where children begin to understand the views of others. The classification by the child of the three categories involved in the bullying process confirms the analysis by Twemlow, Fonagy and Sacco (2004) that the role of the bystander is crucial in reducing bullying and the effects of bullying on the victim. Twemlow et al., (2004) indicated that the bystander is an active participant rather than a passive witness. Through being a bystander the individual or group becomes the support network for the bullying act. The role of the bystander is perceived by Twemlow et al., (2004) as a major variable that can reduce the incidence of bullying and power of the bullying social construct. The child’s comments that bullies are people who “think they are cool” and that “everyone likes them” confirms the use of the bystanders as a key support mechanism for empowering the bully or bullying group. Developing competencies in bystanders to not support and to report bullying should be seen as critical in reducing instances of bullying and the effect on the victim.

The child was also asked to write two stories giving examples of bullying he had witnessed since the original events. The child was not the subject of bullying but in the role of being a witness or bystander. The first story involved bribery by a boy to obtain the possessions of a girl:

_A boy says to a girl give me your fruit juice otherwise I will tell everyone who you love. The girl begins to cry and gives over the juice and says “Take it I do not need it anyway”. Here friends are watching. They are very nervous so they go to the nearest teacher. The teacher comes over to sort it out. The teacher asks the girl did she say no. The girl says she gave the fruit juice to the boy. The bully might lie. If he lies then something turns really bad. Sometimes the bully gets in trouble. Sometimes the persons getting the bullying_
(Victim) get in trouble. The thing I’m talking about is the bullying triangle.

The child’s analysis of the social circumstances is becoming more sophisticated reflecting the developmental process in the Concrete Operations period. In addition he has structured his own framework to describe the social process operating, the bullying triangle. Even though the bystanders (the girl’s friends) report the incident to the nearest teacher the fear by the girl of retaliation by the bully and further bullying lead her to deny to the teacher the reality of the events. In this event, the problem for the teacher is that the victim of bullying denies the event as protection against further harassment. Triangulation of data by teachers may assist in this circumstance. Programs focussing on the development of positive roles for the bystander during the Concrete Operations period of childhood seem appropriate and achievable. The data reflects that the child has developed a more complex understanding of rules, accidents, lying and justice and is capable of an analysis of the social circumstances to determine fairness and justice.

The second example written by the child related to play activities:

The boy scores a goal. A girl says that was not a goal. The boy then pushes the girl over. The girl gets back up and says a swear word to the boy. The girl’s friends get angry and support her. The boy then runs away with the girl’s ball.

The girl then goes and says to the boy’s friends and says that she thinks they are all “darn so and sos”. The other boys then gang up on the boy who took the ball and pushed the girl. Then they say don’t go tell on us because it won’t work. His friends then go and tell on him and he gets in trouble.

In this example the children’s behaviours reflect in the first instance that they observe rules but there is little agreement on what the rules are. The boy who was aggressive took the ball as a result of claim that he felt was unfair. The development of constructive play and clear rules facilitated by the school may reduce this problem. The role of the bystanders here also becomes clear. The girl’s friends support her and the boy’s friends once challenged by the girl bully the boy. But who is the victim? The boy whose response in the first instance to the claim over goal or no goal led him into conflict may well perceive himself as the victim. He is harassed by his own friends over the incident and also threatened by his peers not to tell, “Because it won’t work”.

The bullying circumstances discussed in this paper involve systematic bullying by others, exclusion from the group, humiliating the victim by using peers, taking possessions by physical force or by blackmail. The child who is the subject of the study and his parents do not feel he is bullied on a regular basis and believe that the school is no different in terms of problems with bullying than any other. The analysis also reveals the complexity of distinguishing daily social interactions that result in conflict from systematic bullying.
Conclusions

Review of this case study with its specific focus on the Concrete Operations period suggest the following key issues should considered by schools to reduce bullying.

- Supervision – Duty of care. Clearly supervision of playgrounds is crucial to management of the bullying and creating more positive and inclusive schools;
- Risk assessment of the playgrounds. Supervision of playgrounds should be linked with risk assessment of areas where children are more likely to be not observed by teachers;
- By facilitating constructive play, establishing and modelling the rules the social environments in playgrounds in this period may become more inclusive;
- School discipline rules in the period should be simple and should include a “Hands off policy”;
- Validation of the programs designed to reduce bullying need to be implemented. The language used and intervention methods need to be matched closely with the age and cognitive develop of the cohort involved;
- In the Concrete Operations period children are beginning to applying rules with rigidity. Posting the rules often will reinforce on a regular basis what rules need to be observed;
- Unless the teacher has directly observed the situation, triangulation of data is required to establish the reality of what has occurred, and
- Developing competencies in bystanders to not support and to report bullying should be seen as critical element in reducing instances of bullying and also the reducing the damaging effect on the victim.

This pilot study investigates a single case study dealing with bullying in the period of Concrete Operations. Results from the study are limited in terms of generalisation however the initial analysis provides significant recommendations for developing strategies that are age appropriate.
References


MEETING PRE-SERVICE TEACHERS WHERE THEY ARE: SUPPORTING THEM AS LITERACY EDUCATORS

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Abstract
Some media reports (Devine, 2005; Donnelly, 2005) have asserted that pre-service teachers often graduate without an understanding of how to teach children to read and write. In the current climate of professional milestones, national benchmarks and teaching standards for early career teachers, it is crucial that pre-service teacher education programs adequately prepare graduates for entry into the profession. This paper explores how we have tailored a final year literacy elective subject to meet the needs of our pre-service teachers and to support them in their final practicum and subsequent entry into the profession. In particular we report on the processes we engage with to encourage pre-service teachers to identify their own professional learning goals within literacy education and how we incorporate these within the context of the subject workshops. Throughout the session we challenge the traditional mode of a university subject as we create opportunities for pre-service teachers to network with the wider education community through attendance at local professional learning sessions and through contact with key literacy personnel across the school systems. We argue that our pre-service teachers overwhelmingly perceive this subject as a valuable way to stimulate and encourage professional learning and dialogue as they focus on their role as literacy educators.

Introduction
The inquiry into Literacy Teaching led by Nelson (NTIL, 2005) provided a number of recommendations about what constitutes 'effective' literacy teaching in contemporary classrooms. Indeed, such findings are consistent with reviews of teacher education preceding this inquiry. Between the period of 2000 and 2002 three state and federally funded reviews all identified some vital considerations for teacher educators (Department of Education, Science and Training, 2002; Ramsey, 2000; Vinson, 2001). Each of these identified that traditional preparation programs are often not adequately preparing our graduate students for the teaching profession. Each of these reviews identified a number of key elements that are often not well developed by traditional pre-service teacher preparation programs. Such skills include: motivating students, dealing with individual differences, insufficient and/or inadequate resources, organisation of classwork, assessing student work, and relationships with parents. Our own
anecdotal evidence and experience working with final year pre-service teachers is that they often leave university feeling inadequate and under-prepared for life in classrooms and confused by what will confront them when they arrive at schools. Indeed, other research has presented similar findings (for example, Kervin & Turbull, 2004, Kiggins, 2001). In particular, they indicate a particular level of anxiety with respect to implementing the literacy curriculum. Further, schools that employ beginning teachers, claim that a majority of recent graduates appear unaware of how classroom cultures operate and find it difficult to transfer what they’ve studied at university into effective classroom practice (Ministerial Advisory Council on the Quality of Teaching, 1998). The Ramsey (2000) review of teacher education in NSW supported these findings and also asserted that pre-service teachers often do not understand how classroom practice produces effective student learning. In the current climate of national benchmarks and teaching standards for beginning teachers, it is crucial that these issues are addressed within pre-service teacher education.

The actual structure of the university degree and that of subjects within this, impacts significantly on the pre-service teacher experience. The ‘traditional’ lecture and tutorial structure of university degrees has been criticised for decontextualising theory from practice. Hoban (2002) asserts that many teacher education courses present a fragmented view of learning and this can hinder the development of pre-service teachers into confident, flexible and progressive practitioners. His claim is supported by other earlier studies that also identified the fragmented and decontextualised way that knowledge is often presented in schools and universities (for example, Entwhistle, Entwhistle & Tait, 1993). As a result essential knowledge can often not be retrieved by pre-service teachers when it is required in real-life classroom situations because there were minimal links made to the situation in which it applies during the ‘teaching’ of theory.

Teachers have long been identified as being central to the quality of children’s learning (Darling-Hammond, 2000; Goodson, 2001). While this is important for all curriculum areas, the importance of this to literacy education is timely with the current concerns communicated by politicians and the wider community. Teacher education programs, and the specific subjects within this, need to actively consider how pre-service teachers can be further supported with both their understandings of how children best learn literacy practices and what the teaching of this may look like in actual classroom practice. The provision of a ‘meaning-centred’ curriculum working with the cultural resources children have in connection with a balance between explicit teaching and independent practice have all been identified as integral components of literacy practice (e.g. Dyson, 1993; Gregory and Williams, 2000; Kamler and Comber, 2003; McNaughton, 1995).

Within an Australian context, the way that language and literacy practices are taught in classrooms has changed considerably over past decades. Teachers are being called upon to provide explicit teaching,
but also provide for opportunities for individual exploration of language processes. The terms modelled, guided and independent are used frequently in current thinking about literacy teaching in the classroom (e.g. Department of Education and Training, 2000; Crevola and Hill, 1998). These three strategies are acknowledged as being ‘recursive’ as “…teachers constantly return to them and apply them in new ways” (Department of Education and Training, 2000, p. 28). Teacher educators are challenged as they consider how these theoretical understandings can be best communicated to pre-service teachers in a way that is meaningful and representative of classroom reality. What is also vital is that such perspectives are presented in such a way that they reflect the individual needs of pre-service teachers.

The time has come for teacher education programs to further consider how pre-service teachers (specifically in their final year) can become responsible for guiding their own professional learning as they actively construct their knowledge about literacy teaching. Doecke and McKnight (2003) write:

“Student teachers are not passively inducted into the profession … They actively participate in their own making, consciously applying various frames of reference in order to make sense of their own experiences and arrive at judgements about professional practice.” (p. 297)

We believe the way we have structured our language and literacy subject for final year pre-service teachers is one way to support their entry into the profession as confident and informed literacy educators.

Findings from our subject

The subject we are reporting on in this paper is a final year curriculum elective with a focus on language and literacy. This subject is open to all students within the Bachelor of Teaching and Bachelor of Education degrees, however is restricted to 48 places. In effect we are able to reach approximately 30% of final-year students. Prior to entry into this subject, pre-service teachers have experienced two core language and literacy subjects. The first of these is in their first year with a focus on reading; the second is in their second year with a focus on writing.

We worked together facilitating this subject for three years and during this time we have consistently made changes as we refined and developed our teaching to best support the needs of our final year enrolled pre-service teachers. Continued reflection of our own practice and evaluative feedback from our students have helped us to identify the components of our subject that support them best in their entry into the profession. Each of these components will be described in what follows.

The Learning Environment
While we acknowledge that the traditional lecture and tutorial structure is often criticised, the restrictions placed on universities through funding, staffing and timetabling issues mean these structures are part of our own teaching reality. In order to provide our pre-service teachers with the physical and emotional circumstances that assist to facilitate change we have to be creative with our interpretation of how to best organise our allocated lecture/tutorial time. Our subject is weighted at six credit points and scheduled to run over five hours in face–to–face mode. The first hour is nominated as a lecture slot with the other four hours for two x two-hour tutorial slots. In order to begin the change process we negotiate to have two rooms side by side on campus for our two-hour tutorials. This enables us to engage in team teaching and to move variously between the two rooms. We ‘discovered’ a way to organise this time (between the two spaces) that appeared to best support our students. This is represented in Figure 1.

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30 – 10:00</td>
<td>Input session on workshop focus (whole class)</td>
</tr>
<tr>
<td>10:00 – 11:30</td>
<td>Workshop activity (separate tutorial groups)</td>
</tr>
<tr>
<td>11:30 – 12:15</td>
<td>A focus on classroom implications (whole class)</td>
</tr>
</tbody>
</table>

Figure 1: Organisation of workshop time

While this appears a structured routine it allows us to provide input, workshop activities to aide understanding and then ‘pull it together’ with a facilitator led discussion. For example, during this time we often create a series of workshop activities each and then run the whole class through these in a medley between the two rooms. We also actively demonstrate how to teach specific literacy practices. For example, when we focus on grammar and spelling we use a Big Book as an example text, and we explicitly demonstrate how we would identify and then teach using elements of this specific text using a whole to part to whole process. We then provide the students with a range of subsequent activities where they have the opportunity in small groups to replicate this process.

We demonstrate how to work collegially with other teachers by encouraging them to share and discuss their plans for seminar presentations with us to ensure there is no overlap with our own lectures and all points are covered appropriately. We’re not afraid to let them lead discussions or to go with the teachable moment prompted by a question during the ‘lecture space’ so we don’t get into a power struggle for control of the classroom, we want them to assume that level of responsibility and ownership. Our goal is to scaffold them towards this by a process of affirmation, collegial interaction and reflection.

We aim to incorporate structured guidance and support as well as affirmation and collegiality within all sessions. This takes the form of the types of assessments we use and is indicative of an iterative, recursive and supportive process For example in Assignment One we expect that our pre-service teachers will create a Statement of Organisation for Language and Literacy in a selected class stage. This
is then marked and the feedback given is required to be incorporated into their Assignment Three that is the creation of daily literacy experiences for the same stage for a five-week practicum period. They need to include the original Assignment One in their Appendices and to have actively incorporated the previous feedback into the creation of their unit of work. The culminating nature of the assessment supports the pre-service teachers as they build upon their understandings in connection with specific feedback to create resources to support their professional practice.

**Negotiating the Curriculum**

Our subject outline identifies a number of objectives that we aim to incorporate within the subject. These are represented in Figure 2.

- Familiarise students with the N.S.W. English K-6 Syllabus with specific emphasis on its use in planning, teaching and assessing English
- Critically analyse various approaches to teaching English
- Further extend students knowledge about metalanguage and multi-literacies.
- Introduce students to the concept of functional descriptions of images and how these are deployed in a range of multiliteracy texts to make meaning.
- Acquaint students with a range of texts, both literary and factual, and in multimedia modes
- Workshop a range of classroom approaches/strategies, that will facilitate Language and Literacy learning
- Familiarise students with the parallel curriculum cycle for teaching reading and writing within a Functional framework.
- Assist students to plan teaching units/English programs that will facilitate practicum requirements including the Third Year Internship.

**Figure 2: Subject objectives**

However, while we have clear aims and have a proposed framework to organise what will happen during the thirteen weeks of our subject, we find that this has to be open to negotiation. In the first week of the subject we actively encourage our pre-service teachers to identify what they view as ‘gaps’ in their understanding of how to teach literacy. During this needs analysis we find that our pre-service teachers typically communicate an overwhelming sense of fear, uncertainty and anxiety about the English curriculum area. At this point we begin to negotiate the curriculum in order to best respond to their identified needs. Thus the subject often flows differently each time we teach it as it is crafted to address the specific needs of each cohort. We have found there are always a core of elements that each cohort identifies as being of vital concern such as grammar, spelling, phonics, guided and modelled reading and assessment. One of the other ways we work towards lessening their levels of anxiety and provide them with access to a visual map of the growth and development of their literacy knowledge is through the use of flowcharts.
Flowcharting to support the experience

The use of flowcharts to illustrate logical thought has a long history and some are still commonly used today. For example, the use of tree figures in science to represent relationships between and among different species or in genealogy to identify the links in a family tree (Gardner, 1982). Schools still use John Venn’s diagrams to illustrate the similarities and differences between two sources of information (Gardner, 1982; Maxfield & Brown, 1998). Although these are the most easily recognised forms a flowchart may assume a variety of forms or structures dictated by the task at hand.

Using flowcharts to demonstrate logic led to the creation of logic machines that played a significant role in the later development of the computer (Goldstine, 1972; Shurkin, 1984; May, 1996). By using flowcharts in this subject we are attempting to provide our pre-service teachers with an easy to use reflective tool that demonstrates their current understandings. By comparing flowcharts created at the beginning and the end of the subject our pre-service teachers begin to realise the depth of their own growth and development over the session. The use of flowcharts both demonstrates to each individual their own growth over time and functions as a way of illustrating complex and intricate relationships. McQuigg and Harness identify the use of flowcharts in planning, remembering and problem solving

‘A properly prepared flowchart is like a road map. It can be used to plan important steps in your thinking. It can be used to help you remember how you arrived at a certain point in your thoughts. Sometimes a flowchart will help you find a better way to solve a problem’ (1970, p.iii).

During the needs analysis workshop within the first week of the subject we also ask our pre-service teachers to create a flowchart or concept map that illustrates their current understanding of literacy. We provide them with the phrase ‘Literacy teaching is...’ in order to stimulate their thinking. We provide them with time, coloured markers and a piece of A3 paper to complete this task. They include their name, date their flowchart, and return it to us.

Once the pre-service teachers have engaged with this activity, we meet privately to review each of their flowcharts in conjunction with notes taken from the needs analysis workshop and develop an appropriate organisational sequence for the subject. A developed sequence is represented in Figure 3.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>25&lt;sup&gt;th&lt;/sup&gt; July</td>
<td>Classroom Literacy Blocks</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; August</td>
<td>What about assessment and evaluation? What does the syllabus say?</td>
</tr>
<tr>
<td></td>
<td>- How does this link with the Social Model of reading/writing?</td>
</tr>
<tr>
<td></td>
<td>- How can I provide authentic assessment opportunities?</td>
</tr>
<tr>
<td>4 August</td>
<td>PRAC</td>
</tr>
<tr>
<td>5* 15&lt;sup&gt;th&lt;/sup&gt; August</td>
<td>Grammar/Spelling</td>
</tr>
<tr>
<td></td>
<td>- How can I implement these in the classroom?</td>
</tr>
<tr>
<td></td>
<td><strong>Assessment Task 1 Due</strong></td>
</tr>
<tr>
<td>6 22&lt;sup&gt;nd&lt;/sup&gt; August</td>
<td>Guided Reading: What’s it about?</td>
</tr>
<tr>
<td></td>
<td>- How do I implement and resource it?</td>
</tr>
<tr>
<td></td>
<td>- How can I use Community Texts?</td>
</tr>
<tr>
<td></td>
<td>- What are the rest of the children doing?</td>
</tr>
<tr>
<td>29&lt;sup&gt;th&lt;/sup&gt; August</td>
<td>Students are invited to attend a Professional Development Workshop on Visual Literacy run by the South Coast ALEA Network. This is scheduled to run on the 31&lt;sup&gt;st&lt;/sup&gt; of August at 3:45, SeaSpray, Shellharbour.</td>
</tr>
<tr>
<td>8** 5&lt;sup&gt;th&lt;/sup&gt; September</td>
<td>Handwriting and resources for casual teaching</td>
</tr>
<tr>
<td></td>
<td><strong>Assessment Task 2 Due: Seminar Presentation (Groups 1,2)</strong></td>
</tr>
<tr>
<td>9** 12&lt;sup&gt;th&lt;/sup&gt; September</td>
<td>School Principal on Programming</td>
</tr>
<tr>
<td></td>
<td>- Casual Teaching, School’s expectations</td>
</tr>
<tr>
<td></td>
<td><strong>Assessment Task 2 Due: Seminar Presentation (Groups 3,4)</strong></td>
</tr>
<tr>
<td>10** 19&lt;sup&gt;th&lt;/sup&gt; September</td>
<td>Critical Literacy…what’s all the fuss?</td>
</tr>
<tr>
<td></td>
<td>- What is critical literacy?</td>
</tr>
<tr>
<td></td>
<td>- How can I implement it with Stages 2 and 3?</td>
</tr>
<tr>
<td></td>
<td><strong>Assessment Task 2 Due: Seminar Presentation (Groups 5, 6)</strong></td>
</tr>
<tr>
<td>11*** 3&lt;sup&gt;rd&lt;/sup&gt; October</td>
<td>Information Computer Technology workshop</td>
</tr>
<tr>
<td></td>
<td>- Subject evaluations</td>
</tr>
<tr>
<td></td>
<td><strong>Assessment Task 3 Due: Mini Unit of Work</strong></td>
</tr>
</tbody>
</table>

Figure 3: 2005 Organisational Sequence

We then repeat this flowcharting exercise in the last weeks of the class. Pre-service teachers are again provided with paper, markers and time to respond to the same phrase as previously. Once this has been completed, we present them with their initial flowchart and ask them to compare and evaluate their own professional learning over the course of the subject. They are also encouraged to identify individual areas to explore further in terms of their professional learning goals as beginning teachers. Our observations have shown that while all of the flowcharts were different, each was a clear representation of its creator’s understanding and logic flow.

The importance of relationships

The components we have already discussed require us, and indeed our pre-service teachers, to move out of our ‘comfort zone’ as we delve into the unknown. Typically they have had some involvement with us in their core undergraduate subjects, however, the lecturer / student role needs to be re-thought when operating in the way we do in this subject.
A key element of our subject organisation requires trust; the pre-service teachers need to trust us enough to tell us their areas of weakness and we need to trust them to guide the process of the subject. In order to aid this process and create an environment of openness and trust it is necessary that we mindfully change roles. We have found that moving into a collegial, facilitative and affirmative mode and using inclusive language such as ‘us’ and ‘we’ and ‘our’ assisted with building positive relationships.

The process of negotiating the curriculum transfers the ‘power’ from the lecturer to the student. It is within their professional needs that the subject operates as opposed to our pre-determined one-size fits all model, typical to university environments. For many of our pre-service teachers, this is the first time in their university careers that they have been asked to identify their own needs as a prospective teacher. They are often vitally aware that by the end of the year they may have to assume responsibility for their own classroom and students. For the most part, they grasp this opportunity to identify and direct their own learning with appreciation, gratitude and focussed engagement with the subject.

**Professional networks**

The literature emphasises the need for teachers to form professional networks to assist with the development and refinement of professional practice. Such networks need to create ‘community’ within individual schools, districts and curriculum areas (Darling-Hammond, 1997; Edwards-Groves, 2003).

As our pre-service teachers engage with the subject, they are often struck with the overwhelming reality of how much there is to learn about literacy teaching. We aim to continually emphasise the need for ongoing professional learning throughout their careers; they aren’t going to leave university knowing everything there is to know about how to teach a child to read or write. However, often the pre-service teachers are at a loss as to how they create professional support networks for themselves as early career teachers. In order to address this need, we incorporate two ‘networking experiences’ into the subject.

The first of these is to invite literacy personnel from local schools and Departmental offices to come and talk to the pre-service teachers about the expectations from their school/system and practical suggestions about how they can manage these things. We have found that this provides the pre-service teachers with ‘faces’ to put to literacy help in schools and the beginnings of some professional, collegial associations.

The second way we support our pre-service teachers in creating professional networks is through taking them to a professional
development session aimed at teachers run by our local ALEA council. This experience enables the pre-service teachers to sit and talk with ‘real’ teachers in a relaxed session as they work towards a common goal. Further, it encourages the development of collegial networks that have been identified as a major factor in assisting teachers to transfer their professional learning into their classroom practice (McKenzie, 2006).

Discussion

Our construction of the subject in this way and the use of the types of components we have described appear to provide our pre-service teachers with a support structure that empowers them to accept responsibility for their own learning. The type of learning environment that we are attempting to create is indicative of one that moves away from a transmission mode of teaching to a more facilitative, collegial and reflective one that encourages professional empowerment. Further, it is a model that we hope will impact on the way our pre-service teachers organise teaching and learning experiences within their own classrooms.

Of course our pre-service teachers are not the only learners in this subject. We continue to grow and learn as well and our continual reflection and evaluation of this subject has resulted in our own development and growth as educators as we attempt to replicate the ‘real-world’ of the classroom for our students and to lead by example.
References


Lessons from the Classroom: First Year Teachers
Report about their Perceptions of Life as a
Beginning Teacher

Julie Kiggins
University of Wollongong

Abstract

The Knowledge Building Community (KBC) Program at the UOW was designed as an alternative model of teacher education and an intention of its underpinning framework was that it would produce beginning teachers who were confident with problem solving and collaboration. It was hoped that by exposing the students to contextual based learning and a mentoring culture they would be equipped to cope and or seek support in order to deal with the rigours and demands of the primary school classroom. This paper will look at four school and classroom features identified as significant to beginning teaching success namely: Total Responsibility, Behaviour Management, Time Management and Mentor Support.

Introduction

We are living in a society that demands that our children be well educated. “A basic education is no longer adequate preparation for life” (Ramsey, 2000, p.9). In an era when new innovations in teacher education are necessary for classroom preparation, it is important that preservice teachers be equipped with alternative teaching strategies that challenge the telling and rote learning model (Gunstone, Slattery, Baird & Northfield 1993; Brown, Doecke & Loughran, 1997). Le Cornu (2003) adds that because ‘there are so many issues confronting teachers, the teaching profession, school systems and teacher education’ (p.2), teaching has become more complex. She cites that not only are teachers faced with major changes and challenges in the curriculum, significant economic, political, cultural and social changes also impact upon the role of the classroom teacher.

Luke (2000) refers to schools as ‘the shock absorbers and buffers for societal change’, while Rumble (1999) proposes that the challenges schools encounter are reflected in the quest they must endure to reform their structures and systems and become more effective within this new environment (both cited in Carrington & Robinson, 2001 p.1). Yet despite these challenges, teachers and schools are still charged with the responsibility of providing a suitable and effective learning environment for all children, while at the same time trying to maintain their professionalism. This demanding climate awaits graduate teachers and therefore teacher preparation programs need to make an attempt to prepare them for this environment.
**Teacher Education**

The preparation of teachers and teacher education programs according to Tripp (1994) has not stood up well to public scrutiny. He says that many people, particularly teachers, administrators, and governments, believe that many teacher education practices are an inadequate preparation for teaching. Teacher education in many tertiary institutions throughout the world are under pressure (Korthagen & Kessels, 1999) and it has evolved to the point where “the professional school’s prevailing conception of professional knowledge may not match well with the actual competencies required of practitioners in the field” (Schön, 1987, p.10).

The aim of any teacher education course is to produce competent beginning teachers. However, it must be reiterated that teaching is not easy; it is a combination of skilful activity that demands professional attention. The challenge, therefore, for teacher educators, is to create programs that will prepare the beginning teacher for the intricacies of life in the classroom. The transformation of students to teachers is a combination of complex events, which needs to take place in both universities and schools.

Furthermore, teaching is an activity that requires life-long learning and continual improvement and the effective teacher, according to Barry and King (1998), will be the person that maintains and understands this aspect. Student teachers have stated that in order to be a competent beginning teacher they need to have qualities such as caring, personal, psychological and social growth, compassion, patience, nurturing and imagination (Brousseau, Book & Byers, 1988; Weinstein, 1989; Mahlios & Maxson, 1995; Wilson & Cameron, 1996). With experience the beginning teacher's concerns shift from these ‘motherhood statements’ to emphasise classroom management and by the fifth year of service are usually centred and focused on instructional and management techniques (McCullough & Mintz, 1992). Therefore the effective teacher is seen as one who can combine management, content knowledge and interpersonal skills (Abbott-Chapman, Hughes, Holloway & Wyld, 1990; Hughes, 1994). From the research it can be determined that these attributes or qualities of effectiveness increase with experience in the classroom setting.

Therefore a major function of teacher education is to prepare beginning teachers for the reality of the classroom and equip them with the basic skills necessary to manage in their first years of teaching. Teacher education needs to maintain the empathetic and humanistic concerns that preservice teachers bring to their teacher education courses. In conjunction with this empathy for the pupil the preservice teacher needs to understand that, with time, it can be supplemented by the managerial and technical expertise associated with the craft of teaching (Wilson & Cameron, 1996).

**An Alternative Teacher Education Program: The Knowledge Building Community Program at the UOW**

In the light of suggestions from many reports that the structure of teacher education needed to change, an alternative model of teacher preparation
was developed at the University of Wollongong. In January 1997 a small group initiated an informal, but searching series of discussions within the Faculty of Education at the UOW. This Reference Group began meeting regularly and negotiating details with the overall intent to explore issues inherent in changing two major aspects of teacher education at the UOW:

- the teaching/learning culture of undergraduate teacher education; and
- the traditional mindset and culture associated with practice teaching/internship in schools.

Given this rationale, the faculty supported a proposal to design a research project that 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; and a greater integration of the practical field-based component of the teacher education program with the theoretical.

(Cambourne, Ferry & Kiggins, 2002, p. 2)

Based on this premise the Faculty of Education at the UOW, together with the Department of Education and Training (DET) and the New South Wales Teachers’ Federation developed the Knowledge Building Community (KBC) Project, which commenced in 1999. Its design was to explore a number of issues that are of critical importance to models of teacher education in NSW (Ramsey, 2000, p.57). The KBC is significant because its design offers students the chance to work and learn in a context-specific environment. Cambourne (2000) stated that:

…it is possible to reorganise the knowledge bases of undergraduate teacher education subjects so that they are more integrated with school and classroom culture, and therefore more relevant, more meaningful, better appreciated by student teachers, with less duplication across subject areas (Cambourne, in Ramsey 2000, p. 57)

**What is a Knowledge Building Community?**

Although the concept of knowledge building communities had been explored for students in schools they had not been implemented in teacher education. For the purpose of the UOW project the definition of a KBC proposed by Hewitt, Brett, Scardamalia, Frecker and Webb (1995) was adopted. They proposed:

A Knowledge Building Community is a group of individuals dedicated to sharing and advancing the knowledge of the collective. What is defining about a Knowledge Building Community is a commitment among its members to invest its resources in the collective pursuit of understanding. (p. 1)

In order to effectively initiate a repositioning of teacher education delivery from a ‘campus-based-lecture-tutorial’ mode to a ‘problem-based-learning-within-a-school-site’ mode, the KBC in operation at the UOW was underpinned by three learning principles. These three underlying learning
principles of the KBC are Community Learning, School-Based Learning and the vehicle which drives these two sources of learning is the facilitation of Problem-Based Learning.

**Community Learning (CL)**
This is achieved through the sharing of ideas and experiences with other community members, these being the preservice students themselves, the facilitators (university lecturers), and school-based teachers;

**School-based learning (SBL)**
Is achieved through participating in the school context over a regular period of time. An important principle in the pilot has been to shift the approach in the practicum component from supervision to mentoring and;

**Problem-based learning (PBL)**
This is the notion of a curriculum created around a version of problem-based learning designed for use at the University of Wollongong. The use of PBL will enable students to engage in-group discussions and data collection to address real life problem scenarios found in school settings. The use of PBL in teacher education places professional practice at the center of the student’s learning, which encompasses the learning of the student teacher and the mentor.

This approach as identified by Cambourne is consistent with the directions identified throughout the Ramsey report (2000) as necessary to improve the quality of initial teacher education. It was thought that the KBC Project (by 2001 it gained Program status) would produce beginning teachers who were confident and had the ability to tackle problem solving and collaboration. It is this aspect of the design brief that this paper will now focus.

**The KBC Graduate Beginning Teacher**
Informants for this paper were students from the pioneer KBC group through to the most recent of graduates of 2006. The NSW Department of Education and Training (DET) employed all the participants for this paper (except Lucy). Data were collected via the use of e-mail correspondence (a virtual necessity). The use of electronic communication for this research paper proved to be an invaluable, convenient and popular tool with both the participants and the researcher. With the expansion of the Internet, e-mail correspondence has become part of our culture and the use of e-mail correspondence has become a very reliable and popular tool for data collection. The graduates stated that the use of e-mail was by far the most convenient method of data collection. They said that being able to read and think about questions ‘posted’ to them enabled them to take the time to think about their replies. This meant that the replies or thoughts were not rushed as they had the advantage of ‘think time’.

To reiterate one of the major ideals of the KBC program is to prepare beginning teachers for the reality of the classroom and equip them with the basic skills necessary to manage in their first years of teaching. It was under this premise that the graduate teachers were asked to consider how the KBC Program had prepared them for the realities and challenges of the classroom. In addition the KBC graduates were asked as to whether they
felt confident and prepared for their role as a classroom teacher and to consider the availability of mentor support.

The responses that the graduates gave to the above questions were analysed for common themes and trends. An interesting response that the graduates gave was the need for a successful final year school-based practicum. The graduates said that as this was their final experience as a student teacher it was vital that this practicum be successful. The graduates stated that if this were a successful, supportive practicum then they would feel confident and ready to start as beginning teachers. The following four categories however, are the major themes that emerged from the graduates’ first year as classroom teachers:

- Total Responsibility
- Behaviour Management
- Time Management
- Mentor Support

Each of these themes will be addressed.

**Total Responsibility**

The realisation that I am totally responsible for the planning, teaching and learning activities and assessment for the students in my class hit home when I was informed that I had my own class. As a student teacher this was always the class teacher’s role and although we were doing segments of planning it was not for the whole year and we certainly didn’t have the total responsibility for it. This was a very daunting aspect in the early days of term one.

Louise

Lucy also said that planning took up a great deal of her time and she echoed Louise’s comments about the total responsibility for the day-to-day operations of the classroom. She said that getting a real understanding of the outcomes that her class were working towards was for her an important responsibility that she needed to undertake early in her planning prior to school commencing in term one.

Karen agreed that planning is an ongoing responsibility but she also said that classroom presentation is an added expectation that as a student teacher she took for granted. She said that she totally underestimated how long it took to make her classroom “look nice”.

However, it was Helen who said that the enormity and the responsibility of the job ahead hit her on Boxing Day. She said:

When the last of the presents had been unwrapped and the dishes put away I realised that it was now ‘after Christmas’. I was starting my teaching job ‘after Christmas’ and therefore it was time to get ready. What would I do on my first day? How would I organise my class? How would I introduce myself? I wonder what the classroom has in the way of reading books? I had so many questions and I needed to get started.      Helen
The graduates stated that total responsibility included planning, programming, assessing, reporting, and classroom presentation but also reported that it also included yet another new challenge: the children’s parents! As student teachers the ‘real’ classroom teacher had handled any concerns and queries voiced by parents. In their new role as classroom teacher this aspect now also fell their way.

Public relations with parents is a new challenge for me, some parents have realistic expectations of their children while other parents’ expectations are quite unrealistic and when I am talking with these parents I find myself choosing my words carefully.

Louise

Well I had an interesting experience the other day, I had parents at the school swimming carnival using digital cameras to dispute the results of their child’s race, I should say at this point that it was only a novelty race. Working with parents is just another thing I am learning a lot about.

Shane

From the data gathered however it was Maree who reported a disturbing aspect concerning total responsibility and the parent-teacher relationship, she stated:

On Thursday a parent yelled at me in front of children and parents... a very humiliating way to end the day. This was coupled by having another parent in tears at the same time because of how poorly her child was misbehaving and how far he has fallen behind in six weeks, which of course I was getting the blame for.... too many of the parents of my children have attached the stigma of “first year out teacher” label to me. Most mornings another teacher accompanies me to lines in the morning so the parents leave me alone. Quite often I am in tears I am tired and in over my head in what the school Executive have now termed my “baptism of fire”.

Maree

The question must be asked what were the Executive doing to alleviate the “baptism of fire” that Maree was experiencing. However, Maree was not alone in her dismay at the perceived lack of support when it came to life as a classroom teacher Amy, reported:

This whole experience is definitely an eye opener no matter how much training you get it really is a rude awakening when you are faced by the day-to-day reality of a classroom teacher. By the end of first term I was getting really crabby and mean because I was so worn out. But I am feeling refreshed and relaxed after the two week break. I am all ready for the next nine weeks.

Amy

When asked how the KBC program could have prepared them for any of these aspects Karen stated:

When I started I felt like someone should have been there in the room with me I almost wanted my hand held. But then I started to think about it some more and came to the realisation that I could stay at university for 5 or 6 years and still feel exactly the same way. I don’t think that in any job there is someone to hold your hand at all times. I mean when starting any job there will be things to learn about the workplace, the people who work
there, the work ethics and the culture of that workplace. I know teaching is a little bit different but I still think there is always something to learn about your job. I think university could have maybe helped me a little bit more. But if you put your head down and work then I don’t really think it’s that hard to learn and it’s the type of job where you’re always learning, no matter how long you have been there. There is always something new to learn.

Karen admitted that staying at university longer would not necessarily equate to greater preparation she also stated that teaching is life-long learning and there is always something new to learn. Maree whilst disillusioned about her lack of support agreed that there is no length of time that can prepare you for the total responsibility of the classroom because ‘prac teaching’ is artificial and that support in the beginning years must come from the school site.

Behaviour Management

The stresses and strains of first year teaching are often exacerbated by issues relating to classroom management (Brown, Doecke & Loughran, 1997). McCullough and Mintz (1992) believe that beginning teachers emphasise classroom management as one aspect that they need to get under control. They estimated that classroom management can dominate classroom practice and that it is not until the fifth year of service that graduate teachers are usually centred and focused on instructional and management techniques.

How then did the KBC graduates manage their classes as first year teachers? Shane stated that she was doing everything she had ever dreamed of and by her own admission she could not get the smile off her face!

However, the following excerpt from Karen is an insight into her first few weeks as a fulltime beginning teacher.

Until the classes were sorted out I had a Year One class, and I wish I could say that they were angels, but they were not! I had never met any little kiddies who were so naughty! I yelled on the first day, I had plenty facing the back wall! One little boy was sent to the room next door (with Year 5, which he didn’t like!) because he was being so rude! They were very talkative, and you wouldn’t believe how much they fought! I had fighting and tears everyday, because one boy was being a bully. I was hard on them though, and they did listen to me, but they just seemed to be at each other all day! In this class I also had some students with special needs such as cerebral palsy, muscular dystrophy, one with speech impairment and two with severe asthma. This was my introduction to teaching and my new school it kept me on my toes. I tried so many techniques that I learnt at university, which I am pleased to say worked okay.

Karen was not alone with her Year One class of children with challenging behaviours in the excerpts that follow Louise, Maree and Ann describe their classes.
There are 28 students in my Year One class; of which there are 5 particularly difficult students. This is very draining. When they are out of the class (with the STL\textsuperscript{1} teacher), the classroom is peaceful and the children are quietly working. When these children return to the room the classroom dynamics change immediately.

Louise

I have a Kindergarten/Stage 1 composite class which means programming from 2 different stages and then four weeks into the term I gained a refugee from Sierra Leone, who is the most violent six year old I have ever seen. We have had stealing and graffiti in the classroom, and a lot of frustration as my parent of a child with Asperger’s Syndrome has refused funding and given the many behavioural issues that I have in my class I just can’t accommodate his special needs.

Maree

I have a child with bipolar disorder in my class he is only five and his behaviour is all over the place, he is very violent and has hurt me, the other children, the principal and the teachers’ aides. It has only been this week (week 1 of term 2) and the last week of term one that I actually had a teacher’s aide with me, which could be the reason that I was so stressed out last term. The problem is how do you teach the whole Kindergarten class when you have a student who demands so much time and energy? It is frustrating me and upsetting me that the other children have to wait for me to manage this child, and it is not as simple as giving him warnings it is physically restraining him and forcing him to sit still and calm down, which takes a lot of time.

Amy

Faye teaches in the Far West of NSW and she was scathing in one of her first e-mails as a beginning teacher she complained that we had not given her enough techniques for all the challenging children she was coming into contact with in her dual roles of a casual and job sharing teacher. Given the scenarios cited above it would certainly prove difficult to meet the needs of our graduates in their varied classrooms. As a KBC facilitator I communicated with Faye through several e-mails suggesting that it was not possible to give a recipe for every known (and unknown) aspect of misbehaviour but reminded her that she was a confident empowered beginning teacher and to utilise the skills of KBC and investigate what options the school had and who could assist her. In the mid year break, Faye reflected on her first few months of teaching.

My major challenge was classroom management and I think that I made that clear if I remember rightly! I had planning under control even though I only had 3 days notice. Lots of work but I knew or felt that I knew what and how to do the planning. I think I could say I was wise enough to watch, look, listen, and learn (thanks to KBC). I have now a greater understanding of why children misbehave in class, the children that misbehave in our school are generally the ones who don't come to school, so they have not learned to do school, let alone read. They will then misbehave to not draw attention to the fact that they do not know how to do the work. After e-mails with you and my KBC colleagues, I went to my principal for advice, textbooks and the school councillor. I have to say the school councillor was of the most help to understand why the children were

\textsuperscript{1} Support Teacher Learning
behaving this way. My principal was of the most help when it came to practical ideas on how to handle the children on a daily basis. But I do have to say that I quickly realised that it was my problem to solve and I set about gathering information and putting some ideas to the test. I also knew that time and patience was needed. I am a lot better at managing the behaviour of children. I am now a lot more confident to walk into a class of children that I do not know. There are a few children that I have in my permanent classes that are a constant challenge, as a school we try different things to keep them on task, to learn the skills that they will need to support them when they get to middle and senior school. I am working on their self-esteem and the one student that I have that has only had 14 days at school this year is now my biggest worry. Faye

“I set about gathering information and putting some ideas to the test”, as a KBC facilitator this comment from Faye was exciting to read. The KBC Program is concerned with empowering students to have the confidence to inquire, question and in general act as educational anthropologists. One of the underpinning structures of the KBC Program is Problem-based learning (PBL) and it was always the intention in the planning phase of the KBC Program that our graduates would have the skills to solve professional problems using the principles of PBL. Although Faye admitted that she was quick to assert blame on the university for not preparing her, once she was reminded of the skills that she did have she was able to work her way through the difficulties she was having in her class. She also stated that she knew that it was going to take time and patience in regards to classroom management. Faye concluded her July reflections with the following:

I just love my job. I know I have a lot more to learn; I am open to ideas, enthusiastic and committed to my new career. Faye

The common theme running through the above graduate teacher experiences would be the degree of challenging behaviours that these first year out teachers were facing on a daily basis. From an outsider’s perspective it would appear that the graduates were on more than one occasion doing so with varying levels of support from their more experienced colleagues.

**Time Management**

The graduates have reported that time management is a constant struggle. Louise made the following analogy:

The huge time factor involved in preparing lessons, organising the classroom and marking work is enormous I have never felt so exhausted

Louise

Helen said that time was the currency used in the school. She went onto explain:

Throughout our KBC experience we discovered that schools valued time. As a beginning teacher I knew this but also found out that time could be
traded, through RFF\(^2\), library allocations, timetable rotations, and playground duties. However, what surprised me the most was that the teacher’s conversations in my staff room centred on the value of their time in relation to the effectiveness of activities or extra duties they were asked to perform.

Lucy described her day as thus:

I get to school at 7.30 each morning to assist me with my preparation for the day. Yet I am forever having panic attacks about some of my ‘less able’ children (that I love deeply) and I feel very frustrated that they still aren’t getting some of the concepts we are learning (even though I practice modeling, guided and independent teaching strategies) but I know that it is because I am not able to spend as much quality time with them as I would like! For example this term I have been doing narrative text writing, and I really feel as if I would like to spend more time with a small group of children extending this text type to them, but of course I have programmed to move on to another text type next week so I cannot do as I want as I’m tied into moving on or I will not cover all the text types if I don’t.

Lucy’s concern for covering the required number of text types was a reflection of her status of a beginning teacher and her programming was driving the decisions she was making in her classroom on a daily basis. She knew that as a beginning teacher her program would be examined and she was struggling with not wanting to have it incomplete. Lucy had a supportive mentor that allayed her fears and allowed her to progress past this struggle and enjoy her teaching. Lucy’s mentor told her to relax and to remember: “she is only human and that she couldn’t do everything”. Lucy said that in hearing this she immediately felt that she could stop trying to create perfection.

The kind of support offered to Lucy in the context of this research proved to be the exception rather than the norm. The support and mentoring offered to the participating beginning teachers will now be looked at in greater detail in the following section.

*Mentor Support*

Mentoring is not a new concept. The origins of the term mentoring can in fact be traced back to Greek mythology. A mentor needs to view their mentee in a holistic way. Caldwell and Carter (1993), state that the mentor-protégé dyad is a ‘mentorship’. They describe this mentorship as a learning partnership between two or more individuals who wish to share or develop a mutual interest. The mentor serves as an advisor, a guide, a net worker, and as a role model to the learner who seeks to explore the mentor’s experience. The graduates reported varying levels of support from their respective schools. The overriding theme however was that a supportive school was vital for their wellbeing as a beginning teacher. The DET actively and aggressively recruits final year preservice teachers via their Graduate Recruitment Program. Among the many features of their advertising

\(^2\) Release from face-to-face teaching
program the DET states that:

“New teachers are supported in their first years through our beginning teacher induction program. All teachers are involved in an annual school-based assessment program that aims to ensure ongoing professional development within a supportive environment. Schools with significant numbers of new teachers are staffed with a teacher mentor, who works collaboratively with new teachers to support quality teaching in classrooms, guide professional development and provide new teachers with a reduced teaching load”. (NSW DET 2007)

This assertion will now be examined in light of the reality that the KBC graduates from 2001-2007 reported. Karen knew that she needed a mentor; she clearly knew that her beginning classroom experience could have been made easier:

I didn’t have a mentor until term 2, when she came on board and started to help me I was able to see connections but had she been there from the start my transition to full time teaching would have been a lot easier. Karen

Amy also reported that she did not have a mentor and that she was conscious not to ask too many question for fear of wearing what Maree referred to as the ‘first year teacher label’. Amy, like Maree found herself in a school where the appointment of a first year teacher was a very rare occurrence. She asked and received support from her principal when things were getting beyond her in regards to the child with bi-polar disease. It was interesting though that it was the principal that offered her in class support. This act of support then made her feel at odds with the majority of staff who do not appreciate the principal’s progressive ideas. The question must be asked as to why support only came when the beginning teacher asked.

It has taken me a full term but I do feel like I belong in the school. The rest of the staff while very much older are lovely and supportive, I am conscious of how many questions I ask and what I ask though. While I was worried about how I would get on with the Principal I find her very easy to talk to and confide in. We have become partners with dealing with my ‘special boy’ (child with bi-polar) and she was the only one last term that at my request came into my classroom and team taught with me to give me some pointers and help. I really respect her and appreciate all of her work, which sometimes puts me in a very awkward position because not many of the other staff feels that way about her. Most of the other staff have been at the school for up to twenty years and don't like her expectations and high standards. Amy

It is necessary for beginning teachers to have mentors in place from the beginning of the school year. Lucy reported that she did and the support and guidance that she had was “fantastic”. Karen knew she needed this kind of support and when it was finally realised it made her day-to-day classroom life easier. Faye experienced support from her school not from one mentor but from various sources as discussed previously but then found herself in the position of acting as a mentor.
I am not the only new teacher at the primary school. There is one older lady who has been teaching out in the country and another girl. We talk a lot and this poor girl is feeling overwhelmed. She is a 4 year trained graduate but said that she only did one class on programming and we were told on Thursday that by week 5 our programs are to be ready and what they want in them. So here am I as green as grass mentoring this other teacher. She said to me that, as new staff we should have a mentor. But the reality is that the teachers here are so busy; there really is no time to mentor anybody.

Faye

Maree was appointed through the DET’s Graduate Recruitment Program she has however been left wondering when her teacher induction program is likely to occur and just where the supportive environment might be located. She also questions why she was given a composite Kindergarten/Year one class when her supervisor has the smaller ‘straight’ Year One class. Is this the kind of support that the DET has in mind for its beginning teachers?

My supervisor and principal...who? My supervisor only stepped foot into my classroom for the first time in week 5 of term 1. Because of the experienced nature of the staff, I think they forget I am here and I am left to do whatever I want...deep end first!

Maree

Although Maree was disillusioned by the lack of support offered towards her and the difficulties she was dealing with on a daily basis both from the children and their parents the email below illustrates the total despair that she was feeling towards the end of her first term of teaching. There is a desperation and sense of hopelessness emanating from the email. It should be reiterated that this student was an independent and successful learner as an undergraduate.

I am not coping and I can't keep showing up hating each day before it has even begun...and as you know the staff doesn’t exactly rush in and help. I just want to have a week where I am not in tears almost every afternoon and a day when I don’t regret the decision I made to take the job. I can't speak to mum and dad about it, they already want me to quit the public system and move home because they are sick with worry... I know it shouldn't be like this but the reality is that it is. I am developing resilience very fast .... it will all be okay, I am tough... this just isn’t the dream experience that everybody thought it would be. The school has told me that I can take a mental health day if I need it! I am walking proof that the DET and the government needs to stop fiddling around publishing reports on beginning teacher drop out rates and start bothering to do something to fix the problem! But that will never happen.

Maree

This school’s answer to support was to encourage Maree to take a ‘mental health day’. This is a euphemism for sick leave, when one is not sick! This strategy is a short term solution for an issue that requires effective leadership and management. This beginning teacher needs a mentor. According to Ramsey (2000) ‘the induction period is a major test of the extent to which employers, school leaders and the profession are interested in and committed to the quality of teaching in schools’ (p. 64). In Maree’s case it would appear that the principal and executive have failed this test to
However, having a mentor does not always mean that one’s transition to school and classroom life is guaranteed to be smooth. Helen was assigned a mentor from the beginning of the school year but as so often happens in any human relationship the match was far from compatible. After three months Helen’s mentor had not even asked her where she lived or even what her interests were.

The efficient delivery of mentoring can only be achieved when all parties are aware of its definition. Problems with the practice of mentoring have arisen when programs have been implemented with too little conceptual understanding of mentoring, unrealistic expectations, poorly thought-out implementation strategies and the lack of formal arrangements, with regard to the rights and responsibilities of partners (Little, 1990; Long, 1994). It is doubtful whether Helen’s mentor truly understood the nature of the role she had been assigned. The fact that there was no rapport between Helen and her mentor meant that the classical traits of mentoring were not occurring. The mentorship should be self-selecting it should be a mutual arrangement between the two parties. It must be a venture that has been undertaken willingly not an imposed assignment.

Helen’s reflections during this period were recorded as thus:

Having come through the KBC Program I knew what I was looking for in a mentor. I knew the theoretical aspects of mentoring and as a KBC student teacher I had experienced the practical aspects that a mentoring relationship can provide. The fact that I was now in a position where I was ‘assigned’ a mentor who did not want to be my mentor was disappointing to say the least. I wanted to find my own mentor but wondered how to do this without making ‘life’ difficult. This aspect was spoiling my experiences as a classroom teacher. I enjoyed my class we were having fun, the children were learning we were working towards or meeting the prescribed outcomes yet I was not happy. I felt alone. I felt constantly criticised and scrutinised.

Helen

From the above citations the varying levels of school support appear to have had the greatest influence on the lives of these beginning teachers. They had coped with the total responsibility of the job; they were learning how to handle the difficulties of behaviour and time management but what they were yearning for or appreciated the most was collegial support.

Conclusion

The purpose of this paper was to inform about the experiences of some of the KBC graduates from 2001-2006 and what they encountered as they made the transition from the campus to the classroom. This preliminary research would appear to confirm that the principles of the KBC program have supported the students in this transition.

The lessons that the graduates are learning and sharing about life as a beginning teacher point to the fact that as teacher educators it is important to provide them with skills that will enable them to survive as members of a
school staff. The KBC Program’s founding principles of community, school and problem-based learning given the above stories are equipping the KBC graduates to make the transition to full time classroom teaching. The KBC graduates know what they are looking for and even if they need a reminder they still have the ability to use the principles of PBL to help them solve the professional problems that they are encountering on a daily basis. By their stories and reflections it is obvious that community learning has taught them the benefits of collegiality.

Where the beginning teacher was being supported and guided by their mentor the graduates reported that their advice was invaluable. From the data though it was obvious that the support of a mentor was sporadic at best. The degree of support (or lack thereof) plays an important role in the success of the beginning teacher. Ramsey (2000) stated, ‘there are undoubtedly many exemplary induction programs within schools, which provide beginning teachers with an outstanding induction into the profession’ (p. 64) these exemplary programs did not feature in the narratives of these participating beginning teachers involved in this research. Many of the themes from the participants of this research would suggest that induction programs were completed poorly, if at all. The Development Directorate of the NSW Department of Education and Training has prepared a number of resources to assist the induction of beginning teachers, in the cases of Amy and Maree they weren’t utilised.

Apparent also was the use of the term ‘mentor’ it was loosely applied or its true definition was misunderstood and/or not carried out. Where teachers are too busy to lend support to beginning teachers would seem to confirm what Le Cornu (2003) described as the contemporary business and demanding nature of our school systems, it is hoped that this is not a lack of genuine willingness of the teachers themselves. What cannot be ignored and must be paid more than lip service is Maree’s plea for concerted efforts to support the beginning teacher instead of just reporting about ‘drop-out’ rates.

References


DESIGNING AND IMPLEMENTING PEDAGOGIC CHANGE IN MATHEMATICS EDUCATION: A POSTSTRUCTURALIST ANALYSIS OF THE TOXIC EFFECTS OF ENVIRONMENT

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ABSTRACT

This paper represents an engagement in polemics, highlighting the inadequacies of contemporary theoretical and philosophical orthodoxies to address pedagogic change. In this case, the required change is in mathematics education, and is away from instructional practices based on teacher and textual authority alone to those that foreground student initiated inquiry and sense-making. My argument, from a poststructuralist perspective, is that teacher change of this sort is about much more than cognitive or intellectual reconstruction, as commonly theorised. Such change has an ontological dimension, it has to do with the constitutive effects of past and present learning and teaching environments on a prospective teacher’s practice, it has to do with power relationships and the social construction of knowledge and identity. A poststructuralist analysis of the pedagogic environment in some teacher education sites suggests that, even here, there may be residual levels of inertia that jeopardise change.

As educators and researchers we have not had the effect we might have had on school-based mathematics education. Andrew (2006) makes the startling assertion that “students pass through more than 15 years of formal schooling successfully and still have deep misconceptions of the most fundamental of mathematical operations”. He adds that learners who do well in mathematics classes often have difficulty transferring that knowledge to other contexts outside of school (Cobb, Perlwitz, & Underwood-Gregg, 1998). Even more worrying to teacher educators is the fact that prospective teachers come to tertiary education with little positive regard for the discipline of mathematics itself, they endure it rather than enjoy it and when in schools merely attempt, often by dubious means, to make it more palatable for their students (Gellert, 2000). Many preservice teachers enter teacher education on the back foot, as it were; they are not sure of the content they are to teach, they are anxious and fearful (Swar, 2005) and have little disposition to inquire into mathematical ideas or what constitutes quality in the teaching of mathematics.

Although there has been quite a lot of research done on attempts to implement inquiry-based practice and its effects in teacher education, no precise road forward has been mapped for teacher educators wanting their students to act in more inquiry-oriented ways in schools (Foss & Kleinsasser, 1996; Schuck, 1996; Nicol, 2006, Andrew, 2006). There are many intervening variables, and Andrew (2006, on-line) summarised the problem that he found persisted even though inquiry-based practice was modeled in his subjects in teacher education:

Many preservice teachers … had major issues with the structure and teaching methods implemented within their third and final mathematics courses. After exploring the
responses of my students to the course, it seems evident that they do not understand or simply do not agree with reform-style teaching and learning. As many of these students will be teachers in a matter of months, it seems that another group of teachers will leave the university bent on teaching their students as they were taught, thus perpetuating the teacher-student-teacher cycle of the past 100 years. It appears that direct instruction, with the focus on procedure instead of understanding, has won the day again. This is quite discouraging to me as a teacher educator.

However, Andrew’s (2006) interpretation of what is happening here is just one of many that could be made. His reading of the situation is firmly rooted in psychological, humanist readings of learners, of what it means to know and how knowledge relates to practice; his reading is rationalist and individualistic. Because he draws from this psychological framing, he is able to pathologise his students who “had major issues” with the novel teaching approach, and “do not understand or simply do not agree with reform-style teaching and learning.” Here Andrew (2006) centres the individual, suggesting that the individual learners in his subjects were autonomous and had a choice, choosing to be “bent on teaching as they were taught”. While Andrew (2006) is singled out here, his analysis mirrors most research in the field that takes for granted that change is merely a matter of cognitive (re)construction, or “unlearning” old knowledge about teaching (Ball, 1988), giving no thought to the power relationships and constitutive effect of the learning environment.

In this paper I suggest that alternative epistemologies and ontologies could render supplementary readings of situations where changes in practice are difficult to realise. A poststructuralist analysis, foregrounding the constitutive effects of the discursive practices of school and teacher education, might reveal that the preservice teachers, too, found (and find) their involvement and learning in the mathematics education subjects ‘discouraging’. Through a poststructuralist lens, learning to teach in ways that involve new, untried interactional patterns between the prospective teachers and their students can be read as a matter of the head and the heart; while the head strives to grasp new pedagogical and mathematical concepts and practices, the heart may not be in it. My aim is to proffer an alternative reading of how the discursive practices of teacher education, within which the novice teachers struggle to establish themselves as competent and capable teachers of mathematics, may not be as liberating as one would hope.

THE CONSTITUTIVE POWER OF DISCOURSE

At school, the preservice teachers experienced ways-of-being a learner (and teacher) that are constitutive of the person (and potential teacher) they are now. While much of the research and writing in teacher education focuses on prospective teachers’ lack of mathematical knowledge, little thought is given to all that they do know about how mathematics is taught and learned. I refer here not to their knowledge as an intellectual product, but rather to an ontological dimension, their constituted ‘knowing’ (Lather, 1991) about power relationships and how things are done in teaching mathematics. This knowing imperceptibly, invisibly, guides their practice and is very difficult to erase. Rational argument might unsettle, but not erase, it.
From a poststructuralist perspective, highlighting the constitutive power of discourse and discursive practices, it can be seen that the preservice teachers have built a powerful arsenal in their constituted knowing about learners and how mathematics is learned. As learners themselves they largely took a passive role, waiting for the teacher to hand out worksheets, textbooks and show them procedures to be practised and remembered. Eagerly they grasped what they could of the mathematical knowledge that came their way, blaming themselves if they were not quick or clever enough to understand it. Simultaneously, they came to know about learning and teaching mathematics; the relative positioning of the teacher and students became inscribed on/in their very persons as the way teaching mathematics is done. Of course, there was nothing untoward or sinister in this; the teachers were merely ‘teaching’ their students, they were helping and supporting them, providing prospective teachers, among others, with a visceral experience of how mathematics is learned and taught. However, a particular problem arises later when teacher educators expect preservice teachers to view mathematical knowledge as a personal construction, and to cherish the learners’ own sense-making processes in mathematics, allowing them to investigate and communicate mathematical patterns and ideas in a wide variety of ways. Old ways of knowing mathematics die hard, and as Raymond (1997, p. 574) says: “Deeply held, traditional beliefs about the nature of mathematics have the potential to perpetuate mathematics teaching that is more traditional, even when teachers hold non-traditional beliefs about mathematics pedagogy”.

We can liken the case of the preservice teachers, who are expected to teach outside of all they know to be true about teaching mathematics, to that of a parent who unpredictably has her/his parenting practices questioned. Imagine this parent who considers her/himself to have all the discursive practices of parenting ‘right’; the children are well fed, taken to sporting events and read to at night. However, all this is as nothing when the parent is chastised by someone in authority for lightly ‘smacking’ one of the children. From the point of view of the parent, ‘good parenting’ has been redefined and smacking is not a discursive practice to be condoned [perhaps somewhat similar to direct teaching and textbook work in mathematics]. To regain status as a parent, at least in the eyes of the authorities, the parent has to change ways of relating to and interacting with her/his children. However, from a poststructuralist perspective which recognises the constitutive effects of past discourses, changes that involve ways-of-being a parent are uncertain and unlikely to happen. Even if it could be agreed at a ‘rational’ level that parenting could be done without spanking, workable alternatives to a practice that has felt so right for generations have to be found and implemented. It is likely that the words and warnings of the authorities will fall on deaf ears where there is no inherent, heartfelt desire for change.

Similarly, in mathematics education there are preservice teachers with no inherent, heartfelt desire for change in interactional patterns in the classroom. Over a period of twelve years or so, they have come to know, through experience, how teachers of mathematics relate to their students. Through relations of power, the social world of the classroom inscribed itself on them, establishing within them a sense of the proper positioning of the teacher and the ‘taught’. As stated by Price & Ball (1998, p. 263):
What teacher education students bring to learning to teach is constituted from their own past experiences as raced and gendered subjects … They bring assumptions about what teaching is, what its aims are, what students ‘need’, and what their roles should be.

A poststructuralist lens makes visible how the discursive, regulatory practices of the classroom established and maintained binaries (teacher/student; powerful/powerless; giver/receiver of knowledge) that can have toxic effects on prospective teachers’ future classroom practice. They have come to know teaching as telling, and showing students rules and procedures (Seaman, Szydlik, Szydlik, & Beam, 2005). Now in teacher education they are learners again, and they adopt a teacher dependent, passive position preferring to rely on memorisation, methods and procedures, instead of the hoped for independent and creative pedagogical thought (Alsup, 2005). To the poststructuralist none of this comes as a surprise, though it is confronting in the extreme to the teacher educator who has to determine new ways of interacting with these students to at least interrupt out-dated, already constituted knowing (Lather, 1991) about learners and, in this case, learning to teach mathematics.

**PEDAGOGIC WORK IS IDENTITY WORK**

If we start from the vantage point of the preservice teachers, and analyse the learning to teach process, we find that there are varying conditions of possibility across sites wherein they struggle to recognise themselves as competent and caring teachers. For them, competence is largely defined in classroom practice because it is here they need to perform to expectations to achieve their practicum rating (and hopefully a job). They crave tasks that will ‘work’ in the classroom, and are drawn to games and puzzles that will engage and excite the children they teach (Foss & Kleinsasser, 1996; Gellert, 2000). From a poststructuralist perspective, ‘what works’ can be read as those activities that they can safely implement while maintaining their uncertain status as a prospective teacher of mathematics. For them, their pedagogic work is identity work, on two levels. First, while still in the teacher education program, they seek to be recognisable as ‘competent’ teachers, interacting with children in the classroom in ways that feel comfortable and ‘right’. At another level, they are subjected to the discursive practices and discourses of teacher education that at times support, at others suppress, this realisation.

The difficult task for the teacher educator, who recognises the constitutive power of discourse, is to enact pedagogical practices that support the preservice teachers’ realisation of self as active agent in the classroom, while nourishing the innovative, equitable and generative potential of this action. To this end, an increasing number of teacher educators have introduced inquiry-based pedagogies in to their programs, for as Chicoine (2004, p. 245) said:

If our future teachers are not going to teach as they were taught by many of their own primary and secondary teachers, teacher education courses must not only present the bodies of knowledge needed by future teachers to assume responsible positions as professionals, they must also consistently model the kinds of pedagogical practices that are conducive to active, in-depth learning.
However, Chicone (2004) presents an argument assuming that the preservice teachers are rational, autonomous individuals who will pick up the knowledge and new pedagogical practices and run with them to the classroom. As research shows, this does not often happen. One explanation, the one that I am focusing on in this paper, is that we take far too much for granted regarding the implementation and effects of inquiry-based practice in teacher education. What we forget is that such discursive practices, in whatever form they take in universities around the world, comprise intersections of knowledge and relationships of power that can support, or suppress, the preservice teachers’ learning. There is nothing about inquiry-based practice that makes it inherently liberating for students, for as Kendra, a student in an inquiry-oriented teacher education program (Nicol, 2006, p. 32) lamented:

I feel like the solid floor has been ripped out from underneath me, and I’m being shoved into very unfamiliar territory. I need to somehow gain confidence in myself and accept the changes that you are proposing, even though I haven’t had the chance to prove them one way or the other myself.

Here the student felt herself to be in a vulnerable position. Note the implied coercion in the discursive practices that “ripped out the floor from under her” and “shove her in to very unfamiliar territory”. However, the student reads in to this that the onus is on her to “gain confidence in myself and accept the changes”; like all good subjects of education discourses, she imagines that she just had to work harder to ‘get it right’ (Davies et al., 2007, p. 31). But “what is going on” here is quite a lot messier than any rational discourse can capture (Davies et al., 2007, p. 35).

In teacher education, new ‘truths’ about learners as active constructors of meaning, and about learning as a sense-making process of thinking and reasoning are spoken and enacted in the discursive practices of mathematics education subjects. However, the preservice teachers, like Kendra above, find the new discourse quite threatening in their implied implications for teaching. These prospective teachers are concerned that they may not be able to establish and recognise themselves as competent in the classroom, and all this talk about active inquiry and understanding is not something they have knowingly experienced. Regardless of whether they learned much mathematics at school, or whether or not they enjoyed their learning experiences, they know how mathematics teaching is done, and their immediate desire is to implement the discursive practices of their past. The introduction of a new discourse, in this case a discourse that foregrounds the learner and the learning process, clashes head on with the preservice teachers’ desire to teach in the old-fashioned way. For example, this phenomenon is demonstrated in Nicol’s (2006) research where students’ comments clearly show their dedication to method and procedure over process in teaching mathematics. Nicol (2006, p. 30) had shown her students a video of a classroom teacher valuing students’ sense-making in mathematics. The teacher elicited her students’ answers to the problem and then asked students to explain and justify their responses. Students in the video were engaged in a lively discussion of articulating and convincing others of the reasonableness of their response. But the preservice teachers became very uneasy thinking that they would be expected to interact in these ways with children (quotes following are taken from Nicol, 2006, p. 31):
Michelle: Don’t they ever learn any more to carry the ones and bring down the- the way we did it?

Kelley: This is all-we’ve been exposed-we’ve all been through it one way and we can’t forget that. For us to learn how children operate is really going backward for us because we’re not there, and I think it’s very difficult for us to see how they’re thinking. It makes sense, but we have the rule…We can’t take the rules away. So what Michelle is saying, why not just do it the way we would because we’re used to it? It works for us, we remember the rules!

Kelley: How would you explain it to your principal or to parents? I mean if a parent came into this classroom, I’m sure they would probably be livid that their child wasn’t learning the method and…that their child is experimenting with the wrong answers.

Whereas in the past our main concern has been the preservice teachers’ lack of content knowledge (and this is still a worry), it also becomes clear that the uptake of these new interactional patterns causes concern. It may be that the preservice teachers are not interested in them because, in spite of their experiences in teacher education, they hold on tightly to the (constituted) idea of mathematical knowledge as absolute and conveyed through transmission methods. If knowledge is set, already established and just waiting to be ‘gotten across’ to learners, then why would one encourage them to indulge in such elaborate thinking and reasoning processes? Also linked to this might be the preservice teachers’ (constituted) notions of learners as naturally rational and autonomous individuals; if how one positions learners in teaching encounters is of little or no concern, then why spend time and energy on the provision of quality learning environments where learners are given the opportunity to make sense in their own ways, to communicate mathematical ideas and solve mathematical problems? In the end, the preservice teachers in Nicol’s (2006) study agreed that “teaching in ways that respect students’ thinking and sense-making were not worth the time, the effort or the consequences” (p. 31).

SUBJECTIFICATION IN TEACHER EDUCATION

To be positioned well in any discursive field, let’s say mathematics education, one has to have access to the powerful knowledge of the discourse, and be recognised as one capable of speaking and enacting its wisdoms. When one acts in agentic ways, one is able to act beyond the taken-for-granted, to engage in novel and generative ways with concepts and ideas and take up new discursive practices. Exactly how teacher educators can best prepare their students for this sort of participation in classroom life is not clear, though a first step might be to carefully analyse the extant processes of subjectification in the environment of teacher education.

In teacher education, too, we fall to the lure of the humanist individual where a great deal of our research is dedicated to indications of all the things prospective teachers don’t know and won’t do. We allow ourselves to imagine that if we can just get their mathematical knowledge ‘up to speed’, quality teaching/learning interventions will
follow. The individualistic and rationalist philosophical underpinning of our work sees us attempting to change the preservice teachers’ thinking, so that they can implement more reflective and investigative teaching strategies. However, as we have found from research (Foss & Kleinsasser, 1996; Nicol, 2006; Schuck, 1996), the first has no necessary connection to the latter. Even in our inquiry-based pedagogies the prospective teachers undergo process of subjectification as they did in school. There is no guarantee that they do not exit our programs having a sense of knowledge as absolute and unchangeable, and of learners as dependent on the teacher. Because their professional identity always hangs in the balance, they are looking for the mathematical answers and the perfect task that will make them recognisable as competent in the classroom. Nicol (2006, p. 32) says of some of her students “they felt anxious, dissatisfied, and frustrated with learning that did not seem to be directly connected to preparing them for their teaching”. Kendra, another of Nicol’s (2006) students lamented:

Kendra: Right now I am very frustrated…We as beginning teachers need to know the math before we start hypothesizing, exploring, and understanding students. What I need is more concrete emphasis on subject matter, rather than abstract thought about how kids learn…I still feel lost (p. 32).

So the preservice teachers are not enjoying their learning experiences and their demands seem so ‘unreasonable’; teacher educators would wonder how Kendra could expect to get to know the mathematics without engaging in some thinking and reasoning processes. Note the tone in Kendra’s plea: “What I need….”. Here the teacher educators, too, are engaged in processes of subjectification as they are subjected to what they see as students’ unreasonable demands for the ‘answer’. When Andrew (2006), for example, attempted to engage his preservice teachers in processes of investigation and inquiry, he was subjected to insistent demands that he take a more authoritative role and provide them with more ‘knowledge’. His reply to their questions: “I don’t know, what do you think?” sent them in to a frenzy because they sensed they had so much to learn, the professor had the knowledge yet he was not coming up with the ‘goods’ they needed. However, it should be noted that to their minds the preservice teachers were not being ‘unreasonable’; whatever their reasoning was, it had been constituted in mathematics education and community discourses over twelve or more years of schooling.

**AN ANALYSIS**

From a poststructuralist perspective one could say that in teacher education we face two major problems:

1. That what we are now doing in the name of ‘inquiry-based practice’ is probably helpful in constructing mathematical ideas, but not our students’ inquiry-based practice, and
2. That genuine inquiry as a pedagogical practice denotes an ontological state of mind and being that is in essence constituted, not intellectually (re)constructed.

Petrosky (2006, p. 91) stated that “Inquiry learning…apprentices students to intellectual and academic habits of mind that mirror those used by professionals in the disciplines.”
However, I disagree with this statement and suggest that the inquiry learning that our students, and students in schools are most involved in are poor imitations of the real thing. Inquiry learning when it is carried out by a professional, let’s say a mathematician, has a purpose, it is initiated by the inquirer, there is an accompanying desire to find out something new, to solve a problem and to gain kudos (or respect, in poststructuralist terms it is an identity issue). The inquirer takes her questions beyond her immediate environment choosing only those colleagues and literatures from which she can best progress her investigations. She has authorship and control over her learning process, and her reward comes mainly from an inner sense that she has done well. The ‘quality’ (and constitutive effect) of the engagement is quite different from ‘school’ inquiry where the teacher (and quite often a text) still hold the power and the authoritative knowledge. In this case the inquiry is imposed, and the outcome rated by an external authority. The learner is again in a dependent position as the teacher or lecturer sets the tasks and evaluates the ‘outcomes’ of the inquiry. In teacher education the student teachers’ beliefs and practices do not change, and they do not reconceptualise their roles as future elementary teachers (Foss & Kleinsasser, 1996). Behind all this, I would argue, is their (re)constituted sense that learning is about being told and shown and deferring to the authority of the teacher. Even though the words in teacher education say something else, the teaching strategies within which the preservice teachers struggle to achieve themselves as teachers, reinforce traditional relationships of power and knowledge.

From a poststructuralist perspective change can only come from a change in discursive practices. In this case it is in teacher education where necessary changes need to be conceptualised and implemented. One way to do this might be to embrace uncertainty, and frame the learning environment with a constant questioning of the nature of learners and how learning mathematics (and to teach) happens. In this way we are interrupting the teacher/student, knowledgeable/not knowledgeable binaries to some extent. With the preservice teachers we could inquire into inquiry-based learning, analysing theories, journal readings and classroom tasks as to their perceived potential to enhance learning. We could examine the learning to teach process of the student teachers themselves and the learning of children in classrooms. We could engage them as equal partners in the investigations in to teaching, giving them a real presence and some sense of authorship in the learning to teach process [I was first drawn to this notion in Nicol’s (2006) research, where she moves away from labeling the student teachers as ‘resistant’, to positioning them as capable participants in the learning-to-teach process]. We might let go of ‘method talk’, preferring instead to expose the students to, and use ourselves, a range of instructional strategies that best seem to support their learning and classroom practice. The preservice teachers want ‘content’ knowledge and need it to be able to recognise themselves as competent in the classroom; let’s join with them in building this competence, perhaps teaching them where patterning, partitioning, estimating, generalising and finding and using mathematical relationships are relevant and useful in teaching mathematics, as one small example. Their assessments could comprise an e-portfolio of annotated tasks, lesson plans and observations, evaluations and reflections on significant discussions with parents and classroom teachers. In assessing their work we would be attempting to gauge the extent and depth of their learning to teach journey; we would be evaluating learning processes rather than their knowledge of any specific
mathematics or theory (although a mixture of mathematical and theoretical knowledge would inform their portfolio work).

CONCLUSION

Sound research exists in mathematics education highlighting the importance of learners’ self-initiated investigation of mathematical ideas and relationships. However, the intellectual processes of thinking and reasoning that lead to the construction of mathematical ideas (and pedagogical theories and ideas) are not sufficiently comprehensive and diverse to frame the uptake and implementation of new and innovative classroom practice. I have argued that this is so because the actual implementation of new ways of interacting with learners in the classroom has an ontological genesis that has to do with one’s constituted sense of what learners and learning mathematics are all about.

In poststructuralist thought, all learners are constituted within a dynamic and productive learning environment; in teacher education relationships of power are seen to circulate unpredictably and professional identities and knowledge are (re)produced. As Davies et al. (2007) put it, individual persons are emergent, constantly constituted through practice. Change accompanies changes in discursive practice, putting the onus on teacher educators (including classroom teachers) to do something differently to bring about change. Though what this should be is yet to be determined, and the distractions and complications many, I have suggested that inspiration might be found outside contemporary theoretical and philosophical orthodoxy that informs pedagogy in teacher education.

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Community Service: Including a social justice component in a teacher education program

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Abstract
Based on Dewey’s notion of experiential learning (1938), community service has long been recognised as a vehicle that builds awareness and appreciation of diversity, addresses social justice issues, provides a context for developing partnerships with different community groups, and contributes to personal feelings of worth and fulfilment. As such, it is seen as an increasingly effective form of pedagogy within teacher education programs. This paper provides a brief overview of the literature relating to community service programs in a range of contexts, with a particular focus on their implementation in pre-service teacher education programs. The paper then describes the process undertaken to include a community service component in a newly developed four-year teacher education program at the University of Wollongong with the aim of increasing community awareness, social responsibility and social cohesion. The key components of the program are described and remaining challenges discussed.

Note: In the North American literature, community service that is incorporated into education programs at any level is referred to as “service learning”, and the two terms are used interchangeably in this paper.

Introduction
The relationship between community service and emotional health and well-being, feelings of connectedness, and long-term health and happiness has now been firmly established (Panksepp, 1998; Seligman, 2001). Studies over the past decade also support a connection between community service and high levels of performance and effectiveness across a range of occupations (Goleman, 1998; Cherniss, 2002).

Researchers and writers such as Goleman and Seligman strongly believe that instruction in social and emotional learning should be as much of an integral part of the school curriculum as traditional academic instruction. Service learning, a community service component built into an educational program, has now been incorporated into many school and college programs, and is building an enviable reputation as a pedagogical tool that has positive effects across a range of domains.

The impact of community service programs in schools and colleges
Positive outcomes have been consistently associated with community service programs in a range of educational settings. Before exploring the specific results of research in teacher
preparation programs, we will examine the effects of such service learning in other educational settings under the three broad headings of (a) academic gains, (b) social and emotional gains, and (c) increases in citizenship and community responsibility.

**Academic gains**
Conrad & Hedin (1991) found that service-learning components in secondary school programs resulted in academic gains, a finding supported by the research of Cohen and Kinsay (1994), and Billig (2000). A significant additional finding of Billig’s was that outcomes were stronger if they were particularly targeted by the program design. Similar academic outcomes were found in the very large studies conducted by Eyler and Giles (1999) with 2000 students, and Astin, Vogelgesang, Ikeda & Yee (2000, both cited in Malone et al, 2001) with 22,000 students. The consistent finding of gains in the important higher order thinking skills makes the academic outcomes of service learning particularly powerful.

**Social and emotional gains**
Personal gains in increased self-esteem, self-efficacy and lower levels of isolation and alienation were reported by Conrad and Hedin (1991) and Eyler & Giles (1999). The latter researchers also found that interpersonal skills were positively influenced, that stereotyping decreased and racial tolerance increased. Billig (2000) in her summary of a decade of research on service learning in K-12 students also found significant positive outcomes in personal and social development.

**Citizenship and community responsibility**
The development of empathy, appreciation of diversity, increased racial tolerance, and violence prevention have been associated with community service programs in secondary schools (cited in Lefkowitz & Tamarkin, 1997). Sax & Astin (1997) found increases in commitment to school. Astin et al (2000, cited in Malone et al, 2001), in their very extensive study, reported increased racial understanding, leadership abilities and plans to participate in service activities after graduation. Billig (2000) also found that students who completed a community service component had significantly more sophisticated career aspirations than those who had not.

While it was difficult to locate any reports of community service programs that did not result in positive outcomes, Eyler & Giles concluded that the quality of the service learning experience had a significant impact on the outcomes, and that not all programs were uniformly successful in achieving a wide range of positive results.

Anderson (1999) identified the following principles of effective service learning programs:
1. aligning outcomes for service learning with curricular goals;
2. ensuring service learning programs are theoretically grounded in disciplinary knowledge;
3. including all stakeholders in the design, implementation and assessment of the program;
4. ensuring that all stakeholders should have clearly defined roles and responsibilities;
5. facilitating frequent and varied opportunities for service providers to engage in reflection; and,
6. for preservice teacher education candidates, ensuring that the pedagogy of service learning is explicitly taught to increase the likelihood that it will be used in the practice of these future educators.

With these elements in mind, we will examine the outcomes of service learning components in teacher preparation programs.

The impact of community service programs in teacher preparation programs

There is now a convincing body of research that prospective teachers who engage in service learning as part of their teacher preparation programs develop skills that will help them both as teachers and as people. We will now provide a fuller discussion of some of the specific outcomes of research into service learning in teacher preparation courses to provide a context for the introduction of such a component in the new four-year degree at the University of Wollongong.

Application of theoretical knowledge.
While practice teaching provides opportunities to apply theoretical knowledge, community service programs provide additional contexts in which this can happen. This has been supported by research conducted by Alexandrowicz (2001) who stated:

“...the integration of community service learning and the development and application of the case study methods are proving a powerful approach to assess the teacher candidates’ understanding and ability to apply university course content”

If the community service is conducted in a school context, the additional benefits of additional exposure to and opportunities to reflect on classroom management practices and a wider range of instructional strategies are added (Strage, 2002).

Improved problem-solving and critical thinking
Consistent with results of service-learning programs in primary, secondary and other tertiary programs, increased academic outcomes for preservice teachers involved in similar programs were reported (Root & Batchelder, 1994, cited in Root, 1997; Vadenboncoeur et al, 1996). This provides a strong argument against those academics who use the argument that such programs waste valuable teaching time, and that they are inconsistent with the broad goals of a university education.

Improved communication skills
Interacting with a range of people, many from unfamiliar backgrounds, which is necessary in many service learning programs built new communication strategies. With improved communication comes greater understanding, greater trust, and an increased willingness to persevere through difficulties (Sullivan, 1991; Vickers, Harris & McCarthy, 2004).

Increased self-esteem
The reflective journal entries of students in Strage’s (2002) study of a service-learning program in an extremely disadvantaged community revealed that students came to see
themselves in a new light. They became more resourceful when faced with difficulties, and the resolution of problems enhanced the picture they had of themselves.

“I have to say that it felt great to know that the children trusted me. I think the whole experience was a great way for me to realise that I could multitask when it came to the student’s’ needs,”

As Strage reported:

“The students came to discover dimensions in themselves that they did not realise they had. They came to identify and appreciate talents and strengths they could draw on, as they pushed themselves to be the very best teacher they could be.”

Further studies by Green, Dalton & Wilson (1994) and Wade (1995) supported the view that service-learning programs results in increased self-esteem.

Sensitivity to diversity and changes in attitudes, beliefs and perceptions.
A number of studies revealed that interacting with someone who is different in areas of cultural, religious and ethnic background, gender, primary language, socio-economic status and learning potential resulted in positive attitude and behaviour change. Preservice teachers were more confident and willing to teach and interact with a very diverse population of students, and developed more appropriate language, attitudes and behaviour after service learning experiences (Aguilera, 1995; Flores & Yee-Sakamoto, 2003; Hedrick, McGee & Mittag, 2000; Siegal, 1994).

Research by Malone, Jones and Stallings (2001) found that pre-service teacher education students were “transformed “ in significant ways by a tutoring experience that was integrated into their teacher education course. They found particular benefits when the tutors were matched with tutees who were significantly different in terms of ethnicity, cultural background and socio-economic status. Strage’s (2002) research also found that students developed new understandings that challenged their preconceptions of the students with whom they interacted. While initially believing that they lacked prejudicial beliefs, many journal entries reflected their growing awareness that they often made unfounded assumptions and responded in stereotypical ways.

Stronger commitment to teaching as a profession and an ethic of service, and increased willingness to take on leadership roles
This outcome was reported in a number of studies (Filippo et al, 1993, cited in Malone et al, 1997; Strage, 2002). Strage noted that the introduction of community service programs helped address a continuing problem facing her school district in Silicon Valley, California. More than half of the newly graduated teachers were leaving the profession within the first year. The reason most often reported for this was the difference between their expectations about teaching in their community and the realities they encountered. Schools lacked the range of resources and materials they expected; the assumed level of home support was not forthcoming; and students were often unable to learn to their potential because of home-based problems. A community service program built into their teacher education course provided
experiences and strategies designed to address just these types of difficulties. It was built on a variation of the African proverb “it takes a village to raise a child”. It acknowledged that retaining successful teachers in their own community required the contributions of many stakeholders - not just the formal teacher preparation programs but the businesses and resources that made up the broad community.

Anderson (1998) and Vadenboncoeur et al (1996) also reported increases in the students’ perceptions of themselves as future leaders, and as having the ability to make an impact.

**Strengthened caring and advocacy skills**

Service learning programs in disadvantaged communities resulted in teacher education students coming to a new appreciation of the strength and resilience of children, but also of their vulnerability. They began to see an increasing advocacy component in their future teaching role (Anderson & Guest, 1993; Root and Batchelder, 1994; Strage, 2002; Swick, 1999).

The evidence for the effectiveness of community service programs across so many different domains provided the motivation for the inclusion of such a component in the new teacher education program, which is now briefly discussed.

**Community service in the teacher education program at the University of Wollongong**

The development of a new four-year Bachelor of Primary Education degree provided the impetus and opportunity to include community service as a compulsory component of the new degree. A committee of three academics was the instigator of this component, and canvassed faculty opinion on the idea. All but two of over forty academics were broadly supportive of the idea of a community service module within the new degree. Thus with broad but not unanimous support, guidelines were developed regarding implementation.

**Key aspects of the community service program**

**Significant number of hours**

The aim was to make the number of hours significant in order for it not to be seen as a token requirement by students, and to increase the likelihood of real engagement in the process. A total of 70 hours was agreed on, and these hours were to be completed in the third year of the program. If students were already involved in voluntary community service, they could continue in that role, but needed to accrue the required hours within the third year of their program rather than being able to have past service signed off as having met the requirement.

The committee felt that the community service component would provide an opportunity for all students to interact with a more diverse section of the population, thus non-educational contexts were to be the focus of this component. Community-based organisation such as disability services, youth and children’s services, community centres, aged care facilities, drug and homeless programs, and arts, environmental and animal welfare organisations are some of the available options. Other options still being canvassed are volunteer emergency services, rural fire services, and even overseas volunteer opportunities organised by external bodies, depending on the skills of the students.
Students operate in cohorts
There is evidence that students who move through their teacher preparation programs in cohorts build stronger networks, take a greater interest in each others’ attainments, and maintain a sense of community that extends beyond the formal teacher preparation program itself (Holmes, 1995, cited in Strage, 2002). It is planned to place students wherever possible in small cohorts for their community placements so they can provide support, feedback and advice for each other.

Students reflect on their experiences
Reflective journals and web-based discussion sites will be used to encourage students to integrate formal academic knowledge with their community experiences, and to establish connections between campus-based learning and site-based learning. The development of portfolios in community service reflections has been used successfully and these will be trialled in the more structured format recommended by Wade and Yarborough (1996).

Administrative support
It was clear that coordinating and supporting the placements of approximately 180 students would require a level of administrative support similar to that required by practice teaching placements. An administrative allocation was made to support the development of a community service data base, and the creation of supporting materials such as log books and community service feedback forms.

Aspects still to be developed
Community service component to be embedded in the pedagogy of a subject
The literature makes it quite clear that a strong link to an academic subject is integral to the success of service learning programs. This is not yet a key component of the University of Wollongong program. While broad support of the idea was established, very few academics felt that their particular subject was an appropriate place in which it could be housed. This could reflect poorly disseminated information about the value of the program and the research evidence that most subjects can meet its outcomes through service learning. The committee has considerable work to do to convince subject coordinators to take on this commitment. One particular subject is being targeted - a third year education foundation subject called Sociology and Cultural Studies. The nature of this subject appears to be ideally suited to the inclusion of a community service component.

Collaboration with community stakeholders
Service learning experiences should provide authentic service to the community and valuable learning opportunities for the students. Because the community service component does not begin until 2009, little more than interest in the community service elements has been agreed upon by local agencies and businesses at this stage. Strage (2002) highlighted the importance of gaining the close cooperation of all stakeholders and involving community partners in all stages of planning, with clear articulation of goals and implementation plans. This stage of the planning process must be implemented in the year prior to the first enrolment of students (2008) to ensure that community partners are invested in the program.
Site visits by academic staff
The committee believed that site visits by academic staff would add greatly to the integrity of the service component, but workload concerns meant that this notion did not receive support. Realistically, current staffing levels are not sufficient to cover visits to 180 students. The appointment of a coordinator of the program - and it would have to be a full-time appointment - seems to be the only way this hurdle could be overcome. In addition, the departure (with no replacement) of the administrative staff member who had responsibility for the database management means that the entire program is now at risk.

Systemic support
Not only do individual faculty members have to be persuaded that community service is a way to meet academic outcomes across a range of subject areas, bureaucrats associated with educational institutions must engage with, and indeed be convinced by, the evidence in order for the required financial support to be forthcoming. If community service programs are not valued at the highest level, they will not be funded. It is planned to present to the faculty the evidence that not only academic gains can be achieved through community service programs, but positive outcomes across many different domains.

Conclusion
This paper has presented convincing evidence to support the inclusion of community service components in teacher education programs - indeed the evidence is almost overwhelming that positive outcomes are achievable across academic, social and emotional domains and can contribute to a potential teacher’s development in a myriad of ways. Such programs do, however, require careful planning, close collaboration with community partners, and above all, the support of those who allocate funding. The committee has much to do to gain the required support for the program to go ahead. A concerted effort will be made to inform academic staff of the benefits and versatility of service learning in an effort to engender some enthusiasm for a program that has much potential for positive outcomes for all stakeholders.

References


Learning Circles in the practicum: An initiative in peer mentoring

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Abstract
This paper discusses a peer mentoring teacher education initiative that aims at developing pre-service teachers’ capacities to participate successfully in learning communities, both during their initial teacher education and throughout their teaching careers. Peer mentoring utilizes the latest conceptualization of mentoring, that of co-mentoring by Bona et al (1995) or that proposed by Hargreaves & Fullan (2000) where all teachers give and receive support. Such a conceptualization challenges the traditional assumption that the mentor knows best and is consistent with the latest approaches to teacher professional development, where teachers are encouraged to participate in learning communities. A peer mentoring teacher initiative is described, and based on some initial evaluation data from student teachers and school coordinators, it will be argued that Learning Circles in the practicum appear to offer a viable option for beginning to develop student teachers’ capacities for effective participation in learning communities and in particular, a mentoring attitude. The challenges of developing such an attitude, one which requires pre-service teachers to not only take responsibility for their own learning, but also to accept some responsibility for the learning of their peers, are also presented in this paper.

Introduction
At first glance the term peer mentoring might seem somewhat of a paradox given that mentoring is normally associated with expert-novice relationships. However there has been a recent shift in the mentoring literature to reconceptualise mentoring as much more of a collaborative or collegial relationship. There is a shift away from the mentor as expert, hierarchical, one-way view, to a more reciprocal relationship. Terms such as co-mentoring (Bona, Rinehart & Volbrecht, 1995), mutual mentoring (Landay, 1998), collaborative mentoring (Mullen, 2000) and critical constructivist mentoring (Wang & Odell, 2002) are being used to reflect these changes. In the context of teacher education, there are many applications of mentoring, including the use of mentoring in initial teacher education, teacher induction, and transition periods of re-entry and role changes. This paper focuses on the use of mentoring in initial teacher education. However, unlike much of the literature, which applies the term mentor to the role of co-operating teachers in their work with pre-service teachers during their school experiences, this paper highlights the mentoring role that pre-service teachers can play for each other.
The first part of the paper provides some background information and then describes the peer mentoring initiative – Learning Circles – in the Bachelor of Education (JP/P) at the University of South Australia. The next section presents initial evaluation findings and this is followed by a discussion which centers on the concept of peer mentoring. It will be argued that Learning Circles in the practicum appear to offer a viable option for beginning to develop student teachers’ capacities for effective participation in learning communities and in particular, a mentoring attitude.

Background
At the University of South Australia’s School of Education, with the advent of new programs in Early Childhood, Junior Primary/Primary, Middle School, Secondary and Adult Education being implemented in 2005, it was decided to move towards a ‘partnership pedagogical framework’ for the teaching of new practicum courses (based on the “pedagogies for the practicum” work by Le Cornu, Mayer & White (2000; 2001). As applied throughout the School of Education, it meant an intimate linking of on-campus, on-line and in-school/setting learning, with an explicit commitment to strengthening partnerships with site-based colleagues. It was not intended that one model would fit all but rather that the framework provided some guiding principles and parameters within which course co-ordinators and program teams developed their courses. This paper focuses on one aspect of how the framework is being implemented in the Junior Primary/Primary (JP/P) Bachelor of Education, in both the four year undergraduate program and the eighteen month graduate program.

In four of the practicum courses in the JP/P program, changes have been made to how the courses are staffed, how student teachers are placed in schools, how university staff work with student teachers and mentors in schools and Learning Circles have been introduced in schools. While it is the latter innovation that is the subject of this paper it is necessary to briefly explain the other changes so that Learning Circles are understood in context.

The four targeted courses are the second and third year practicum courses in the undergraduate program and the first and second practicum course equivalents in the graduate program. Each of the courses have a series of on-campus workshops, an online component and a practicum which consists of four – six individual introductory days over as many weeks preceding a two - four week block. In these particular courses, practicum course teams have been developed where each lecturer is responsible for the teaching, learning and assessment of their workshop group of 25 students (including the liaison work in schools). Alongside this, student teachers are clustered in school sites, with a minimum of four teachers per site involved. We have also changed how lecturers work with student teachers and staff in schools. We have moved to a liaison per site model to replace the liaison per student model, where each liaison visit includes the lecturer spending as much time with the mentors and site co-ordinators as with the student teachers.

The final innovation is what we have termed Learning Circles and is the focus of this paper.

What are Learning Circles?
A learning circle is a term used in the literature to describe learning communities for teacher development (see for example Collay, Dunlap, Enloe & Gagnon, 1998; Le Cornu, Peters, Foster & Shin, 2002). Other names have been used to describe learning communities for teacher development including; teacher research groups (Grimmett, 1995), communities of practice (Wenger, 1998), inquiry communities (Cochran-Smith & Lytle, 1999) and teacher networks (Lieberman, 2000). Regardless of name, there is a general agreement that the aim of such groups is to provide an enabling context for teachers’ professional growth, where the professional learning of teachers is shared and problematised (McLaughlin, 1997; Cochran-Smith & Lytle, 1993, 1999; Groundwater-Smith & Mockler, 2003; Warren-Little, 2002). The term Learning Circles is being used in this paper to describe learning communities of pre-service teachers who are placed together in the same on-campus workshop and in the same school for their practicum placement and who meet regularly throughout the practicum for professional dialogue. Learning Circles are structured into both the individual days and the block practicum. At the end of each of the individual days of practicum and once a week during the block, the student teachers are required to meet with each other for forty five minutes. This normally occurs from 3.45 – 4.30pm to allow time for them to talk with their mentors straight after school. In the guidelines given to the student teachers on-campus prior to the practicum starting, they are advised to negotiate with the student teacher co-ordinator an appropriate venue to hold their Learning Circles. They are also required to nominate co-chairs for each of the Learning Circles and each person has to take responsibility for co-chairing at least one of them. The role of the co-chairs is to facilitate the ‘learning conversation’ and to keep a check on the time so that everyone has an opportunity to participate. Student teachers are informed at the beginning of their practicum courses that participation in Learning Circles requires a dual commitment from them. That is, that the task of each participant is not only to share their experiences and learning but also to listen actively to their peers and ask enabling questions that will assist their peers to explore on a deeper level their own understandings of what they are learning. Questions or conversation starters are provided to guide these conversations.

Why Learning Circles?
The rationale for establishing the Learning Circles was influenced by three main factors. Firstly, as a result of my experiences with Learning Circles in the Learning to Learn project in South Australia. The school leaders involved in this education renewal project came together twice a term for three years to talk in depth with other leaders from a leadership perspective. In essence, the Learning Circles provided school leaders with time and space for them to focus on their own learning and to develop the notion of “school leaders as learners” (see Foster, Le Cornu & Peters, 2000). There was a reciprocal dimension evident in these Learning Circles as each participant was committed to further both their own learning and that of their colleagues. So, part of the rationale for establishing Learning Circles for the student teachers was to provide an opportunity for strong peer support and to enable them to learn that, in learning communities, they have a part to play in others’ learning as well as their own.

The second reason for establishing Learning Circles is that they build on the work of developing reflection skills in pre-service teachers, which has been a commitment at the University of South Australia for over a decade now. We know from the literature that we need to acknowledge the personal theories and beliefs that preservice teachers bring to
their teacher preparation programs and provide opportunities for them to make their beliefs explicit and to continually re-examine them (eg Holt-Reynolds, 1992; Richardson, 1996). Without this, teacher education will have little impact (Wideen, Mayer-Smith & Moon, 1998). We know that student teachers are constantly engaging in professional conversations on practicum, with their mentor teachers, other school based personnel and their university liaison but we also know that not all student teachers have opportunities to engage at a reflective level. It is hoped that Learning Circles might provide an opportunity for student teachers to make links with their own beliefs and experiences and to develop the confidence to articulate questions and opinions concerning their practice. They complement the practices of journals, critical friends and critical reflective questioning, which are also used for the development of critical reflection skills in these practicum courses.

The third influence in establishing Learning Circles is the notion of the ‘hidden curriculum of the practicum’ (Dobbins, 1995). We have known for awhile now that how we structure the practicum, the requirements that we have and the roles of the various participants affect the messages student teachers receive about teaching and learning (Ginsburg & Clift, 1990; Dobbins, 1995). For example, if student teachers spend most of their time isolated from peers and colleagues, the message they receive is that teaching is an individual pursuit rather than a collaborative endeavour. Similarly, if the requirement for their participation ends when the bell goes at the end of the day, then the message they receive is that teaching finishes when the bell goes. So, our practicum course team wanted to be quite clear about sending particular messages about teaching. These were that:
- engaging in reflection and professional dialogue are important parts of teachers’ work;
- teaching is a collaborative rather than individualist pursuit;
- teaching does not finish when the bell goes.

**Methodology**

This section of the paper examines some of the evidence gathered from a preliminary evaluation of the Learning Circles of the third year undergraduate practicum course in 2005 and the first graduate practicum course in 2006. The data were collected by an online Course Evaluation survey, using an open-ended question asking for student teachers to comment on the effectiveness of Learning Circles in their school placement. The data sets are incomplete as there were only 79 responses out of a cohort of 224 in the undergraduate course and 22 responses out of a cohort of 60 in the graduate course. However they provide some emerging insights, which, together with some initial feedback that has been collected from school based co-ordinators on conclusion of the practicum, provide some directions for both the development of Learning Circles in practice and also for continuing research.

The data were quantitatively analysed initially to determine the support or otherwise for the initiative. Of the 79 third year responses, 50 were positive, 14 were negative, 4 were undecided and 10 had no comment. Of the 22 graduate responses, 14 were positive, there were no negatives, 5 were ‘mixed’ and 3 had no comment. An interesting observation is that the undergraduates who did not like the Learning Circles were quite clear in expressing this as a negative whereas the graduates expressed any concerns they
had as just that – highlighting a problem or a challenge rather than discounting the idea altogether. The data were then categorized according to the issues they raised and these are presented next under the category headings of benefits and difficulties. The data sets are considered together as the issues raised were similar.

Some emerging insights

“Learning Circles are a good concept but difficult to get going successfully”
(third year pre-service teacher, 2005)

This comment succinctly captures the findings of this preliminary evaluation. It is clear from the feedback that there are many benefits associated with Learning Circles but that there is a number of implementation issues which present some challenges.

Benefits of Learning Circles

Affective

The main perceived benefit was of support. Many comments related to the level of support offered by their peers. For example: “It has been great to have feedback and support from your peers” and “It was great to get ideas and advice from others going through it.” The sharing of different strategies and being able to “debrief the day” were frequently mentioned as a very positive aspect of Learning Circles. Some participants particularly highlighted the diversity aspect associated with this sharing. For example “everyone had very different experiences with different age groups and mentor teachers.” A number of comments highlighted the non-judgemental nature of the support network. For example; “It’s good to bounce ideas off each other without fear of being wrong or being judged” and “It’s a chance to express concerns and gain feedback and advice during practicum within a confidential group of people going through the same situation.”

Another category of comments related to the development of personal/professional relating skills. For example “It has helped me to approach and communicate with others not only during Learning Circle but also on a daily basis” and “It has opened my eyes to working with others and being a good listener.” Several people stressed the importance of relationships in teaching and claimed that the Learning Circles enabled the student teachers to “get to know each other early on which was beneficial as time went on as we developed strong relationships.” Another comment also highlighted this issue; “The bond built within this group at our school was very supportive and productive.”

Another aspect of support was in managing the stress associated with practicum. One component of this can be seen in the following comments: “I was able to get things off my chest instead of building up stress”. And another: “It’s a chance to bring up issues or concerns and find out how other students are managing them, including managing the uni liaison!” One person commented that being able to “clarify things” had “helped enormously” in how she got through her practicum. And another: “It helped to share successes and frustrations.”

Cognitive

There were many less comments which reflected the cognitive benefits of Learning Circles. However whilst they were in the minority, they were noteworthy. For example
“It made me think about different aspects of teaching and allowed for in-depth discussions about certain topics” and “I have found Learning Circles to be particularly important in terms of constructive reflection which aided my ability to grow and change as a teacher”. One person commented that by people sharing what they had been doing in their own classes, it was a “good way for others to explore and generate new or existing ideas.”

**Difficulties with Learning Circles**

One of the biggest problems reported on was people’s perceived level of commitment to Learning Circles. One student expressed the problem this way: “No one cared about what we were supposed to discuss” and for one student, her reluctant peers presented her with a particular problem: “The three other students at my school refused to take them seriously ...they created tension between the student teachers as I found myself constantly chasing other students to get them to participate.” Clearly students’ participation levels varied enormously as indicated by the following quote:

> I enjoyed the opportunity to discuss aspects of the experience with other students but found that some people were not interested in participating fully. This was a little annoying and meant that the time was not particularly useful.

The second problem that was identified by a small group of students appeared to be related to the content of what was discussed. For example, “It just became a huge gossip session” and “We only had 3 in our group and though we tried hard not to, due to problems between students and mentors, we spent most of the time whining and complaining.” For another small group of students, the problem was that they found the Learning Circles to be repetitive; “They were good at first, but after the first three I found that everyone kept saying the same things and they became less effective.”

The third problem was in the timing of the Learning Circles. A number of students commented on the difficulty of them being after school. The main problem cited was one of tiredness. For example;

> Learning Circles shouldn’t be at the end of a school day, maybe during the day would be better. Our groups would spend most of the time having a gossip session and would be too tired at the end of the school day to reflect critically about our learning...

Another problem was the difficulty of getting everyone together at the same time. Several student teachers mentioned that it was difficult to do this. And another issue was that it “has taken valuable time out of a busy schedule.” This point was made several times, although it was not always clear whether the ‘busy schedule’ was related to professional or personal commitments.

One problem was only mentioned by one student but will be mentioned here as it raises questions about the facilitation of Learning Circles;

> ...the deputy principal often sat in on our LC which really stopped us from freely reflecting and exploring various practices that we
were experiencing and observing...I would have preferred to talk more freely with my peers.

Feedback from school co-ordinators
A comprehensive evaluation of the other stakeholders (ie mentors, student teacher co-ordinators and university liaison) has not been undertaken at this stage. However in a small focus group of co-ordinators from the graduate course who met on completion of the practicum, it was clear from the comments made that there was general support for the concept. For example, “It’s a great concept. They need to learn that teacher learning is ongoing and that teaching isn’t just about being in the classroom.” Two other co-ordinators highlighted the importance of teachers being able to reflect on what they do, when they said: “They have to be able to reflect. Learning Circles help them do this” and “Teacher reflection and dialogue are parts of the job now. I expect my staff to do it. It’s good to see that student teachers are being asked to do it.”

There were differences of opinions in regard to two aspects of Learning Circles. The first issue was the question of who should co-ordinate them. One co-ordinator wondered if the Learning Circles needed to be chaired by the co-ordinators. She believed that the success of Learning Circles depended on the questions being asked and raised the issue of how much the process needed scaffolding and by whom. Several other co-ordinators expressed the opinion that they thought it was a good opportunity for student teachers to work just with their peers. The second issue was related to the timing of Learning Circles. One co-ordinator wondered if the Learning Circles would be best done during the school day when the student teachers would not be so tired, but this was countered by another who said she wanted the student teachers to be with their mentors during the day.

Discussion: Peer Mentoring in Learning Circles
There is no doubt for me that the concept of Learning Circles is worth pursuing even though this initial investigation has unearthed quite a few challenges and dilemmas. These include the fact that there were some student teachers who did not like the concept, only a few students reported any cognitive benefits and there is a number of pragmatic issues associated with their implementation. However, in regard to the initial rationale, the Learning Circles did succeed in two of the three reasons given for their introduction – that is, they did provide a structure for peer support for many students and they also conveyed particular messages about teaching that we wanted to give (ie collaborative, reflective and demanding nature).

Mentoring as co-learning
I have argued elsewhere that the process undertaken by learning communities is a mentoring one (Le Cornu, 2005). This assertion is based on the recent reconceptualisation of mentoring as a process of co-learning as mentioned in the introduction. In learning communities, participants become genuinely involved in one another’s learning, as well as their own. Participants are positioned as co-learners as they engage in professional dialogue with one another and become co-constructors of knowledge. This is in line with a social constructivist view of learning, which suggests that learning should be “participatory, proactive, communal, collaborative and given over to the construction of meanings rather than receiving them” (Bruner, 1996, p. 84).
When Learning Circles were introduced it was hoped that they would enable student teachers to engage in a peer mentoring process, as traditional hierarchical relationship dynamics would be obliterated and student teachers would be positioned in non-hierarchical relationships. The student teachers did engage in a peer mentoring process, although it might be argued that is was one that mainly involved the participants giving and receiving support, rather than one in which they became “co-learners in a process of discovery” (Kochan & Trimble, 2000, p. 21). The challenges inherent in developing a commitment to co-learning will be explored in this next section, following a look at the crucial role played by peer support.

**The role of peer support in the practicum**

It can be concluded that Learning Circles enabled student teachers to provide a level of personal and professional support to each other. The affective benefits have been identified and it can be seen that they helped many student teachers feel more positive and confident about their experiences and helped with their stress management. These are not dis-similar benefits to some of those reported in the literature for teachers who participate in learning communities, which includes them feeling more positive about the profession (Darling-Hammond, 1996); reducing their isolation (Lieberman, 2000) and staying in the profession (Grossman, Wineburg & Woolworth, 2001).

The importance of peer support in professional experiences can not be overstated. More and more, the literature affirms the complexity of the learning process in the practicum and stresses negotiation of practicum experiences by pre-service teachers as being critical in learning to teach (eg Groundwater-Smith, Brennan, McFadden & Mitchell, 2001; Mule, 2006; Tang, 2003). It is acknowledged that the experience of ‘being a student teacher’ has its own dynamic with its own set of relationships, rules, intellectual and emotional responses, judgements and unpredictability (Britzman, 1991; Dobbins, 1994; Bloomfield, 2000; Groundwater-Smith, Ewing & Le Cornu, 2006; Sundli, 2007).

Moreover we have come to appreciate more about the importance of context in professional experiences and acknowledge that professional knowledge is always embedded in the complexity of the context. Practicum sites are not neutral, as Tang (2003) highlighted when she referred to the “risk level of the action context”. Some student teachers experience a low risk action context, where they face “well behaved and motivated classes who are receptive to different teacher practices (p. 487)” whilst other student teachers face high risk contexts and “classes with low motivation to learn, severe behavioural problems and/or low receptiveness to different teacher practices (p. 488).” One can appreciate that for some student teachers, the level of challenge they experience is higher than others but given that each student teacher brings their own understandings, values and beliefs, each practicum site presents its own challenges. Martin (1996) reminded us of the individual nature of challenging situations when he wrote that challenge “occurs when a discontinuity or dissonance occurs” and that “it is different for different people and that there are degrees of challenge” (Martin, 1996, p. 49).

It is very clear that pre-service teachers need to be able to manage their physical, emotional and intellectual resources whilst undertaking their professional experiences.
As well as doing this for themselves, I would argue that they have a crucial role to play in providing support for their peers. Increasingly, the benefits of engaging in dialogue with peers and supporting one another throughout practicum experiences are being recognized (Featherstone et al, 1997; Le Cornu et al, 2001; Manouchehri, 2002; Sim, 2006; Sundli, 2007).

Another reason as to why peer support is important is related to the intense emotional work related to teaching. The emotional dimensions of teachers’ work and learning to teach are being increasingly recognized (Hargreaves, 1988; Cochran-Smith & Lytle, 1999; Maynard, 2000; Stokes, 2001; Hastings, 2004; Le Cornu & Collins, 2004; Prosser, 2006). Peer support then is both an essential element and a worthwhile outcome of Learning Circles. What we have learned from this investigation is not to underplay the role of peer support as a part of the peer mentoring process in the practicum.

Many challenges have emerged for us as university based teacher educators from this initial evaluation. The one that I wish to highlight here is the challenge of developing in pre-service teachers a particular attitude, one which I have termed a *mentoring attitude* (Le Cornu, 2005). Such an attitude has a commitment to *learning* and to the notion of *reciprocity* and a willingness to work within reciprocal learning relationships.

**The challenges of developing a ‘mentoring attitude’**

It was very evident from the data that there were varying levels of commitment to the Learning Circles, including a group of students who appeared to have no commitment to them at all. For these students it would seem that they did not have a mentoring attitude. A *mentoring attitude* is one that values both one’s own learning and the learning of others and I would argue that such an attitude is essential in any mentoring relationship. This is because an effective mentoring relationship is underpinned by a commitment to learning and to the notion of reciprocity. There is a mutual exchange and each person is not just concerned with ‘what am I learning?’ but also ‘how can I assist someone else’s learning?’ The student teachers were informed at the beginning of their practicum courses that participation in Learning Circles required this dual commitment from them. However as we have seen it was not forthcoming from all of the participants. There was a small group of students who did not appear to have a commitment to their own learning, let alone their peers’ learning, as they wanted to leave straight away after school and did not want to engage in dialogue with their peers. So herein lies the first challenge. How do we as teacher educators get student teachers to accept responsibility for their own learning? And then, how do we get this group to accept responsibility for their peers’ learning?

The majority of student teachers appeared to display a limited mentoring attitude. By this I mean they involved themselves in the reciprocal process of giving and receiving support which showed a genuine concern for their peers. However, in so doing, they seemed to privilege the affective dimension of learning at the expense of the cognitive domain. They seemed keen to offer support and encouragement in the sharing of ideas and feedback but there was little cognitive engagement in the form of challenging questions or a willingness to engage in in-depth discussions on any topic. This was despite the fact that the mentoring approach of the Learning Circles, as established initially, required a high level of cognitive involvement by participants also. Students in the Learning Circles
were actively encouraged to not only reflect on their own learning, but to promote reflection on others’ learning. It was suggested that they do this by listening actively to their peers and asking enabling questions that would assist their peers to explore on a deeper level their own understandings of what they were learning. The need for student teachers to engage at both the affective and cognitive levels for worthwhile participation in Learning Circles is reflected in the following by Grossman et al (2001);

Forming a professional community requires teachers to engage in both intellectual and social work – new ways of thinking and reasoning collectively as well as new forms of interacting interpersonally… (p. 973)

Thus, to really engage in learning communities, or to participate at a ‘deep level’, individuals need a preparedness to learn from and with others and accept the responsibility of contributing to the learning of others. An insight that has been gained from this exploratory investigation is that this learning needs to incorporate the social, emotional and intellectual dimensions of learning. This then represents another challenge for us as teacher educators. How do we get student teachers to engage at both the affective and cognitive levels?

The third challenge is related to the concept of challenge itself and is represented in the very small group of student teachers who seemed to benefit most from the Learning Circles in that they reported cognitive as well as affective benefits. For these student teachers it might be argued that they were both supported and challenged in their professional dialogue with their peers. We know from the literature that professional growth requires the two elements of support and challenge (Daloz, 1986; Martin, 1996; McLaughlin, 1997; Tang, 2003). Daloz (1986) explained that when the level of both support and challenge are low, there is little professional growth and similarly, if one of them is increased without comparative changes in the other, there is once again little or no growth, resulting in the status quo being maintained. McLaughlin (1997) also highlighted the two aspects of support and challenge in arguing for learning communities as an enabling context for teachers’ professional growth. She explained; “teachers provide support and challenge for each other to learn new practices and to unlearn old assumptions, beliefs and practices” (p. 84). So the question is; How do we develop an understanding in student teachers that there needs to be a challenge aspect to their peer mentoring as well as a support aspect?

It seems that for us as teacher educators there is somewhat of a paradox facing us when implementing Learning Circles, in relation to the support/challenge issue. We have seen that peer support can play a vital role in professional experience and we also know that a level of challenge is important if professional growth is to be maximised. How we move forward with this needs to be further investigated. What we can say at this early stage is that the focus of the Learning Circles appears to need to be explicitly on the student teachers’ learning. Thus peer support as we have seen is crucial, but it may need to be framed as support for learning. That is, student teachers need to develop an attitude which enables them to work with their peers at both an emotional and intellectual level and provide challenge as well as support. Without these elements the Learning Circles risk becoming support groups only, rather than learning communities for student teacher development.
Ongoing Challenges and Dilemmas

The challenges associated with developing a mentoring attitude are not the only ones facing us. There are many challenges and dilemmas associated with introducing Learning Circles into the practicum. This investigation has raised the following questions;

- How much should we scaffold the learning conversations?
- What is the best timing for Learning Circles – during the day or after school?
- Should the school co-ordinator or student teachers chair the Learning Circles?
- Who monitors attendance/participation? Is this necessary?
- What is the optimum size of Learning Circles?
- How do we find time to develop student teachers’ levels of interpersonal, dialogue and critical reflection skills which are needed for effective participation in Learning Circles?
- Learning Circles are just one opportunity for ‘learning conversations’. How does the university liaison build on this? How does the mentor teacher build on this?
- How do we find time to meet with school based colleagues prior to the start of practicum to develop a shared understanding around the purpose of Learning Circles?

There is ongoing learning for all of us as we explore these challenges and dilemmas. It is my contention that pre-service teacher education has a role in preparing teachers of the future to acknowledge the part they have to play in a community of learners and to develop their confidence in this. What we have learned from this small investigative study is that having an expectation of active participation in Learning Circles which rely on reciprocal learning relationships is a beginning.

Conclusion

It has been argued in this paper that Learning Circles in the practicum appear to offer a viable option for beginning to develop student teachers’ capacities for effective participation in learning communities and in particular, to begin to develop a mentoring attitude. Such an attitude requires pre-service teachers to not only take responsibility for their own learning, but also to accept some responsibility for the learning of their peers. A mentoring attitude is considered essential for active engagement in learning communities where reciprocal learning relationships are at play.
References


Generation Y: A Challenge for Teacher Education

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Teachers are traditionally middle class, reasonably conservative, practitioner oriented, deliverers of curriculum which involves knowledge, skills, values and attitudes. Skilbeck and Cornwell claim in their submission to the Australian House of Representatives Standing Committee on Education and Vocational Training inquiry which is reported in the “Top of the Class” Report on the inquiry into teacher education in Australia (2007) that

… teaching does not seem to be drawing fully on the multi-ethnic/multi-cultural diversity of Australia… [the] conventional image of teaching [is] largely a lower middle class, Anglo-Celtic profession, feminine in the primary and lower secondary years and some subject areas (humanities and languages) and masculine in upper secondary years, some subject areas (science, mathematics) and senior leadership positions in schools. Teaching is in danger of being stereotyped through these features of the teaching force (House of Representatives Report, 2007, p. 37).

The implications of this are many but we need to be attracting into teacher education a more diverse and broad range of people to be more representative of the population as a whole. The young people entering teaching now, will be for the most part, from Generation Y.

There are many perspectives in the current and emerging literature which propose certain descriptors which characterise Generation Y. For the purposes of this paper, no attempt is made to cover all perspectives. Rather a synthesis of the common threads of perspectives such as those of Howe and Strauss (2000), Huntley (2006) and Sheahan (2005) forms the basic theoretical, interpretive framework for this paper and for the interpretation of the data collected.

There is a growing body of literature surrounding the characteristics of Generation Y as they constitute a large cohort in proportion to the rest of the population and are exerting a major influence on education, business and workplaces. Literature (Howe & Strauss, 2000; Huntley, 2006) for example tells us that Generation Y, which in this paper has been taken to be those born after 1978 who are now entering tertiary education and the workforce, are discriminating, independent, risk takers, technologically savvy and are not brand loyal. They have multiple options and they will take them. They know what they want and need and will get it. They work to live, they do not live to work. They are mobile and the Australian Bureau of Statistics, estimates that they will have 29 jobs in five different countries over their working life. These people want choice and multiple options and pathways. They will not accept “traditional” approaches at face value, they will want to be in control of their own learning and futures, they will expect pizzas to be delivered – not education. Education is not a commodity to be delivered and consumed.
Rather it is an interactive experience where the learner is central to the creation of meaning and Generation Y will reflect this concept. If we want life-long, self-directed learners we have to help them believe in learning and themselves; we have to engage them as active participants (Warner, 2006, p. 114)

They will want a rationale to be provided for particular learning and teaching approaches so that they can intelligently choose which approach(es) they favour. When students who were interviewed for this study were asked what criteria they use when choosing a course and what they want to get out of a course, the instant answer was “a job”. One student claimed that she wanted “to be known by a name not a number”. They have clear criteria and apply them with discrimination.

In a recent report through the National Centre for Vocational Education Research, entitled “Crazy Paving or Stepping Stones?” (Harris, Rainey, & Sumner, 2006) it is claimed that in a University of South Australia research study, 49 students and their personal histories were investigated. These 49 students had in total made 165 moves between the University and VET sectors. In this report, quoted in the Australian Higher Education Supplement (Macnamara, 2007), researchers claim that “while the reasons for enrolling in courses were frequently straightforward… educational pathways were not. Students used such terms as stepping stones, zigzags and crooked paths”. Generation Y is also “the most formally educated generation ever. Over 70% finish high school, of which 30% go on to university, and a further 40% get some other post-secondary training or qualification. Those who are at university are also staying longer” (Sheahan, 2005, p.10).

If we are to attract and retain Generation Y and its successors in teacher education courses, we will be required to realise it is not business as usual. Sheahan (2005) states that Generation Y are

- street smart and they are also: mature; resilient; fast learners; practical;
- enterprising and manipulative… will not be rocked by bad news… have a unique ability to see the practical side of things… are obsessed with having the newest and fastest of anything technology related (p. 16).

For the purposes of this paper, groups of students from final year Bachelor of Business degrees and Bachelor of Education/Graduate Diploma in Education courses were interviewed through one-on-one interviews and in focus groups. This pilot study is in the form of a practitioner inquiry “to construct local knowledge within inquiry communities” (Cochran-Smith & Lytle, 1999). There were 12 students in all who volunteered to attend focus groups and only 2 of the students were male. This is of course a small sample, but is intended as a pilot to a larger and more extensive study. With the informed consent of students, the focus groups were audio taped and a note taker was present to record contextual elements in the sessions. I was not known to any of the students nor was the note taker. The audio tapes were used as a basis for discerning key themes which emerged and the literature was then used as a basis for interpreting the responses of the participants. The students were asked about the ways they prefer to learn, what their
priorities are in balancing study and other parts of their life, what they expect of
University staff, how much choice they like with their study, whether they live to work or
work to live, what they are loyal to and what is important to them.

These students stressed their preference for learning by a blend of face to face and on-
line, streaming video and other technology such as podcasts. They did not see
technology as replacing lectures and tutorials but as adding to them and enhancing them.
I like to have lecture back-up on line so that I can go over it later. I can down-
load notes at 10 o’clock at night and get my readings anytime. But I need to make
the effort to go to a lecture as well. It’s hard if I don’t understand something on-
line. It needs to be interactive. When I’m on-line late at night I look to see who
else is on-line so I can talk to them and ask questions.

They were highly committed to their University study and in one case, the student stated
that her parents had a university fund for her since she was three. The students
interviewed were, in general comfortable with taking risks in their own learning but
stressed the need for there to be a supportive climate in order to do this.
If you don’t take risks you never experiment and there’s not effective learning
taking place. You need an environment where you’re not afraid to take risks. It
needs to be OK to be wrong and to not be put down. You also need to have a
mentor to talk about what was wrong.

Generation Y is used to choice and having multiple options. This has both positive and
negative impacts. Students interviewed for this study indicated that in the current climate
in general, they were faced with a confusing array of options and choices and that at
times, this can be quite overwhelming.

The students interviewed claimed that in sorting out options, friends were very important
and also that they drew up a list of pros and cons and worked through their options in this
way. Thus having a clear rationale for choices and deciding on the best options was
crucial. When asked whether they would go somewhere else if they were not getting
what they wanted in this course, one student said “I’ve already done that”. Others
indicated that they had begun at another university and changed because it did not give
them what they wanted.
If I don’t get what I want in a course I will walk away and go somewhere else –
I’ve already done that.
I have done a year of arts but didn’t like it – there were no links between subjects.
Arts was a stop-gap while I worked out what I wanted to be.

In some respects, teacher education epitomises the double hermeneutic about which
Giddens (1984) writes. As teacher educators we “teach” our students but also provide
them with a basic rationale for the way they teach their own students. Our rationale for
learning and teaching choices becomes the basis for our students’ rationale and they will
be increasingly required to be able to clearly and authentically articulate that the theory-
practice link is now even more crucial than ever where discerning and discriminating
learners will demand such links to be made. Students interviewed articulated their desire
for there to have been more explicit links between theory and practice made in the first few years of their courses especially, when they were coming to terms with new ideas and concepts.

In terms of the content of teacher education, curriculum Generation Y will expect a major focus on linking the local and global contexts. These people are cosmopolitans who are able to be participants in both contexts and Urry (2002) refers to this merging of local and global contextualisation as “glocalisation”.

… there are parallel, irreversible and mutually interdependent processes by which globalisation – deepens – localisation – deepens – globalisation and so on. The global and the local are inextricably and irreversibly bound together through a dynamic relationship, with huge flows of ‘resources’ moving backwards and forwards between the two. Neither the global nor the local exists without the other (Urry, 2002, p. 84).

In such a glocalised world, the demands of learners are complex and dynamic and ever changing. Static, rigid and highly prescribed courses of study will not be acceptable to the current or future generation of cosmopolitan learners. Urry (2002) claims

Cosmopolitan fluidity thus involves the capacity to live simultaneously in both the global and the local, in the universal and the particular… we can talk of a ‘glocalised cosmopolitanism’ in which in the everyday lifestyle choices they make cosmopolitans need routinely to experience the wider world as touching their local lifeworld, and vice versa (Tomlinson, 1999, p. 137 in Urry 2002).

Whilst glocalised cosmopolitanism is part of Generation Y’s mindset, the mindsets of teacher educators is significantly challenged by Generation Y. The students in this study all indicated a desire to travel and in most cases to work and live overseas and were also open to several changes of career in their working lives. When asked where they saw themselves in 5 years time one student responded “I have absolutely no idea where I see myself next year let alone 5 years down the track”. Students did not see that security was very important but rather saw that insecurity was all around and part of life. The fact that they did not know what the next few years held was something with which the students interviewed were quite comfortable

In teacher education we have been used to a great deal of “front end loading” of students with input which we deem as essential to their survival in classrooms. Obviously such input is still necessary but making students dependent upon teacher educators as the purveyors of that knowledge will not satisfy Generation Y who will want to know how many different ways they could act in multiple situations, will want some control over what input they need and receive and will not be content to be enculturated into the existing teacher culture. The front-end loading model of teacher education is reminiscent of what Cochran-Smith (2001) refers to as the “input-output metaphor” which

… carries with it a linear view of the relationship of teaching and learning for both K-12 students and for teacher candidates (p. 30).
The kind of “hand holding” that teacher educators may have done in the past is now not possible, due to lack of resources, and is now not appropriate with the current technology savvy, change oriented generation. They will see us as co-learners or, in some cases as their students in the process of their own learning experiences. Students interviewed emphasised the need for practical learning and also relished the idea of a trimester year and the ability to fast track their qualifications. One student claimed that “I think we have too much time off – three months over summer is just too much.” Another claimed “It takes too long to get back into it when you get back.” One student claimed that being away from university for the long break meant that when she was with her family she had to “code switch” because they spoke differently and used different terms from those she would use at university. She claimed that this “code switching” was difficult and she would prefer to have fast tracked her study and got out and into work more quickly. Students were also highly critical of examinations as a form of assessment and wanted more assessment on how students are thinking and feeling. Most were in favour of more interactive forms of assessment perhaps by peers or in small groups.

I have a general dislike of exams. I went into an Year 12 exam and decided beforehand I was not going to do the exam so I just sat there. It was an extra subject so I didn’t need it. I focussed on the subject I most needed to pass. I wanted to be in control and didn’t want to put that much pressure on myself. At Uni I’m just happy to get a pass – it was different in high school. At uni the pressure is off.

The students interviewed in this study were critical of lecturers who were not obviously passionate and enthusiastic about their subject, and were super critical of lecturers who used overhead after overhead (often of poor quality and with massive amounts of text on one slide) and who spoke in a monotone. “Death by powerpoint” is a growing malaise in higher education. They want to be engaged with the lecturer and the subject and see it as a form of discipline for themselves to come to lectures. One student stated that without that discipline she would leave everything until the last minute and probably would not do what was necessary to get through the course. She stated “If I can put it off to the last minute I probably will – I need structure”. All agreed that they liked lectures and tutorials that were interactive and allowed them to ask questions, make comments and work with their peers.

I like a quirky lecturer – one that draws you in. Elements of humour are important – life gets stressful. I like lecturers who share something of themselves and you feel like you know them. I think I should listen to this person because they’re a trusted Person. Lecturers who stand up the front and speak in a monotone are bad.

Typical of most Generation Y, these students stressed the importance of their network of friends. In fact friends and family were terms and concepts that were used interchangeably or even blurred with some students saying that they had created their own family of friends. They are immensely loyal to their friends and expect their friends to be loyal to them.

I talk to my own friends more than my family. If I need advice I turn to my friends not to my family.
My parents are dependent on me. I counsel my mother and give her advice. It can get a bit much sometimes. Every week throws up a new challenge so you can’t say this is how I’ll deal with it.

There is a blurred line between family and friends – it’s important to feel part of a group or community and to share struggles and issues. When I didn’t have a network of support and friends at Uni I dropped out.

The students in this study bore out what the literature claims about Generation Y in terms of being concerned about their future financial state. Yers are leaving university with big HECS debts which many will struggle to pay off quickly. One in ten Australian students graduated from university in 2004 with more than $40 000 in debt (Huntley, 2006, p.93).

Many students in this study also commented on their HECS debt and the fact that they began from behind and could not save money for the future.

Another claimed that even in a previous job where she was earning good money, she did not save but spent it all. She was a typical Generation Y consumer. The feeling was that as it is always going to be very hard to save, why bother. What this does mean for universities however, is that this is a user pays generation which wants to get value for money and expects to do so. They are critical of poor learning conditions, inappropriate learning spaces and antiquated facilities. Several students had been to two or three other Universities prior to this one and were able to make comparisons, bearing out the literature which claims that these people are not brand loyal and will go to a competitor if they are getting a better deal.

Teacher education courses have traditionally been characterised by rigid and full to over-full weekly timetables which demand that students attend class in order to engage with content. They have traditionally reflected a lock-step course design which is linear in its progression and has little room for flexible pathways or fast-tracking of the course. These are characteristics that will be anathema to Generation Y and their successors. They will look for multiple entry and exit points, blocks of learning undertaken intensively, the choice to attend class or to download material on to an ipod, access streamed video on demand, engage with online learning materials and discussion groups with peers and staff. They will expect to fast track their qualification and will want balance in their lives – family, friends, community, social life are important to Generation Y and they will not want work or study to swallow up their other parts of their lives. Generation Y expects things to happen quickly at the speed of mp3 downloads and text messages. The contraction of time means there is little personal space for quiet reflection and thoughtful consideration (Huntley, 2006, p. 18).
Students interviewed actually had a list of what they wanted to do to keep balance in their lives when they left university and certainly agreed that they work to live not live to work. This generation has multiple options and will take them as brand loyalty is not important to them. Balance in their life is important to them, however, and this is reflected in one student’s comment.

I try to take on so much I am always busy. I have had 10 years of doing a juggling act and am at a point where it’s got to stop. Friends of mine who now have babies are planning to limit the amount of activities their children do. When I have children I want them to be healthy in mind and body. I spent a lot of my childhood in front of TV eating crap. I want them to have as easy a childhood as possible – a childhood that is actually a childhood.

The students interviewed for this study were optimistic, thoughtful, reflective (despite Huntly’s comment above) and open. They wanted everything to be clear and transparent and would not tolerate anything that tries to manipulate or persuade them and which reduces their own sense of control and choice. This is a generation that knows what it wants and will take any steps necessary to get it. As educators we have a lot we can learn from them and would be foolish if we do not take advantage of what they can give to us and share with us. They are ready to do it and we need to be open to it without assuming that we are the receptacles of all wisdom and knowledge.

Yers are downloading an entirely new way of life. The rest of us will have to understand and adapt – In any generational war, I would put my money on Y (Huntley, 2006, p. 187).

These students are far from empty vessels to be filled by us – it will be to our peril if we do not listen to Generation Y and allow them to assist us into a new future.
References


The ‘Double Helix’ Relationship Between Quality Teaching and Values Education: Emerging Issues for Teacher Educators

Terry Lovat and Ron Toomey

A report on the research undertaken by the Australian Council of Deans of Education for the Department of Education, Science and Training as part of its Values Education Partnerships Project.

Disclaimer: The opinions expressed in the paper are those of the authors and not of the full Board of the Australian Council of Deans of Education nor do they represent the views of the Department of Education, Science and Training.

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Modbury School – Pre-School to Year 7 in Adelaide, South Australia; Dr Kathy Shea, Vice President of Living Values: An Educational Program, Inc. in the USA; Dr Laura Stocker; Senior Lecturer in sustainability at Murdoch University; Associate Professor Malcolm Vick, James Cook University.

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Abstract
This paper draws on research undertaken on behalf of the Australian Council of Deans of Education, and commissioned by DEST. Much of the background information it utilizes relates to an allied school-based project titled Values Education Good Practice Schools Project (VEGPS). Both projects are funded by the $29.7 million Values Education Programme initiated by the Australian Government in 2004. The latter project is being managed by Curriculum Corporation with the assistance of a network of personnel from a number of university faculties of education. With Stage 1 undertaken in 2005-2006 and Stage 2 implementation taking place in 2006-2008, the VEGPS project is producing findings that point to a close relationship between Values Education and overall effective teaching, herein defined as ‘Quality Teaching’ (cf. DEST, 2006). Four case studies from the research project are reported on as illustrative of the developing argument that Quality Teaching and Values Education are coalescing in terms of their demonstrable research effects. The ‘double helix’ metaphor from Genetics is proposed as a way of expressing the nature of this coalescing relationship. The paper goes on to raise a range of issues that confront teacher educators if the potential to link Quality Teaching with Values Education is to be more fully realised.
Purpose
In 2005, as part of its Values Education Partnerships Project with key stakeholder groups, the Department of Education, Science and Training commissioned the Australian Council of Deans of Education to undertake research about any relationships between values education and quality teaching. The findings of the research were subsequently to be disseminated to all Australian Faculties of Education and discussed with teacher educators in a series of faculty forums. This paper has been prepared to assist with the conduct of the faculty forums.

It became clear during the research phase of the project that many teachers were particularly positive about the impact their attempts at values education were having on the quality of the teaching and learning in their schools. The main purpose of this paper is to share what these teachers were saying about such things, analyse it from a Quality Teaching perspective and engage our teacher education colleagues in a discussion about the relative importance of it all for our work in both initial teacher preparation and ongoing teacher professional learning. The key issue that we are hoping colleagues will be prepared to wrestle with has been expressed elsewhere in these terms:

“The nature, shape and intent of Values Education has the potential to re-focus the attention of teachers and their systems on the fundamental item of all effective teaching, namely the teacher her or himself, including naturally the quality of the teacher’s knowledge, content and pedagogy, but above and beyond all of these, on the teacher’s capacity to form relationships of care and trust, and so establish a values-filled environment and, along with this, to teach about those values and so promote in students commitment to live by those values and to build a society where justice and respect are assured. Values Education and Quality Teaching are cohering. Values Education without Quality Teaching is an oxymoron, of course, but Quality Teaching without Values Education has the potential to suffer from the missing link that promises to strengthen and complete it”. (Lovat, 2006).

We appreciate the contentiousness of this assertion but hope that this paper will promote serious consideration of it because, in saying it again this time, we bring to the discussion some substantial research findings.

Background
The project that informs the paper grew out of the Australian Government’s Department of Education, Science and Training’s ongoing Values Education initiative. Since mid 2002, as part of its Quality Teaching Program (QTP), the Australian Government has pursued Values Education as a policy priority. It has subsequently invested very substantially in the values education enterprise by assigning A$29.7 million to the venture from 2004-2008. This investment has been spread across a number of initiatives, including the two stages of the VEGPS Project which well over 300 schools, across the country and across all sectors, have been experimenting with effective ways to implement the National Framework for Values Education in Australian Schools (DEST, 2005) which is the guiding document for the task. It has also included: funding for each school in Australia to conduct its own
values education forum; a programme of Partnerships Projects with key stakeholder
groups in education; a series of annual National Values Education Forums; and, the
provision of values education resources for all Australian schools.

At the outset, the Government’s expressed reason for making values education a more
prominent feature of national educational policy was that the full learning potential of
students in all schools, including public schools, could not be realised without an
explicit values dimension being part of the school’s agenda. Addressing a group of
parents at a school function in 2005, the then Federal Minister said: “Our
government’s vision of education is that every human being in this country, and every
young person in particular, should be able to achieve their potential.” In that task, he
argued that all schools have a critical role to play in not only teaching young people
how to learn, but also in “creating well-rounded, well-adjusted, caring, constructive,
responsible and, hopefully, compassionate adults.” Of all the things necessary to
develop such ethical and responsible citizens, he identified the first as the building of
character. In the building of character, he continued, the bricks and mortar are values
and “the concern I have is that if we provide a values-free education to young
Australians, we risk producing values-free adults. … We all love talent but in the end
it’s character that really counts”.

The National Framework for Values Education in Australian Schools
All of the initiatives that the Government is currently funding are informed by the
National Framework for Values Education in Australian Schools. Arising from the
work of the Values Education Study (DEST, 2003) the Framework was developed
and shaped through a “ground-up” community consultation process. It has been
tellingly described “as a framework, not a cage”. It assumes that people will not see
the list of nine values that it contains as a rigid, prescriptive list of content for a values
education program. They are not intended to be read as an exclusive set of precepts
but as a set of shared core values that all schools should foster as a reflection of our
commitment to ‘Australia’s democratic way of life’ and to ‘a multicultural and
environmentally sustainable society where all are entitled to justice’. Essentially, the
list of ‘Values for Australian Schooling’ is to be seen as an agenda for working
towards a collective understanding of what constitutes the type of behaviour that is
morally fortifying and socially strengthening. Significantly, the Framework also
assumes that there are numerous ways of going about implementation and that
“individual schools will develop their own approaches to values education”. The
Framework proposes a vision for what the core of values education in Australian
schools might encompass. Furthermore, it identifies nine core values for Australian
schooling and offers some Guiding Principles and six Key Elements that, together,
constitute a process for having schools and their communities engage in values
education as an essential part of effective schooling.

The nine values for Australian Schooling that are articulated in the Framework
include:
1. Care and Compassion
   Care for self and others
2. Doing Your Best
   Seek to accomplish something worthy and admirable, try hard, pursue excellence
3. Fair Go
Pursue and protect the common good where all people are treated fairly for a just society

4. Freedom
Enjoy all the rights and privileges of Australian citizenship free from unnecessary interference or control, and stand up for the rights of others

5. Honesty and Trustworthiness
Be honest, sincere and seek the truth

6. Integrity
Act in accordance with principles of moral and ethical conduct, ensure consistency between words and deeds

7. Respect
Treat others with consideration and regard, respect another person’s point of view

8. Responsibility
Be accountable for one’s own actions, resolve differences in constructive, non-violent and peaceful ways, contribute to society and to civic life, take care of the environment

9. Understanding, Tolerance and Inclusion
Be aware of others and their cultures, accept diversity within a democratic society, being included and including others

The Framework envisages that schools will deliver values education in a more planned and systematic way through the development of whole school values programs that involve:

- Whole school planning whereby values education is made an explicit goal of school planning.
- The formation of partnerships within the school community whereby schools consult parents, caregivers and families within their communities on values to be fostered and approaches to be adopted.
- A whole school approach in which schools apply their values education priorities to their overall curriculum provision, their structures and policies, their procedures and rules, their funding priorities, their decision-making arrangements, their disciplinary procedures, their community relations and their welfare / pastoral care approach.
- The provision of a safe and supportive learning environment whereby schools provide a positive climate within and beyond the classroom to help develop students’ social and civic skills and build student resilience and responsibility and to ensure a safe and supportive environment for values education. Students, staff and parents are encouraged to explore their own values. Values education reflects good practice pedagogy and is introduced in the curriculum at appropriate times for learners.
- The provision of support for students so that schools develop programs and strategies to empower students to participate in a positive school culture and to develop their local, national and global responsibility. Schools use values education to build student social skills and resilience. This includes addressing issues such as behaviour management and discipline, violence and bullying, substance abuse and other risk behaviour, disconnectedness and alienation, student health and wellbeing, improved relationships and students’ personal achievement.
- Quality teaching procedures in that teachers are skilled in good practice values education, provided with appropriate resources to support their efficacy as
teachers of values within all areas of the curriculum and total school life and to monitor this efficacy on an ongoing basis.

Since the endorsement of the National Framework by all the Australian Ministers of Education through the Ministerial Council for Education Employment Training and Youth Affairs (MCEETYA) in 2005, DEST has been concentrating on initiatives designed to see it implemented in Australian schools. These have included two rounds of funding for clusters of schools to identify good practice for values education, funding for all Australian school communities to conduct local values education forums, projects to develop and distribute values education curriculum and professional learning resources and a number of partnership projects between DEST and key stakeholder groups that might support the implementation of the Framework.

The research reported in this paper was undertaken as part of the DEST partnership with the ACDE. ACDE was approached to undertake a set of internationally benchmarked case studies designed to explore the relationship between Quality Teaching and Values Education which is one of the six Key Elements of good practice identified by the Framework. The case studies were then to be used within the Partnership Project to guide discussion in Faculty Forums around the nation in which teacher educators considered the implications of the research for their day to day work. The case studies undertaken for the study were of schools involved in the VEGPS Stage 1 project and we are drawing upon them here to enable teacher educator colleagues to see what experienced teachers were saying about the relationship between Values Education and Quality Teaching and to consider the implications of the teachers’ comments for what they teach and how they teach it in their courses in both initial teacher preparation and lifelong professional learning.

The Case Study Schools
As part of the VEGPS project design, Curriculum Corporation established an innovative University Associates Network (UAN) to support cluster projects. As part of that arrangement all the clusters that successfully applied for funding to participate in VEGPS were offered the services of a critical friend from a nearby Faculty/ School of Education who had an interest in Values Education and a preparedness to work closely with the project to assist with its implementation. The four case study schools that form the basis of the paper, their approach to Values Education and their critical friends are set out in Exhibit 1. The UAN member associated with each of the schools participating in the research project worked collaboratively with people in the school to produce the case studies that are the basis of the paper.

Exhibit 1: The VEGPSP Case Study Schools

<table>
<thead>
<tr>
<th>Case Study School/s</th>
<th>Approach to Values Education</th>
<th>UAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modbury Primary School – a small school of 200 students from 134 families in a middle to low income suburb of Adelaide.</td>
<td>A whole school approach to connecting student learning with the wider community and encompassing a set of values identified by the school community that shape the identity of the school and underpin the curriculum framework.</td>
<td>Professor Colin MacMullin Dean of Education Flinders University</td>
</tr>
<tr>
<td>St Charles Borromeo PS – a catholic</td>
<td>A Student Action Teams Approach within which teams of students adopt</td>
<td>Professor Judith Chapman</td>
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</table>
primary school in an affluent eastern Melbourne suburb. A community issue that they care passionately about, research it, decide what needs to be changed or improved and take action to achieve their goals. They do this as part of the school curriculum and on projects with a capacity to connect students to one or more of the values in the national framework.

Lance Holt School – a small community school for primary students in Fremantle, WA. A Children and Place Mapping approach involving “place based learning” and the exploration of values in regard to the ethics of stewardship and social responsibility.

The Teach Cluster of primary schools in Townsville, Queensland. The PEER SUPPORT program, a pre-packaged program that suggests ways of older students working with younger ones to help build a sense of community wellbeing in schools, was adopted in a variety of ways to enable the implementation of the national framework.

As can be seen from Exhibit 1, and in keeping with the intentions of the national framework, schools with a range of approaches to Values Education agreed to participate. Also, they were approached to participate because their UAN critical friend had agreed to work intensively with staff at the school to produce the case study.

However, before the case studies could be produced, a conceptual framework for Quality Teaching needed to be developed which the case study writers could use to help direct their investigations.

**The Conception of Quality Teaching**
The conception of Quality Teaching that was developed drew heavily on the work of the Carnegie Corporation and more recent related research in Australia.

The Carnegie Corporation’s 1994 Task Force on Learning (Carnegie, 1994) is a clearly identifiable agency that was active in spelling out the belief and impelling the research that stands behind the modern era of Quality Teaching. It threw down the gauntlet to those who continued to hold the view that school had little impact on student “ability” and was, for the era, surprisingly explicit in its statement of beliefs about the power of teachers and schooling systems to effect change in student achievement and very suggestive of the type of qualities teachers can draw out in children.

Similarly, the most recent studies in Australia and beyond (cf. Willms, 2000; Rowe, 2004) show that the single largest factor in student achievement is the teacher, in some studies showing up as statistically three times more likely to impact than the school (cf. Scheerens et al., 1989). This is not to undersell the power of a whole-
school approach to quality teaching. Indeed, the same studies can be ramified to show that a quality teacher in a quality teaching school context has at least a 60% chance of impacting on student achievement regardless of the cohort that ‘entered the school’.

So, the Carnegie Report (1994) and those more recent reports in Australia are based on solid research evidence that makes clear that, whilst heritage and upbringing can make a difference to the ease with which learning can be achieved, they are in no way certain predictors of success or failure. Therefore, all of this research places the final responsibility for achievement on the school and especially on its teachers to make the difference.

The Carnegie Report goes on to flesh out what is meant by achievement and to identify the range of learning skills that should constitute the targets for teacher and school learning objectives. Here, also, the report challenges more limited conceptions of the role of the teacher and the school. While not underselling in any way the centrality of intellectual development as the prime focus and objective of teaching and schooling, the report nonetheless expands significantly on the more predictable, tried and true features of intellectual development to speak explicitly of the broader learning associated with skills of communication, empathy, reflection and self-management. Intriguingly, the sections dealing with these associated skills seem to imply a strong focus on the student self, including student self-knowing.

Hence the notion of ‘intellectual depth’, so central to the regime of Quality Teaching, was, from the beginning, defined not in an instrumentalist, simple and narrow fashion but in the broadest possible fashion to connote not only depth of factual learning but, moreover, induction into the profound learning to be found through competencies such as interpretation, communication, negotiation and reflection, with a focus on self-management. In a word, the teacher’s job was conceived of as being quite beyond the kinds of achievement most easily measured by standardized testing or simple observation to being one which engaged the students’ more sophisticated skills’ levels concerned with development of such features as ‘communicative capacity’ and ‘self-reflection’.

This conception of Quality Teaching can be represented in the following albeit oversimplified way:

**Exhibit 2: Dimensions of Quality Teaching**

- Intellectual Depth
- Communicative Capacity
- Empathic Character
- Reflective Powers
- Self-management
- Self-knowing

These dimensions of Quality Teaching were then elaborated for the case study schools as follows:
- Intellectual depth (not facile or shallow learning but rather more complicated thinking like perceptiveness, analysis, evaluation, intuition and the like - all the things we bring to mind when we say some one is “sharp”, “bright” or the like.).
- Communicative capacity (being able to talk about the process of exploring the values, how they engaged it, what outcomes flowed from it, what they learned, how it was learned, what it means to practise the values and related issues. The growing capacity to do this is accompanied by a confidence in and a commitment to the process of exploration and working with others on it. Engaging the process in this way helps them to shape themselves and others through their capacity for communication).
- Capacity to reflect (being able to think back to an event or some other act, consider the impact it had and plan how things might have been done better.)
- Self-management (being able to work with others and with oneself around issues related to values and, ultimately, to live out these values).
- Self-knowledge (getting to know oneself better and becoming more comfortable with self, thereby giving rise to more poise in the learning process).

**What the Case Studies Say**

One of the major challenges case study researchers face, especially in studies where there are many case studies comprising the investigation, is the efficient and effective presentation of the data. The complete case studies that comprised the study are presented in full in Lovat & Toomey (2007). The six case studies give ample testimony to the dimensions of Quality Teaching being evident in the schools in question. The following excerpts are taken from the case studies of the four VEGPS project schools that participated in the study. The case studies were prepared by the schools’ UAN critical friends in collaboration with school staff. They give the reader some idea of the evidence we are drawing upon to make the claim that Values Education and Quality Teaching are inextricably linked.

**Intellectual Depth**

*at Modbury PS:*
Both children and teachers at Modbury School have acquired deep understandings of complex ideas as a result of their values education work. Children have deepened their understandings of notions such as: right and wrong, respect, human dignity, human rights, empathy, reciprocity, caring and social action. At the same time, and as a direct result of classes in philosophy, they have developed their capacities to question, analyse and evaluate ideas. Teachers have acquired deeper understandings of teaching and learning, of fostering in children dispositions of respect and caring; and ways of integrating values learning across the curriculum. There is ample evidence of intellectual depth in learning at Modbury.

*at St Charles Borromeo PS:*
It is evident in the high level of engagement by students, particularly at Student Forums and in the Research, Investigation and Action phases of Student Action Teams when students work on issues that they had selected around values that they have deemed to be important to pursue in depth, utilizing intellectual skills in conceptualizing problems and issues for research and action; utilizing skills in
At the Townsville cluster:
In many cases, students were able to demonstrate a considerable depth of understanding of even quite abstract concepts introduced in the program, and their application in concrete instances: One Year 3 student explained that “We learned about ‘positive self-talk’. If you get something wrong you don’t go off and say “damn I hate myself now, you just go off and say well better luck next time. Like if I get words wrong in journal and stuff”. Another student, also in Year 3 demonstrated a capacity for applying her understanding in critical appraisal of other students’ ideas: she explained that, when asked for a solution to a problem under discussion in the group session, “He’d put up his hand and give a solution, but it’s not a real solution”.

Communicative competence

At Modbury PS
A clear and observable outcome of the values education work at Modbury School is a significant enhancement of children’s communicative competence. One is struck by the confidence and sophistication of the children as they engage in discussions with one another, as well as with visitors to the school. They appear to be skilful listeners as well as competent exponents of thoughts and ideas. Of particular note is the language of respect, and the respectful questioning of assertions and ideas. Children have been provided models of respectful communication in all classes throughout the school. Added to this is the language of the philosophy classes. Children show a level of communicative competence in advance of what one might expect of students in the primary years.

At the Townsville cluster
Taken together, such comments (about how the values are put into practice) demonstrate a high level of communicative competence - to communicate complex understandings clearly and articulately, in ways that reflect one’s own understandings rather than superficial parroting of platitudes. They also indicate that the program engaged students in the richness of understandings, and the capacity to apply those understandings to their own lives and social relationships, that are among the hallmarks of quality teaching, and did so specifically in relation to values such as care and compassion, fair go, respect, responsibility, and understanding, tolerance and inclusion, as enshrined in the nine values outlined in the national framework. All this seems to demonstrate that in the schools we observed, the Peer Support program constitutes a form of values education that goes beyond mouthing of moral truisms and good intentions.

At St Charles Borromeo PS
(It is) evident in students’ ability to communicate increasingly sophisticated ideas, commitments and concepts using a variety of communicative skills to audiences of increasing diversity, beginning with the first Student Forum attended by student peers and teachers to the final Student Forum attended by federal, state and local politicians, system authorities, academics, school principals and members of the broader school community.
Empathic Character

At the Lance Holt school
Nyindamurra’s frog wetland

Those who visit the website (http://lanceholtschool.wa.edu.au/) can see Nyindamurra’s children involved in a range of projects as a way of learning about ecological sustainability. These projects reflected children’s many and varied values in relation to their local area. For example, some of the children began to research the topic of worms, using this to write a radio play that was performed out of school hours. This was recorded in a real sound studio with the plan to market it for others outside of the school. In tandem the kindy kids embarked on a project to separate lunch scraps and feed worms daily. The plan was to divide the worm population or get another worm farm in 2006 to cope with the amount of raw material that had been collected. Other children researched ‘safe’ poisons with Department of Conservation and Land Management (CALM) and had a test area of poisoned watsonia. They then researched frogs/environment/native plants and frog ponds with ecologist and local identity Johnny Prefumo.

During this time, a tree that had been a special place for all kids over the 25 years, fell down in a big storm. This generated much interest in both the history of the school and thinking about what children can do to look after trees that are special and important. What was also discovered was that the school needed the local community to take on the role of stewards because watsonia, an introduced plant species, had gradually taken over the school’s bush during the years. When a parent started helping, children became interested in making the school grounds frog friendly because frogs are very good environmental indicators.

This story of children caring for their local school grounds demonstrates the potential connection between values education and children’s involvement in social action. Indeed this work has prompted a new project in 2006 with children planning to move the school from “watsonia wasteland to frog wetland”. As Pam Tuffin, teacher at Nyindamurra said about her project, “we set out to build a habitat and ended up building an ecosystem”.

At the Lance Holt School
One only has to scan the website (http://www.lanceholtschool.wa.edu.au/) to see the extraordinary display of understanding and active seeking out of different perspectives and different ways of understanding a place through a multitude of people such as environmental experts, local government officials, Indigenous elders, migrants, historians, workers in local industries and elders. This has allowed children to move beyond simple understandings and tolerance of others to a much more respectful inclusion of a range of different values and traditions of others.

Capacity to Reflect

at Modbury PS

Reflection is integral to values education and central to philosophy. It is therefore not surprising that children and teachers at Modbury can be seen to be particularly reflective. Teachers are constantly asking children to examine their ideas, to reflect upon their actions, and to consider the positions of others. The philosophy classes
invite children to think about their own positions in relation to big questions and complex dilemmas. Teachers themselves are engaged in reflection on their own practice, particularly their practice around values education.

at St Charles Borromeo PS

(It is) evident in the action research cycle strategies adopted by students of planning, observing, reflecting and if necessary starting again in the interests of solving problems of mutual interest and bringing about outcomes of mutual concern.

Self-Management

at Modbury PS
As an outcome of quality teaching, self-management refers to the capacity for both children and teachers to manage their own learning, both in engaging with others and working independently. In the context of values education, it refers to the capacity to work with others and eventually on one’s own on the intellectual aspects of values and subsequently living them out. Evidence of self-management at work at Modbury is seen in the changes in children’s behaviour. The principal, teachers and members of the governing council all report significant changes in students’ behaviour. It is reported that students are more readily solving interpersonal difficulties on their own, without seeking the intervention of teachers. Teachers also report higher levels of harmony among students, and far less disruptive behaviour since the introduction of the values education program. A further indicator of values in action is the interest shown by children and teachers in community and global service. The choir for elderly neighbours, the fund-raising for research into childhood cancer, and the making of relief parcels for tsunami victims are examples of this action.

at St Charles Borromeo PS
(It is) evident in students being able to work with others in the student action teams, being able to share and teach others, confronting what it is to act upon and live out one’s values in increasingly complex environments of the school, the home, the broader community and society.

At the Townsville cluster
Such understanding (about the values) is of limited value, of course, unless it is applied. Many student comments indicated that they not only understand the ideas but also use them to reflect on their own behaviour and attitudes and were developing the self-knowledge that such reflection promotes. Students of varying ages commented that they had learned about such issues or aspects of human nature and human relations as:

Things that help you be friends with others;

Other people’s personalities and how you can hurt them in ways you didn’t mean to hurt them;

Things that are different about us... and things in yourself other people might have and you might not.
Learn about responsibility and if you care about other people...and if you should treat people the way you want to be treated

In comments that seem to both summarise the broad intent of these comments and captured the way the learning in the program was translated into self-knowledge, one Year 7 Peer Leader explained that “Peer Support is like a key to unlock qualities that you never thought you’d have for your life”, while another, with a slightly different focus stated that, “We do Peer Support... to make kids understand life”.

While critical reflection on attitudes and recognizing its implications for how one relates to others is an important part of applying knowledge, the ultimate test of the value of such learning is in carrying it through into action. Teachers commented that they felt the program was already having a visible effect on student behaviour and relationships in the playground, and related a number of incidents that they felt demonstrated this. Students also indicated a range of ways in which they felt their participation and learning in Peer Support has translated into their behaviour: 

* We have learned how to play games, and how to take care of people when they get hurt (Year 4); 
* It’s a good way to make new friends, get to know people you wouldn’t know before (Year 4); 
* Before I was in my Peer Support group I didn’t know (X) ... X has taught me a lot (Year 4); 
* When I came they were all fighting but the Peer Support leader taught us about cooperation or not participating (Year 6); 
* It’s stopped people going up to the office a little tiny bit (Year 4).

Self-Knowledge

**at Modbury PS**

For children at Modbury, the values education program has provided opportunities for reflection on the nature of relationships between self and others, and on their own beliefs and ideas about many of the major questions of life. This, one would expect, would lead to enhanced self-knowledge (leading) to greater comfort with self thereby giving rise to greater poise in the learning process. The principal and many of the teachers at Modbury report noticing such a change in children’s poise. It is associated with the increase in harmony and reduction in tension that was referred to earlier. A number of teachers have observed that children who have been involved in the values program the longest appear to be the most “poised”.

**at St Charles Borromeo PS**

(It is) evident in the linking of values with a sense of personal achievement, a responsibility to share, a sense of self-belief, commitment, self-efficacy and confidence.

Linking Values Education and Quality Teaching

The teachers and their UAN critical friends frequently linked the notions central to Values Education and Quality Teaching in the language they used in their reporting. That is, in the case studies, they speak about the ways they considered that Values Education could be seen to be nurturing, in their students, intellectual depth, communicative competence and the other Quality Teaching dimensions. The St Charles Borromeo case study, for instance, describes how many of the students developed an improved sense of “self” which led to an increase in their self-esteem.
One of the teacher’s accounts in that case study about the boy “who has produced work in other areas way beyond anything that was earlier thought possible” links Values Education fairly explicitly with improved academic performance on the part of the child.

Some of the improvements in student outcomes are associated with the quality of the relationships that developed during the project:

“I also laughed more. It set up a ripple effect. Children who were not achieving started to really shine”

Other teachers ventured views about the way the program “developed (students) organizational skills and fostered (the practice of) working collaboratively in groups”, a view reiterated in the Lance Holt School case study.

The voices of the students in the St Charles Borromeo case study speak about the way the program improved their confidence, self-esteem, responsibility, integrity, enthusiasm, motivation and commitment. The relationship between values and self-knowledge is also revealed in the words of the students in the Townsville case study:

“Peer Support is like a key to unlock qualities that you never thought you would have for your life” and “We do Peer Support to make kids understand life”.

Some suggest that their Values Education program provides an “ambience” that produces improved interpersonal relationships which, in turn, yield improved student learning. The experience of the Townsville case was that:

“Even though the program had been in place for only a short time … it had had a noticeable effect on the quality of life in the school and a visible effect on relationships”.

There are also other inferences that can be drawn from the case studies that shed light on the fit between Quality Teaching and Values Education. These include the links that are made between concentration, values and improved academic performance. In several cases, self-awareness and student capacity for reflection are also linked to Values Education. In other cases, teachers attribute the use of positive language and the particular type of positive reinforcement that is associated with effective Values Education to their students’ improved performance. In the St Charles Borromeo case study, links are made between listening to “student voice”, the emergence of mutual respect and improved standards, both academic and behavioural.

The idea that Values Education and student performance might be connected in some way was canvassed some time ago in the UK by Ofsted School Inspectors as a possible explanation for the inordinately high attainment on the UK national standard assessment tasks of pupils in a site like West Kidlington Public School in Oxfordshire. The level of performance of students at West Kidlington was dramatically inconsistent with that of school students in similar economically and socially disadvantaged catchments. The distinguishing feature of West Kidlington School to which the Inspectors drew attention was the all-pervasive values education
program that completely defined holistically the ethos and operations of the school. There now exists some solid empirical evidence that suggests the Inspectors’ hunch was correct (Hawkes, 2005, 2007).

In the US, as well, the hunch of a group of researchers in California was substantiated with empirical research that showed a consistent pattern existed between wherein schools where a prominent part of the curriculum was given over to character education (values education) tended to have higher academic scores on state wide academic measures than those that did not (Benninga, Berkowitz, Kuehn, & Smith, 2003, 2006).

Thus, we feel that there is a case for linking Quality Teaching with Values Education, and that “Quality Teaching without Values Education has the potential to suffer from the missing link that promises to strengthen and complete it” (Lovat, 2006)

Nonetheless, we understand that some might still have lingering doubts about the role that Values Education plays in producing such outcomes. After all, Values Education has been such a marginal part of education for so long that a natural reticence to any proposal for mainstreaming it is to be expected. Some might argue, for instance, that intellectual depth is not the sole province of Values Education, and, of course, they would be correct. Similarly, others might question the extent to which communicative competence or any of the other hallmarks of Quality Teaching are exclusively fashioned within Values Education, or, indeed, within Quality Teaching regimes. They, too, would be correct. However, such responses to the way we are describing the intersection of Values Education and Quality Teaching in this paper, and the impact of the intersection on teaching and learning, miss the point. We are not claiming the hallmarks of Quality Teaching as exclusive products of Values Education. Rather, we are suggesting that by making the teaching of values a very explicit and central part of our work we achieve the following:

1. We tend to create an ambience within which intellectual depth, communicative competence, reflection, self-management and self-knowledge flourish more easily, naturally and organically than in other circumstances; and,
2. When we make values central to the ethos and operations of the school, we are introducing a capacity for our teaching to be genuinely transformative. Evidence, from overseas and increasingly within Australia, suggests that the hallmarks of Quality Teaching become potentially available to all.

The notion of transformation also reverberates throughout the case studies. For instance, the school resisters and their turnaround that are discussed in the St Charles case study come to mind, to say nothing of the many self-reflective teacher accounts of professional transformation that are found in all the cases. Some other teachers suggest that self-knowledge expresses itself in changed relationships with children and a subsequent increase in confidence to try new things. This was one of the more dominant themes to emerge from interviews with teachers at Modbury PS. In a particular moving conversation, one teacher said that the Values Education program had fundamentally changed the nature of the relationships that she had with her children. She loved children again, loved teaching again, and was so excited about trying new ways of teaching.
The Double Helix of Quality Teaching and Values Education

Thus, we find in the case studies persuasive evidence that Values Education and Quality Teaching coalesce to produce outcomes like intellectual depth, communicative competence and the other dimensions of Quality Teaching. Over the course of the research project, we have come to think about Quality Teaching (and its inseparable counterpart, quality learning) as one half of a double helix (McGettrick, 1995) – the other half being Values Education. We have tried to represent this below.

Exhibit 3: The Double Helix of Quality Teaching and Values Education.

Values and Quality Teaching

The relationship between Quality Teaching and Values Education is represented in terms of outcomes in Exhibit 3. We have chosen to take this approach because teaching, other than in its technical, managerial and strategic aspects, largely defies easy and accessible description. Without doubt, we know that certain things teachers do in their classrooms can help to produce good results. We know, for instance, from the teacher effectiveness research (e.g. King Rice, 2003; Hill & Crevola, 2000; Kemp & Hall, 1992) that teachers are especially effective when: they employ systematic teaching procedures; spend more time working with small groups throughout the day; use systematic feedback with students about their performance; run more orderly classrooms; adjust the difficulty level of material to student ability; have more students in their classes on task and engaged, and a host of other learning features similarly familiar to teachers.

However, such a list reads more like a set of technical or managerial skills than a description of effective teaching in the sense of the energetic and highly interpersonal engagement that we know is so much a part of it. Values Education largely defies description for similar reasons. However, the case studies reported earlier show us the products, the outcomes of Quality Teaching of Values Education, thereby in some
way making the notion of Quality Teaching more accessible than via a list of managerial skills.

The case studies indicate that Values Education can make a very significant contribution to:

- Fashioning very positive interpersonal relationships not only between students but also, most importantly, between students and teachers in classrooms;
- Producing a calmer and even contemplative environment in the classroom;
- Giving people their emotional and spiritual space; and, very importantly,
- Creating positive dispositions towards learning and enabling people to come to a greater level of comfort with learning, described in the cases as a ‘love of learning’.

They also show us that, in such an environment, everyone, teachers and students alike, can grow in ways demonstrable of intellectual depth, communicative competence, capacity for reflection, self-management and self-knowledge.

So, in our minds, Quality Teaching and quality learning flow naturally from placing values at the centre of a school’s ethos and operations, including its broader community outreach and partnerships. Our use of the metaphor from Genetics is an attempt to capture the nature of the relationship between Values Education and Quality Teaching - that the relationship is somewhat like a double helix – when we identify good practice Values Education, we are, in our view, also identifying Quality Teaching practice.

This is such an important point that it is worth going to some length to clarify it. One way to do so is to draw again on the case studies. In the St Charles Borromeo case study, for instance, an approach to teaching and learning called Student Action Teams (SATs) is described and its capacity to enhance learning argued. It is well documented that such an approach, whether it be SATs or one of its close cousins, “students as researchers”, “inquiry methods” or “student- centred curriculum” in the hands of a skilled teacher makes intellectual depth, communicative competence, reflection and self-management very accessible to students. However, its capacity in and of itself for enabling student access to “critical or self-reflective knowing” is problematic. This requires an ethical dimension. In this case, the ethical dimension is added to the teaching and learning mix by having the SATs focus their inquiry and subsequent social action very specifically on values.

Importantly, “classroom activity”, whether it be in a classroom or elsewhere, is at the centre of this conception of Quality Teaching. When the school places values at the centre of its work and purposefully tries to live out those values, the changes in student and teacher behaviour that follow naturally from this decision gradually move students and teachers towards quality teaching and learning practice. In a phrase, the decision changes the nature of the personal and interpersonal relationships in the school. When everyone in the classroom exchange, teachers and students alike, is consciously trying to be respectful, trying to do one’s best, trying to be honest, trying to be tolerant, and the like, the dynamic of the classroom changes.

In an environment where values like respect, tolerance, doing your best, and others, are constantly shaping classroom activity, and where the classroom activity is
structured to consolidate the practice of the values, quality teaching and learning comes naturally. Children, adolescents and young adults alike all strive to do their best.

Quality Teaching, thought of in this way, naturally gives rise to a range of questions about how it can systematically and consistently be brought into play, what the students should be taught and how teachers might teach it. In our view, the meaning of the value concepts and ways of detecting their practice need to be taught, and opportunities offered - on multiple levels - to engender their practice. This does not preclude teaching the local mandated curriculum. Rather, the local mandated curriculum might be taught in ways that enable teachers to convey its content as well as the meaning of the values. For instance, in teaching, a unit on Australia’s settlement, the teacher would almost instinctively seize on the opportunity to discuss the moral and ethical implications of the settlement, especially with regard to the traditional landowners but also in regard to such things as the nature of punishment and justice, the use of arbitrary rule and attitudes to the land and environment in the convict colony. Similarly, as Farrer (2000) points out, studying Frances Hodgson Burnett’s classic, *The Secret Garden*, provides a golden opportunity to discuss some of the characters from a values viewpoint. Thus, approaching the local curriculum more from a values perspective by providing ways of examining the ‘meaning’ of values, using open, explicit and reflective explorations of values, clarifying values, and examining choices and actions, provides an answer to the question of what should be taught.

Moreover, preparing the class for such explicit explorations in values is also an important part of this content issue. Before content is tackled from this values perspective, the students need to be able to use appropriate language and to talk about them in terms of being seen/not seen, heard/not heard, felt/not felt, put into action or not in their personal/family lives, their school environment and in their community. Such a shift of emphasis can move the student from “knowing the good to be desirable” to “desiring to do the good thing” (Hill, 2004). In a phrase, this shift of emphasis enables members of the school community to identify a personal code of conduct and the ability and commitment to act in accord with it so that, in common parlance, “one’s actions speak louder than one’s words”. Tolerance, trust, respect and a whole range of positive dispositions thereby become routine practice within the school. The practice of such dispositions naturally leads, in turn, to people within the school doing things in ways that produce Quality Teaching outcomes. Thus, our conception of Quality Teaching in good practice in Values Education is one that sees it more in terms of a dynamic and ongoing relationship than a classroom episode or set of episodes.

**Implications**

If colleagues find our argument about the links between Values Education and Quality Teaching persuasive, then that raises a raft of issues for all in teacher education. In the faculty forums that have been conducted as part of the DEST - ACDE Values Education Partnerships project, it has become clear that Values Education is reasonably well covered by faculties. However, it is more often than not treated in a marginal way. If it has the level of affinity with Quality Teaching that is argued in this paper, then it must be made more central to the whole of the teacher preparation and development process. Some of the challenges in that regard include:
What approaches to teacher education are needed if the potential of this concept of Quality Teaching is to be realised?

The research project that informs this paper makes it clear that Values Education requires that teachers have both content knowledge and pedagogical knowledge specific to Values Education, as well as communicative competence. As with Quality Teaching, Values Education also needs to be supported within both pre-service and in-service teacher education programs so that teacher education students and participants in in-service programs can understand better the values formation, moral agency and pedagogical dimensions of Values Education, as well as being able to develop communicative competence and the ability to reflect on their own values (cf. Carr, 2003d; Haberman, 2002; Halstead & Taylor, 2000; Johnson, 2002; Ling et al., 1998). How might teacher education accommodate such needs?

The research also links the climate of the classroom, in particular the quality of the interpersonal relationships in it, and the quality of student learning and achievement. Other studies have shown that students’ capacity to learn is optimised in an environment where due attention is focussed on their emotional development and provision made for emotional security and stability (e.g. Alton-Lee, 2003; Cawsey, 2002; Farrer, 2000; Hamilton, 2005; Hattie, 2004; Johnson, 2002; Wang et al., 1993; Willms, 2000). How can appropriate skills be developed in teachers?

How might teacher education curriculum better accommodate the double helix of Values Education and Quality Teaching?

The same curriculum implications that are spelled out in the full case studies (cf. Lovat & Toomey, 2007) for effective school education in Values Education apply equally to teacher education. That is, the curriculum of teacher education is as much a statement of beliefs and values as any other curriculum. The scope and intentions of a teacher education program will speak volumes to its candidates about the entire role and purpose of being a teacher and, furthermore, what an entire schooling regime is designed to achieve. If teacher education focuses exclusively on the instrumentalist goals of acquiring content knowledge and pedagogical skills, then the purpose of being a teacher will be spelled out in those terms. The importance of the work of the case study schools is in the disruption of this purpose and the reappraisal of teacher education and development that it demands. Hence, a teacher education programme that is inspired by such a reappraised role will focus much attention and energy on the acquisition of values by students and on the essential role of teachers as modellers of these core values. Notions of teacher roles limited by the restricted nature of teaching will be eschewed in favour of notions that hold up the teacher’s role as one with the capacity to make a difference in areas of personal morality and social conscience. Moreover, teacher education programmes need to develop in beginning teachers a commitment to the process of “reflectivity” (in the Habermasian sense) that one finds plays such an important role in the Quality Teaching described in the case studies. How might this be done?

A Concluding Note.
Those with professional responsibilities for pre-service and in-service teacher education might well wrestle with the above questions and issues. There are at least
three reasons for this assertion. First, in many places, both in Australia and abroad, the study of values is now an expectation on the part of policy makers. Most States and Territories in Australia, for example, have formulated policies requiring schools to incorporate Values Education into programs of study. Values Education programs in the guises of character education and moral education are increasingly common in the USA. Values Education is also a required study area in the UK. In short, there is increasingly a policy imperative for more attention to be given to Values Education as an essential core of teaching and schooling responsibility generally.

Second, as the case studies reveal, there is another trend, in Australia at least, that is adding further pressure to educators to be more informed about Values Education and to play a role in the way teachers are adopting commercial programs with a Values Education orientation. As the Townsville case study demonstrates, teachers are gravitating towards certain commercial products, often with something of a Values Education orientation, in their quest to address student behaviour problems in their classes. In the Townsville case study, this involves the PEER Support program. In our experience, they are also turning to a range of such programs, including ‘Tribes’ and others with restorative justice practices as a focus, as well as those adopting a ‘Philosophy in the Classroom’ approach in order to address the full range of needs with which teachers and schools are confronted.

Third, and most importantly, there is a growing band of educators who now recognize Values Education as a potential “missing link” in Quality Teaching. The case studies reported earlier are testimony to that. So, Values Education can no longer be treated as marginal. It needs to become a core part of the curriculum.
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Innovative primary science classroom practice through pre-service teacher immersion in a problem-based, collaborative learning experience: Approaches to teaching that influence, motivate and inspire students to learn.

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Abstract:
This paper describes a pedagogical approach adopted in a compulsory science curriculum subject within a Bachelor of Education (Primary) degree that tackles the complex integrated skills required by pre-service teachers to address the many problems identified in various national and international research reports. A problem-based learning approach is employed where students demonstrate their emerging content knowledge, collaborative skills and pedagogical content knowledge within a criterion-referenced assessment framework. Their development as teachers of science and technology is presented in a vertically integrated set of assessment tasks. The teaching team work collaboratively in the design and delivery of the subject both of which are informed by current research in the field. An action-research methodology employing, in part, a quasi-experimental pre/post-test design is used to assess students’ developing content knowledge, scientific conceptions and complexity of their reasoning. In addition, ongoing feedback and evaluation procedures are built into the subject through the use of one-minute Harvard Papers which allow teaching staff to make continual improvements and to cater for the individual needs of students. Students’ formative and summative feedback reveals high levels of satisfaction with the approach. Student results demonstrate highly significant increases in both content knowledge and complexity of cognitive reasoning and which are accompanied by significant reductions in their alternative scientific conceptions. In 2006, the authors were successful in winning a Carrick Citation for Outstanding Contributions to Student Learning.

Introduction
This paper describes a pedagogical approach adopted in a compulsory science curriculum subject within a Bachelor of Education (Primary) degree that tackles the complex integrated skills required by pre-service teachers to address the many problems identified in various national and international research reports. Inheriting the first curriculum subject, Science and Technology I, close to the commencement of classes in 2004, the authors (tutors) implemented the previous version of the subject with only minor changes. In other research during the period 2000-2005, the authors
had identified problems in primary and secondary science education and specifically in astronomy education (e.g., Danaia, 2001; McKinnon, 2005; McKinnon, Geissinger & Danaia, 2002). In previous years, there had only been piecemeal changes made to this first curriculum studies subject. A fortuitous conjunction of lecturers, one with a career long involvement in problem-based learning and astronomy education, and two others with interests in primary science education and knowledge of the students in question allowed more substantive changes to be made.

In delivering the original version, the students seemed disinterested in science and expressed fear in teaching it. There appeared to be little that the authors could do in situ that influenced the students’ perceptions. Our reflections on, and discussions about, the original version of the curriculum, pedagogy and assessment procedures and the subject evaluations obtained from students in both 2004, and in previous years, led us to make sweeping changes to the mode of offering of Science and Technology I in 2005 and 2006. The pedagogical approach implemented is informed by current research in science education and theoretically underpinned by social constructivism. Evidence shows that the 2005 and 2006 cohorts of pre-service teachers are engaged and motivated by the transformed subject. Engaging in real science during tutorials has challenged students’ alternative scientific conceptions and required them to reconceptualise their current understandings of scientific concepts. In doing so, students are enacting the processes essential in teaching the scientific concepts to primary-age students and concurrently developing their pedagogical content knowledge (PCK) (Shulman, 1986; 1987; Grossman, 1990).

The authors adopted a team-teaching approach in the delivery of Science and Technology I that involved a minimum of two tutors teaching in each tutorial. This approach enabled the authors to explicitly demonstrate, through modelled practice, collaborative approaches to problem-solving and analytical and critical thinking skills that our pre-service teachers could then apply both within their cooperative learning groups and, later, in the context of the primary classroom and schools in which they will teach. The remainder of this paper describes: how the problem-based learning environment was constructed; the cooperative learning strategies employed; the assessment items used; some of the results related to knowledge outcomes, alternative conceptions and the cognitive complexity of students’ explanations; and, the qualitative feedback together with summative evaluation data of the subject provided by the students.

Creation of the problem-based learning environment
The authors created a problem-based learning environment at the outset by administering the Astronomy Diagnostic Test (ADT) (CAER, 2004) to students at the first meeting of the subject. This enabled students to identify their prior knowledge in one content strand of the NSW Science and Technology K-6 Curriculum (Board of Studies, 1993). Marking of the ADT during the meeting gave immediate feedback to students concerning their lack of content knowledge and the alternative scientific conceptions they held. In short, the mean score of the 15 items that mapped directly to the Stage 2 Outcomes and Indicators of the NSW Science and Technology K-6 Syllabus (Board of Studies, 2001) was 2.2. Students did not know the causes of the seasons or the phases of the Moon and expressed many of the alternative conceptions reported in the literature related to these two concepts, e.g., that the Earth’s distance from the Sun causes the seasons and that shadows cast by the Earth cause the phases
of the Moon (e.g. Parker & Heywood, 1998; Schoon, 1995; Trundle, Atwood & Christopher, 2002).

Students were asked to record how they felt in their notebooks and, immediately afterwards, to form groups with whom they would work for the rest of the semester. The group members were then asked to share the results of the ADT and their feelings. An immediate sense of relief was engendered when each understood that despite their own bad results, everyone was in the same boat. Thus, confronted by their appalling results, students clearly understood that there was a problem. One student articulated in class that *[If I don’t know the content then how will I know how to teach it?* (Student 369). This perception was evident in other students’ feedback. This feedback took the form of a “Harvard one-minute paper” that was required to be completed by students at the end of each tutorial session. The one-minute papers comprised five sections: “What worked for me in this tutorial? What could be improved for me? Three things I learned in this tute. Three things I need to know more about. Five words to describe today’s tutorial.”

Students were invited to complete as many of these as they felt were appropriate. It should be noted that the student comments used in this paper have been widely chosen from both the responses to the one-minute papers and the subject evaluation forms collected at the conclusion of this subject. Furthermore, the stream of consciousness words that are included as examples below were selected on the basis that they were present in many of the student responses. The first feedback occasion generated comments such as: *[To teach science, knowledge is needed... more knowledge than what I have* (Student 17); and, *[The test helped me to understand just how much I need to learn* (Student 10). An overall impression of how they felt can be inferred from the stream of consciousness words used by them in the final section of their one-minute papers collected on the same occasion: anxious, embarrassed, confronting, daunting, shocking, frightening, crushing. These indicate the extent to which students were shocked and stressed. Yet, at the same time, they appeared to be motivated by the problem-posing process and which was illustrated by further words/comments interspersing the ones above: eager to learn more; enjoyable; learning opportunity; motivating; exciting.

By the end of the first tutorial, students had completed most of the process tasks needed to deliver the first assessable item for the subject: an essay of 600 words that expressed their personal feelings about their results, the feelings of the group members and what they needed to know in order to teach the content in valid ways. This latter task required the students to begin to navigate through the syllabus document. Feedback was supplied to the students within one week of completion of the essay.

Next, students had to analyse a selection of research literature on alternative scientific conceptions held both by primary pupils and their teachers. The approach to considering the extensive alternative-conception literature involved the students employing a variety of cooperative learning strategies including roundtable (Osborn, 1963), jigsaw (Aronson et al. 1978), think-pair-share (Lyman, 1981), and numbered-heads-together (Kagan, 1992). That is to say, each student chose one research paper from a selection provided by the tutors that addressed either the alternative conceptions held by primary pupils, or primary teachers, with directions that they
needed to find a second paper on a similar topic using the Library Databases. During the following week, students had to think, and answer six questions, about the research they had found and prepare a brief summary to share with a partner from their table group (think-pair-share) who had chosen papers on the same topic (students or teachers). In the subsequent tutorial, the pairs shared their findings with their table group (roundtable) before sharing their learning with other newly formed groups so that all students had access to all other research papers (numbered-heads-together constructing the “jigsaw” of knowledge). This latter step was required because no two table groups had the same set of research papers. This is a key feature of cooperative learning where the members of a group are reliant on each other to construct the entire picture (Slavin, 1991). Feedback from the students demonstrated that this process had a deep impact on their thinking. Specifically, students indicated that they had to address their own alternative conceptions so that they would not pass these on to their students. Comments made by them included: [T]here are many misconceptions among students, adults and teachers (Student 34); Misconceptions need to be addressed (Student 5); [M]isconceptions are easily passed on (Student 56); and summatively, I learnt lots of new things from the research papers and saw the collaborative approaches as a valuable teaching tool (Student 70).

A formal academic essay of 1000 words, properly referenced assessed their understanding of the literature on alternative conceptions. Again, feedback was supplied to students within one week of submission of their paper.

**Constructing curriculum and the learning environment**

The outcomes of these processes provided a scaffold for our students, in their collaborative groups, to construct a curriculum to meet their content-knowledge deficits and gave them a real purpose and motivation for the learning that was soon to take place. Once students had understood clearly that there was a knowledge-deficit problem, resources for their learning were supplied. These took the form of an extensive compendium of astronomy related projects (McKinnon, 2005) and all of the equipment they needed to conduct them. Thus, the groups of students had to collaboratively construct a sequence of projects that would redress their knowledge deficits and in the process map these to the relevant Outcomes and Indicators of the syllabus (Board of Studies, 2001). In addition to the mandatory objectives of the subject, the students derived personal objectives on the basis of their performance in the ADT. They clearly articulated in their feedback papers that they wished to acquire the scientific content knowledge in order to be able to teach it without transmitting the alternative scientific conceptions that they previously held. Students were also required to map their projects to the Outcomes and Indicators of the other five Key Learning Areas (KLAs) of the NSW Primary curriculum. This latter process served to demonstrate for them that science and technology could simultaneously address multiple KLAs and the findings in the literature that many teachers offered for not doing science, viz., that there was not enough time and that they were too busy teaching English and mathematics (Angus et al. 2004). Quite often science in primary school is overlooked and not taught at all (CRTTE, 2003; Goodrum et al. 2000; Angus et al. 2004). The mapping exercise was undertaken by the group in a jigsaw approach and tendered for assessment together with a group-constructed rationale for the projects that they had decided to explore.
Each of the groups’ curricula was unique because each group had specific content-knowledge requirements to be met and alternative conceptions to be redressed in order for them to be able to teach the contents of the NSW Science and Technology K-6 curriculum (Board of Studies, 1993; 2001) in valid ways. Any hints on how to teach the content had been carefully removed from the projects in the compendium by the author, so that the students could begin to construct for themselves the PCK necessary to teach the material, first to their peers in the group and, later after reflection, to pupils in their classes. Here, PCK refers to: knowledge of, and beliefs about, purpose; knowledge of students’ conceptions; knowledge of the curriculum; and, knowledge of appropriate instructional strategies (Grossman, 1990).

At this early stage, the students had already begun to address the first three components of PCK. In order to scaffold students’ understanding of the fourth component, a set of papers was supplied to them. These were analysed in a Jigsaw strategy where each student chose only one paper. During the following week, they returned to class and presented the key instructional approaches appropriate to science education to their group members. Again, no individual student possessed the entire “picture”. Rather, each was reliant on the others within the group to construct the larger picture through the jigsaw strategy. In addition, they understood that they would have the opportunity to implement these instructional approaches as they taught each other the scientific concepts contained within the projects of the compendium in a Jigsaw II fashion (Slavin, 1990). That is to say, one student assumed the role of “teacher”, and thus became more expert on the topic in question in order to teach it, and the others in the group acted as “learners”. These roles were swapped for other investigations so that each student could better understand the perspectives of being both teacher and learner. Consistent with collaborative learning principles, the task of acquiring the content knowledge contained within the projects was too great for any one individual to execute on their own in the time available.

The content of the compendium was aimed at reducing or removing the alternative scientific conceptions held by the students while increasing their scientific content knowledge. For example, a common alternative conception held by 95% of students on the pre-test was that the Earth’s distance from the Sun caused the seasons. Importantly, students had to discover for themselves (in their group and through close questioning by their tutors and each other) that it was the altitude of the Sun and the amount of time that it shone on the planet’s surface that was responsible for the temperature variation between summer and winter. Their growing understanding of the various instructional strategies and sophistication in their use became evident in one face-to-face interaction with a group when one student said “But I wouldn’t teach it this way. When asked why, the group responded in ways that reflected an early stage of understanding of the pedagogical issues. They made comments about the need to break the task into manageable chunks over a series of shorter lessons in order to scaffold the learning of their future primary students.

The approach motivated individuals to engage with the content both as learners and as teachers and facilitated the following: face-to-face promotive interaction; positive interdependence; individual accountability and personal responsibility; interpersonal and collaborative skills; and the development of critical reflection of both their own, and their group’s, performance (Johnson & Johnson, 1984; Johnson, Johnson, & Holubec, 1993; Slavin, 1990). Individualised programs tailored to the group’s needs
required everyone in their different roles to be involved and working at different levels during the tutorials: students as teachers, students as learners, and the members of the tutorial team as facilitators and mentors.

A more structured method has been adopted to elicit feedback by directing the students’ attention to the many roles involved in the teaching-learning process using a “structural reflection and feedback” paper. At the end of each lesson, the “teacher” is required to reflect on a number of issues related to the preparation and delivery of the “lesson” involving both the content knowledge presented and the instructional approaches adopted. The “learners” are required to focus on the instructional strategies implemented and their effectiveness in helping them understand the content knowledge. When completed, the teacher and learners exchange their observations and reflections in a roundtable session with the teacher making notes about what the learners have said about the “effectiveness” of the lesson. The feedback papers are employed as an experiential record that provides them with data for the construction of their final essay.

Observations of students by tutors and visitors revealed that the classroom was a dynamic, task-orientated environment. As they engaged with the content, there were many, many “ah ha” occasions when students came to understand such phenomena as the phases of the Moon or the seasons, and in the process constructed mental models that were highly personal. For example, one student developed a model to explain the apparent movement of the Sun in the sky during the course of the year, based on the peeling of an orange. The sharing and explanation of this idiosyncratic mental model excited both the originator and the members of her group as the abstract idea for the cause of the seasons was made concrete. Extracts from the feedback papers obtained during these sessions reveals students’ feelings when they were engaged in their activities: active, inspired, informative, collaborative, beneficial, enjoyable, productive, powerful, intense, engaging, interactive, supportive, frustrating, tiring, interesting, critical reflection, thought-provoking. A range of comments about the collaborative approaches and group work illustrate the extent to which the students were involved, motivated and task orientated: I loved the Jigsaw activities – everyone brought something different (Student 42); Cooperative learning is great and useful (Student 74); Staying on Task [sic] by moving through each component (Student 26); and, We had a cooperative day where we got together and did it (Student 21). In short, although the tutors had expected changes in students’ engagement, they were pleasantly surprised by the extent to which task-orientated discussion happened within groups to the exclusion of all other problematic conversations, e.g., their social lives.

Student formative feedback and the roles of the tutors
Consideration of the one-minute papers employed early in the semester allowed deeper reflections by the tutorial team members and enabled them to develop strategies that could be implemented in the following week’s tutorial. These, for example, allowed the identification of learning barriers and conceptual problems. Analysis of one paper led the authors to think that one student did not understand the connection between actually doing the project activities and their future teaching of science and technology. The student wrote: Why don’t we just spend more time constructing units of work? The strategy adopted at the start of the following tutorial involved one tutor, in an ethical way, asking the whole class to consider the connection between these two components, i.e., doing the projects and their future as
teachers of science and technology. Students, in their groups, discussed for a few minutes the connection and presented their thoughts to the whole class. There was a high degree of commonality amongst the thoughts: that in the process of doing the activities they were developing their PCK on how to implement activity-based science. In the previous class, the student had been sitting disengaged from the activity of the group. Following the intervention, the student became highly involved, smiled often, and was pro-active both in that tutorial and for the rest of the semester.

The roles of the tutors (i.e., the authors) were thus many and diverse. Tutors stimulated students’ thinking and developed their analytical and critical thinking skills by asking higher order questions. They encouraged students to extend their knowledge and learning by conducting research both for their own benefit and to inform their future teaching of science in problem-based learning environments. Comments extracted from the one-minute feedback papers highlight the various roles adopted by the tutors’ and made explicit by their behaviour in class. The comments include: Great tute [tutor]! I normally find Sci & Tech so boring but you are making it really easy to understand things so it is much more enjoyable (Student 3); I think it is very good that the tutors are so helpful in assisting us to complete the activities each week (Student 62); The activity today ‘The Seasons’ was difficult and hard to understand. However, with teacher guidance and explanation the activity and its findings became clearer (Student 44); Nice to have some 1:1 with the tutors (just for some different perspectives) (Student 61). The approach led students to understand in a very concrete way how social constructivist learning takes place and which was explicitly modelled by the tutors in their many discussions both with each other and with them.

Assessment of student learning
A criterion-referenced assessment framework is employed with a set of clearly specified performance outcomes on a number of criteria for each of the four assessment tasks. The criteria are provided to students at the outset in a marking rubric that provides a clear structural guide for both the student and the assessor and increases the reliability of the assessment process. Formal assessment of the students’ efforts is grounded in team discussions about what constitutes acceptable performance. Extensive feedback is provided to students so that they could meet the outcomes of the criterion-referenced framework. Performance that is deemed to be at less than the standard is discussed with the student within one week of submission of an assignment and the remedial steps necessary are specified. In one respect the feedback provided to the student is both formative and summative. It is formative in the sense that if the student wishes to address the feedback provided, they are encouraged to resubmit the attempt in order to achieve the necessary minimum performance level against each of the criteria. Failure to do so, as the students came to understand, would result in failure of the subject. It is summative in the sense that should the student not wish to address the issues identified in the feedback and they have achieved at the necessary performance level then no further submission is necessary.

Each of the assessment tasks described above have both an individual and a collaborative component. For example, students are required to collaborate in order to develop perspectives generated by their consideration of the research literature and of their experiences as teachers or learners as they engage with the activities in their
group-constructed curriculum. Apart from the third assessment task, students are
required to present their distillations in an individual fashion to ensure academic
integrity.

The final assessment task is a content knowledge test worth 30% of the subject mark
and on which the students must demonstrate at least 70% mastery of the concepts
involved. The test serves a particular purpose, viz., to drive the students’ engagement
with the often difficult scientific concepts related to this one strand of the syllabus.

**Formal subject evaluation**

A formal paper-based subject evaluation is conducted at the end of each semester
where, with appropriate ethical safeguards, students provide feedback on their
perceptions of the subject. The success of our informed approach is illustrated by the
fact that in 2004, using a 19 item questionnaire, only 7 items indicated student
satisfaction; in 2005, using a 29-item questionnaire, 28 of the 29 items (excluding
workload which had a mean of 3.54) indicated high levels of student satisfaction on aive-point Likert scale. Responses extracted from the subject evaluation are presented
below to illustrate the challenging nature of the subject and the positive feelings that
students derived from engaging with it.

*This subject was full-on and scary but looking back through those stressful
nights, I have, & many others, accomplished so much. [The tutors] were very
helpful & wanted us to achieve our best – their attitude was greatly reflected
on us, especially me. Thank you for your support! Thanks for your passion,
greatly appreciated. (Signed) (Student 51).*

*I believe that the collaboration and teamwork component presents
opportunities and challenges – a great development for me personally and
[the tutors’ names] enabled this subject to be a positive and enjoyable
learning experience (Student 73).*

*I am no longer afraid to have a go and teach [sic] science in the
classroom. This subject had a much nicer environment compared to [subject].
I felt that my efforts were rewarded at uni [sic] and especially in this subject
(Student 103).*

*The opportunity to re-submit assignments was extremely beneficial, and
promotes us to improve. The group work taught many skills not just in science
but other KLAs. Working collaboratively is a motivational tool (Student 37).*

*I think the collaborative project was fantastic (Student 83).*

*I enjoyed the post-test today. I think I did really well. It was awesome
(Student 65).*

**Discussion**

In just 11 weeks, the success of the approach, for this most difficult of primary
science content areas, in terms of learning outcomes, is demonstrated by the following
results. Analysis of the post-treatment Astronomy Test (MANOVA) has revealed that
students’ content knowledge significantly increased (effect sizes (2005, 2006) =1.997,
2.26 (Cohen’s d)). More importantly, their alternative conceptions have reduced
significantly (effect size=0.688, 0.507) and they have acquired a significantly
increased ability to explain the astronomical phenomena they will be required to teach
(effect size=1.333, 0.95) (McKinnon & Danaia, 2005).
In addition, the evidence from students’ feedback indicates that, where they were previously afraid of teaching science, did not know the content, could not explain the reasons for certain scientific phenomena or were simply bored by the subject, they are now enthused, motivated and committed to improving their content knowledge. They know how to address their own and future pupils’ alternative conceptions and are acquiring the skills on how to teach science content in interesting and engaging ways.

The first two authors have extended the study in 2007 to assess students’ science teaching efficacy using STEBI-B (Enochs & Riggs, 1990). The pre-intervention results reveal that approximately half of the students entered the subject with high levels of confidence about teaching the Science and Technology Syllabus content. For this group, the ADT results quickly disabused them of this notion and showed that they were not competent to teach the content. The other half of the cohort did not perceive themselves to be confident about teaching the content. Indeed, the ADT results also demonstrated that they were not competent to teach it (Appleton, 1997). It would have been interesting to re-administer the STEBI-B immediately after they had marked their papers but this was not possible. The authors expect that the post-intervention analysis of the STEBI-B will support the qualitative evidence extracted from the formal subject evaluations in earlier years where there appeared to be an increase in students’ perceptions of their competence and confidence to teach science and technology.
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TRANSFORMATION FROM STUDENT TO PROFESSIONAL – A STUDY ON LEARNING TO TEACH

Dawn Naylor

Abstract

This paper is part of a study on the phenomena of learning to teach. Learning to teach involves variables to do with the learner, the task of teaching, the strategies for learning and learning to teach, and the context. Essentially, this forms the research questions of who, what, how, where and when of learning to teach. This paper reviews the literature related to the who question and therefore attempts to identify the learners’ unique characteristics, qualities, abilities and background experiences that are brought to the learning context and influence what is learnt, where, when and how. The literature identifies pre-service teachers’ demographics, dispositions and epistemological beliefs as factors that contribute to what is learnt in teacher education courses. It is anticipated that this part of the study will be both qualitative and quantitative in nature because it seeks to identify significant learner (pre-service teacher) factors that influence learning to teach.

Introduction

Learning to teach is complex and dynamic (Calderhead & Sharrock, 1997). It is thought to develop over time, and with experience and knowledge. It is also evolving in a changing and increasingly multicultural world. Whilst some would argue that learning to teach best occurs in the school context, this study argues that quality teaching involves more than imitating or apprenticeship models of training. Teachers also need to understand about the scientific basis for learning (cognitive psychology), new technologies, policies, research and theory that informs teaching.

The transformation from student to professional teacher documents the phenomena of learning to teach. On entry to teacher education programs, pre-service teachers are experienced learners having had some 10-13 years in school environments. They are familiar with being a learner and learning, teachers and teaching, and the classroom/school context. The knowledge gained by this apprenticeship of observation means that pre-service teachers have preconceived ideas and expectations about the nature of learning and teaching (Lortie, 1975). However, these preconceived ideas and expectations have been formulated from the perspective of a student. The student sees teaching from the performance and personal impact perspective and is often unaware of the professional thinking and decision making behind the teacher’s actions. The journey from student to professional teacher will likely challenge some of these preconceived ideas and expectations and may initiate paradigm shifts or transforming moments.

This overall study seeks to describe and explain these transformations and therefore literature associated with variables that impact on learning is relevant. Essentially, the variables that impact on any learning, also influence learning to teach. These variables relate to questions about who, what, how, where and when (Brown & Day, 1983; Feiman-Nemser & Remillard, 1994; Flavell, 1976). They provide a framework for reviewing the literature. The who
question refers to the learners’ unique characteristics, qualities, abilities and background
experiences that are brought to the learning context and influence what is learnt, where, when
and how (Feiman-Nemser & Remillard, 1994). In this regard, the who question refers to the
**pre-service teachers’ profile.** This paper reviews research on what is known about the pre-
service teachers’ profile according to their demographics, epistemological understandings and
dispositions. The paper will address the emergence and significance of knowing the pre-
service teachers’ profiles.

A review of the literature relevant to the nature of the pre-service teacher identifies three
areas of research. Research concerned with the pre-service teachers’ demographics,
epistemological understandings and dispositions. Pre-service teachers enter teacher
education programs with a wealth of experience and knowledge that will likely be challenged
and affirmed by the learning opportunities provided in their courses. The prior experiences
of pre-service teachers are important because they influence behaviour, motivation,
perspectives, beliefs, expectations and contribute to the quality of their experience (McInnis,
James, & Hartley, 2000).

A review of the pre-service teachers’ demographics identified age, gender, ethnicity,
socioeconomic backgrounds and academic abilities. Epistemological understanding is
classified as understandings about the nature of knowledge and knowing, teachers and
learners and the nature of teaching and learning to teach. Dispositions are defined as
“personal qualities such as attitudes, beliefs, interests, appreciations, values and modes of
adjustment” (Taylor & Wasicsko, 2000). The dispositions to emerge from the review include
attraction to teaching, self efficacy, and anticipated challenges of teaching.

Age

Typically and traditionally, pre-service teachers are aged between 19 and 30 and are entering
early adulthood (Department of Education, 2004; Hodgkinson, 2002; Lortie, 1975; McInnis,
James, & Hartley, 2000; McKoy-Lowery & Pace, 2002; Sanford, 2002; Scottish Executive,
2005; Sharplin, 2002). The significance of age is related to readiness to learn or motivation.
Motivation changes during a person’s lifespan and is influenced by cognitive, socio-
emotional, personality and morality development (Curuso, 2002; Erikson, 1968; Havighurst,

Lifespan research suggests that during the age range of 19- 30 years, people are young adults
who are becoming comfortable with their personality and interpersonal skills. They are
developing a regard for authority and social order. Knowledge and skills are developing and
progressing towards their career. Many are seeking intimate relationships or starting a

The impact of age suggests that many pre-service teachers are encountering first time and
intensely personal experiences. They are increasingly responsible for themselves and as such
are making significant choices about career, finances, social life, sport and recreational
pursuits. The characteristic activities of the young adult period are likely to influence the
amount of time, effort and motivation. For example the need to be self sufficient and
independent might warrant a part time job which may influence the amount of time and effort
put into study and learning to teach. Likewise in seeking intimate relationships, pre-service
teachers may prioritise more time to socializing. In addition, the amount of time afforded to
study effects the degree to which the pre-service teacher might be involved in authentic engagement with the content and reflective thinking.

Gender, Ethnicity, Status and Epistemological Beliefs.

Pre-service teachers are predominantly female, white, Anglo-Celtic and middle-class (Carter, 1990; Darling-Hammond, 1999; Department of Education and Training, 2004; Lanier & Little, 1986; Wideen, Mayer-Smith, & Moon, 1998). Pre-service teachers’ gender, ethnicity and socio-economic backgrounds are thought to influence epistemological beliefs (Belenky, Clinchy, Goldberger, & Tarule, 1986; Gilligan, 1982; Perry, 1968). Epistemology is an area of philosophy concerned primarily with how people come to know and hold beliefs and how these will influence the cognitive processes of thinking and reasoning. Hofer and Pintrich (1997, p 119) suggest that pre-service teachers’ beliefs about the nature of knowledge and knowing “should be considered the core of an individual’s theory, while the other beliefs about learning, teaching and intelligence may be peripheral to an individual’s theory”. Epistemology is particularly relevant to adult learning because pre-service teachers arrive with knowledge, skills, beliefs and concepts that influence what is noticed, how it is organized, interpreted and applied. This in turn affects a learners’ ability to recall, reason, solve problems, apply and acquire new knowledge through generalizations.

In a review of epistemological beliefs research, Hofer and Pintrich (1997) identified multiple dimensions of pre-service teachers’ ability to know and how they are linked to motivation and cognition. Initial models of knowing, centred around structured, developmental experiences and how individuals interpreted their educational experiences (Baxter-Magolda, 1992; Belenky, Clinchy, Goldberger, & Tarule, 1986; Perry, 1968). A second group of models centre around reflective judgement and developing a line of reasoning and as such define knowledge and knowing (King & Kitchener, 1994). The most recent models espouse systems of beliefs that may be more or less independent of the teaching experience (Schommer, 1990).

Recent research on epistemological beliefs suggest the ability to know is related to pre-service teachers’ understanding about the nature of knowledge and the nature of knowing. Knowledge can be viewed with a degree of certainty and simplicity (King & Kitchener, 1994). Certainty is the degree to which one sees knowledge as fixed or alternatively knowledge can be viewed as tentative and evolving. The degree of simplicity can be viewed as an accumulation of facts or alternatively highly interrelated concepts. In addition, the nature of knowing relates to the source, control and speed of the acquisition of knowledge (Hofer & Pintrich, 1997). Sources can range from external authority sources to one’s self as the constructor of knowledge. The control of knowledge ranges from unopposed acceptance of information to substantiated justification and analysis. The speed of acquiring knowledge relates to quick, all or nothing learning.

Studies by Brownlee (2003) and Chan (2001; Chan, 2003) identified two additional dimensions, namely the nature of learning and the nature of learning to teach. Brownlee’s (2003) research on pre-service teachers’ epistemological beliefs found links between beliefs about knowing and beliefs about teaching. If pre-service teachers believed knowledge was fixed they tended to believe teaching to be transmissive. Likewise pre-service teachers who believed knowledge was the ‘construction of reasoned truths’ also held the view that teaching was a process of constructing knowledge. Although Brownlee’s work in still in progress, she claims a relationship exists between beliefs about teaching and beliefs about knowing.
Chan’s research considered a larger sample of pre-service teachers’ beliefs about concepts of teaching and learning, and also investigated beliefs about the teacher’s role and their relationship with students, peers and colleagues; students’ needs and abilities. Chan found similar results to Brownlee, in that those pre-service teachers who had “a traditional conception of teaching and learning are most likely to hold beliefs that knowledge is certain…derived from experts and ones’ learning is innate” (p6). In addition, Chan found that more Hong Kong pre-service teachers believed that knowledge was acquired through effort and the learning process rather than be handed down by an expert. Chan concluded that cross-cultural and contextual differences may have influenced the development of epistemological beliefs because attributes such as effort, endurance and hardworking are admired and commended in Chinese culture.

Specifically, Hofer & Pintrich (1997) suggest the dimensions involved in epistemological beliefs are understanding about nature of knowledge (certainty and simplicity of knowledge) and the nature of knowing (source of and justification for knowing). Brownlee (2003) and Chan (2001;2003) advocate for understanding about the nature of teaching and learning to teach. The nature of teaching involves the role of a learner and teacher/instructor. The nature of learning to teach involves the significance and monitoring of learning opportunities and the speed and process of learning teachers’ work. Table 2 summarises the extreme dimensions involved in epistemological beliefs.

Table 2: Dimensions involved in epistemological beliefs

<table>
<thead>
<tr>
<th>Nature of knowledge</th>
<th>Certain/ fixed</th>
<th>Tentative/ evolving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature of knowing</td>
<td>Simple accumulated facts</td>
<td>Integrated concepts</td>
</tr>
<tr>
<td>External source</td>
<td>Internal source</td>
<td>Internally constructed</td>
</tr>
<tr>
<td>Acceptance of facts</td>
<td>Acceptance of facts</td>
<td>Analysis and critique</td>
</tr>
<tr>
<td>Roles</td>
<td>Teacher transmits</td>
<td>Teacher facilitates</td>
</tr>
<tr>
<td></td>
<td>Learner receives</td>
<td>Learner constructs</td>
</tr>
<tr>
<td>Monitoring and evidence</td>
<td>Regurgitate/recall/reproduce</td>
<td>Argue/conceptualize/reflect</td>
</tr>
<tr>
<td>Process of Learning to Teach</td>
<td>Transmission</td>
<td>Critical/social</td>
</tr>
<tr>
<td>Speed of Learning to Teach</td>
<td>Quick or not at all</td>
<td>Incremental</td>
</tr>
</tbody>
</table>

In summarising the impact of epistemological beliefs on learning to teach, the literature suggests that epistemological beliefs are developed from prior cultural and educational learning experiences (Chan, 2001). Unlike other professions teaching is a highly visible occupation and one that students in developed countries experience early in life and over a long period as an occupational apprenticeship (Lortie, 1975). Further, Feiman-Nemser,
McDiarmid, Melnick & Parker (1989) also confirms that preconceived ideas about what teaching is and what teachers do are often well ingrained, difficult to change and involve dispositions which are not constructively identified, challenged and rationalised. Supporting this influence is the fact that many pre-service teachers attribute their teaching style and reason for becoming a teacher to the impact of a significant teacher (Lortie, 1975).

Essentially, pre-service teachers’ epistemological beliefs about the nature of knowledge and knowing and the nature of learning and instructing may act as filters that screen out teacher education experiences that are not congruent with what they think. Pre-service teachers’ prior beliefs reign even when exposed to knowledge and evidence based theories. The significance of epistemological beliefs has only recently been researched and as such the degree to which they occur, the relationship between knowing and teaching and the influence on pre-service teachers’ receptivity to certain types of knowledge and teaching strategies is largely uncharted.

Academic Ability and Experience.

The literature refers to academic backgrounds as years of schooling and the entry requirements for teacher education programs (Department of Education and Training, 2004; Lanier & Little, 1986; Lortie, 1975; McInnis, James, & Hartley, 2000). The McInnis study claims 74% of undergraduates had completed 12 years of schooling which is in line with the age related demographics. Department of Education and Training statistics claim 71 % of pre-service teachers are less than 24 years of age, however some of the students in this sample entered teacher education without tertiary aggregate scores and so may not have completed 12 years of schooling. Generally, 12 yrs of schooling is experienced, even if vocational directions are pursued.

Regardless of whether pre-service teachers have had 10 or 12 years of schooling, the time spent being taught and observing teachers means pre-service teachers have experienced an occupational apprenticeship that contributes to what they believe is teachers’ core business. The contact is face to face and the relationship is affective with the teacher in a position of power. This sort of exposure is thought to contribute to pre-service teachers’ beliefs that they know how to teach or that teaching is somewhat intuitive and learnt through experience and on the job training (Book, Byers, & Freedman, 1983; Lanier & Little, 1986; Lortie, 1975). Such beliefs impact on effort and motivation as discussed earlier. Lanier & Little (1986) conclude that when pre-service teachers have this belief they enter teacher education programs with the expectation that coursework will be simple, reinforcing an easy workload and of little academic value or relevance to practical teaching. The perceived easy workload will influence the amount of effort and time put into studies and may influence time spent on other activities such as social, sporting, recreational and alternative employment. Lanier & Little indicate this is in contrast to other professional courses whereby students expect coursework to be difficult, requiring effort/time and of academic value directly related to the profession.

Entrance into university and their schools of education varies from year to year and between institutions. The literature cites three potential entrance formats. The most common is an exam aggregate from the final year of secondary school. The second most common format is for a mature age exam format to determine eligibility. Finally and more recently used is an interview and portfolio type entrance format. Generally, where a tertiary entrance score is used the aggregate is lower than for other professions. Whilst the lower aggregate receives
much attention from the media and has contributed to a perception that teaching requires less ability than other professions, Lanier & Little (1986) argue that insufficient analysis of comparable findings in other professions and the attention to central tendencies weaken this argument. They suggest comparisons from statistical data in other professions should be included and that ranges rather than central tendencies should be considered. They also suggest a more likely explanation for lower entrance scores is that recruitment needs for teaching are far greater than other professions and hence teaching needs a greater percentage of the pool of students entering university.

The implications of lower entrance scores for teacher education are not well documented (Lanier & Little, 1986). Suffice to say that adult learners are more vocal and influential in terms of their satisfaction with coursework and as such two implications might emerge. Firstly, if teacher education classes have a majority of lower ability students, one can expect students to request more specific and concrete instruction. The more practical and concrete the instruction the less profound and interactive the instruction. This means the higher order cognitive demands of thinking, reasoning, questioning and analysis appear less and instead the “tell me or show me the right way to teach” prevails (Lanier & Little, 1986). The application of a teaching formula such as ‘one size fits all’ is thought to contribute to early career teachers’ culture shock and beliefs that teacher education coursework is ineffective (Greene, 1979). In reality, every class is unique and idiosyncratic and teachers need to generalize beliefs about learning in order to adapt and be flexible.

Secondly, for the more academic students, the sustainment of less challenging academic activity may lead some to seek alternative coursework. Research by Bierly and Berliner (1982) on in-service teachers’ feedback from professional development opportunities also confirmed requests for activities to be of practical use, able to be adapted to individual teacher’s classroom dynamics, coaching by observation of classroom teaching with feedback and instruction from observer.

Attraction to Teaching

The attraction to teaching is described as being both extrinsic and intrinsic. Extrinsic attraction to teaching was described as benefits such as the opportunity to improve themselves in terms of job prospects; job security, reasonably well paid; ease of entry, exit re-entry; time compatibility and considered important by society (Lortie, 1975; McInnis, James, & Hartley, 2000). Pre-service teachers were intrinsically attracted to teaching because they liked children; psychic rewards from student achievement and / or because they align with and aspire to a significant teacher in their own life (Lortie, 1975; McInnis, James, & Hartley, 2000) . However, in an updated study done by Sykes (1983), changes in the decade after Lortie, suggests some disillusionment emerging. Teachers suggested decreased enjoyment of teaching due to; less responsive and appreciative students; a deteriorating public image of teaching; flat career structures; erosion of material benefits and teaching environment that were increasingly disruptive, dangerous and bureaucratic.

Whilst research on the attraction or aversion to teaching is extensive, little is known about the degree to which intrinsic or extrinsic motivation drives pre-service teachers. One speculative consequence might be that intrinsic and extrinsic motives determine priorities and therefore affect the amount of time, detail, inquisition and the degree of persistence and effort that pre-service teachers devote to their learning. In addition, learning opportunities that are seen to be more practical and directly related to teaching might also attract more effort.
Self-Efficacy and Anticipated Challenges

Bandura, (1986) describes self-efficacy as;

‘self-efficacy is defined as peoples beliefs about their capacity to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy determines how people feel, think, motive themselves and behave’

(Bandura, 1986,p.1)

In this regard pre-service teachers see themselves positively in the role of teacher and as such they want success (achievement), are willing to be challenged (persistence) and have a motive (realistic purpose) in order to pursue learning to teach. Bandura suggests that being able to judge how successful you think you will be in the role is often based on actual performance, vicarious experiences, persuasion from others and physiological reasons. Research suggests that actual performance is the most reliable information about success because people actually see it or receive positive / negative feedback. As a result the more positive experience the higher the self-efficacy rate, or in contrast the more negative experiences the lower the self-efficacy rate. In making these ‘cognitive appraisals’ the learner begins to modify their self perception, which in turn decides how much more energy, time and effort they will continue to put into the task.

A number of studies suggest pre-service teachers are very confident about their ability to teach (Wideen, Mayer-Smith, & Moon, 1998). Weinstein (1988) surveyed 131 pre-service teachers prior to and after an introductory education course. She sought to answer four research questions two of which are relevant to self efficacy. Firstly, she sought to extend replication of the findings of a previous study in which she describes pre-service teachers’ predictions of their future teaching performance as unrealistically optimistic (Weinstein, 1988). Secondly, she sought possible reasons for such confidence. Results from this study suggest that in terms of expected teaching ability and potential for problems, pre-service teachers were extremely confident. Explanations given for such high self ratings included capacity to care, past experiences with children, commitment, ability to relate to children and patience. Differences in the secondary pre-service teachers included commitment, capacity for caring, self confidence, understanding of children and ability to motivate (Weinstein, 1988). From this study, pre-service teachers believe they already have the attributes of a teacher.

A high self efficacy and confidence with regards to being able to teach has implications for the teacher education program. As indicated by the research if pre-service teachers believe they already know, already have teaching skills and can teach, then the teacher education program might be viewed as unnecessary, not practically relevant, and has nothing to contribute to further learning about teaching. The teacher education program therefore has significant challenges to overcome in motivating pre-service teachers to both engage and attend classes.
Conclusion
From this review of the research on pre-service teacher demographics, epistemological beliefs and dispositions it can be concluded that in general pre-service teachers are females, aged between 19-30, white, Anglo-Celtic, middle class, and with average academic ability. Whilst the demographics, epistemological beliefs and dispositions infer pre-service teachers are a relatively homogenous population a number of studies warn against reporting central tendencies. However, knowing the background knowledge of pre-service teachers in terms of their demographics, epistemological beliefs and dispositions reveals a range of characteristics which as a whole have significant implications for teacher education programs.

The first implication for teacher education programs is access to demographics, epistemological beliefs and dispositions. The research suggests a range, but what is really known about the pre-service teachers we teach in urban and rural universities, as a whole group during lectures, between tutorial groups, and between different learning area classes. Generally, universities do not tend to use this information to inform their teaching nor do teacher educators have access to this information. This study advocates for a census style questionnaire to be administered to all first year pre-service teachers, with the sole purpose of informing teacher educators of the participants as a whole group and their respective learning area or tutorial classes. The data could be analysed for trends over time in terms of those attracted to teaching. In addition, changes in thinking from first year to fourth year could be studied.

A second implication is the effect of the pre-service teachers profile on learning to teach. The research indicates pre-service teachers are competing with many first time cognitive, socio-emotional, personal and financial experiences. They will have a range of views about; knowledge; knowledge sources; teachers’ roles and learners’ roles; orientations towards teaching; beliefs about learning to teach: being a teacher and their own teaching performance. They will also demonstrate a range of reasons for being attracted to teaching, levels of confidence and perceptions of challenges in teaching. The range of life experiences is likely to impact on the motivation (time, effort, persistence, endurance), engagement, reflective thinking and longevity of knowledge. In particular, the range of epistemological beliefs might well act as filters that screen out teacher education beliefs that do not align with those of the pre-service teacher. One of the factors that influences how learning is acquired and in particular how pre-service teachers learn to teach is the way one conceptualizes what is to be learnt and how it will be learnt (Wideen et al.1998). These beliefs will need to be constructively identified, challenged and rationalised in order to engage pre-service teachers and transform thinking. This study, seeks to identify learning experiences at university that pre-service teachers say transform their thinking about: views of knowledge; knowledge sources; teachers’ roles and learners’ roles; orientations towards teaching; beliefs about learning to teach: being a teacher and their own teaching performance.

Finally, what is missing from this research? From my own experience as a teacher educator, I know many pre-service teachers have alternative employment and/or are married. The amount of hours pre-service teachers work and the types of employment is relatively unknown, yet we know this is often the cause of late assignments and absenteeism. The marital status and number of children also effect assignments and absenteeism. Whilst again on their own these two attributes might seem insignificant, when they are added to a belief that they can and already have the skills and knowledge to be able to teach and the expectation that they will not change their thinking about teaching/learning during the course
of study might influence motivation, engagement and reflective thinking and as such influence what is taken from the teacher education program.

References:


Peer mentoring for preservice EFL teachers during their field experience

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Abstract:

Providing effective mentoring to preservice teachers in their field-based practice continues to be a major challenge in preservice teacher education programs, particularly because it requires substantial investments of time, money, effort, and resources. Therefore, in a climate of limited resources, there is the need to do research on possible effective alternatives, e.g., on peers learning from peers in school-based teacher education. It has been suggested that peer mentoring, which in this research refers to the peer learning process among participants who are directly involved in each other’s learning by being mentors for each other, might be one such useful component of a comprehensive teacher preparation program. Thus, apart from being mentored by their school practicum mentors, preservice teachers could learn from one another and mentor one another to assist in the development of their teaching practices. However, not much research has been done into the use of peer mentoring as a strategy for developing EFL teaching practices for preservice EFL teachers during their field experience. Therefore, this research advocates the use and benefits of peer mentoring in preservice teacher education programs. This presentation gives an overview of an ongoing study, whose major focus is to examine the impacts of the peer mentoring experience of preservice EFL teachers during their practicum. A concurrent triangulated mixed method design, that included both qualitative and quasi-experimental techniques, was used to investigate the affect of the peer mentoring on participants’ instructional practice. The research investigates the impact of peer mentoring experience by (1) using quantitative data (by the means of survey questionnaire) to assess the instructional practice of the participants in comparison to a group of preservice teachers who do not participate in the peer mentoring experience, and by (2) using qualitative data to identify the key components of the peer mentoring experience that facilitated teaching practices, and explored the perceived benefits and the effectiveness of the peer mentoring experience for the participants (by the means of interviews and practicum journals).

The results are expected to indicate that the participants in the peer mentoring program make significant improvements in their self assessment of their teaching practices. In addition, the study will highlight the essential components of peer mentoring for preservice EFL teachers during their practicum. It is hoped that based on the findings, peer mentoring will be shown to be an effective way to improve preservice EFL teacher’s teaching practice, and their personal and professional development during their practicum. The findings from this study should be of significance to a variety of educational groups, interested in peer mentoring to improve the quality of preservice teacher education programs.
Introduction

The provision of pre-service teacher education has been of great concern all over the world and there continues to be numerous calls for reform and change. Especially within the field of pre-service foreign language teacher education, the challenges are increased because foreign language teachers are attempting to teach a foreign language while using that language as a mode of instruction. Pre-service teachers must be prepared to meet the challenges and standards for English as a Foreign Language (EFL) Teaching (2002; Wertheimer & Honigsfeld, 2000). Many educators (Aiken & Day, 1999; Cook, 1996; Larsen-Freeman, 2000; Nunan, 2003; Richards, 1998) call for reforms and changes in EFL teacher education in order to raise the standard and quality of teaching and learning. Field experience has become a centre of teacher education reform over the past several years (J. W. Anderson, 2004; Beck & Kosnik, 2002; Ewell, 2004; R. Schulz, 2005).

Among many approaches to reform the field-based experience, mentoring pre-service teachers in general, and EFL pre-service teachers in particular, in their initial school-based field experience has been advocated as a reform in pre-service and in-service teacher education. In teacher education, mentoring is typically described as a process to help develop teaching practices and involves a nurturing relationship between a less experienced person and a more experienced person who provides guidance, a role model, advice, support, and feedback (Bigelow, 2002; Haney, 1997). A pre-service teacher (mentee) is normally assigned to an experienced mentor (supervising or cooperating teacher) in the school for the period of the practicum. This teacher’s role is to engage the pre-service teacher in learning to teach, to develop their teaching practice, and to overcome context-specific difficulties. These activities are also at the centre of achieving professional and practical knowledge for implementing EFL teacher education. Thoughtful mentors organize their pre-service teacher’s professional development by “advising on effective practices, making the theory-practice link overt, and evaluating and reporting upon their practicum performance” (Sinclair, 1997, p. 309).

There is a substantial literature that has documented the numerous benefits of mentoring for pre-service teachers. For example, this process is reported to support their learning and develop their professional teaching practices (Ewell, 2004; Maynard, 2000; Street, 2004; Woullard & Coats, 2004). More specifically, mentoring programs provide structure and support in helping a novice teacher to learn, thereby promoting a high level of teaching skills, and pedagogical knowledge (e.g., Arnold, 2006; Ewell, 2004; Street, 2004; Tang & Choi, 2005; Woullard & Coats, 2004; Yip, 2001), attitudinal changes toward teaching (Woullard & Coats, 2004), as well as teaching efficacy (Ewell, 2004; Yost, 2002). Apart from gaining professional benefits, there is also strong evidence that pre-service teachers also receive psychosocial support from their mentors (Wang & Odell, 2002). The relationship with their cooperating teacher (mentor) increases their confidence (Mau, 1997; Walker & Stott, 1994), self-awareness, self-esteem (Walker & Stott, 1994), and reduces the level of pressure (Chow, Tang, & So, 2004). Mentoring can also help mentees to establish a network of contacts by helping them to engage in the school community.
However, such field experiences, which provide benefits derived from working with mentors do not always lead to expected results on the part of the novice or pre-service teacher. Although many studies have investigated how school mentors help facilitate pre-service teachers’ teaching practice, professional and personal development through the mentoring process, if mentoring relationships are not initiated and organized with care, both mentors and mentees are driven into “stressful, conflict-laden situations” (Stokes & Stewart, 1994, p. 34). The reality of mentoring practice have revealed some dark sides (Long, 1997). These shortfalls are attributed to several factors. Some of the most frequently mentioned factors are lack of time (Bush & Coleman, 1995; Ehrich, Hansford, & Tennent, 2004; Evans, Abbott, Goodyear, & Pritchard, 1996; Farrell, 2001; Long, 1997; Manson, 1990; Redmond, 1990; Saban, 2002), money, efforts, and resources to do the mentoring job effectively (Farrell, 2001; Mary, Blank, & Sinderlar, 1992; Slick, 1995), and lack of appropriately trained mentors (Colwell, 1998; Ehrich et al., 2004; Long, 1997; Peterman, 2003a; Reid, 1999; Rowley, 1999). An important constraint on the traditional mentoring process is the availability of teachers as role models and mentors for their junior teachers (Kadar, 2005; Long, 1997; McDaugall & Beattie, 1997; McGuire & Reger, 2003; Thomas, 2000). Mentoring a pre-service teacher means an added responsibility, increasing their daily workloads. A danger from this mentoring process is that teacher mentors may be overwhelmed by the task of mentoring pre-service teachers and their heavy workload at their schools (Ehrich et al., 2004; McGee, 2001). Therefore, they see the process of mentoring pre-service teachers as a burden (T. S. C. Farrell, 2001). They do not have enough time for their mentee. Consequently, the mentees may feel hesitate to share their personal and professional concerns with their mentors “if there is high competition for a mentor’s time” (McGuire & Reger, 2003, p. 58). More seriously, if the mentors cannot perform their roles, as expected, pre-service teachers do not always receive enough feedback during their practicum or internship (Edmundson, 1990). These problems affect the quality of the mentoring process and most pre-service teachers feel that their early field-based experiences are not effectively mentored or supervised (Morton, 2004). Hawkey (1995) adds that “considerable tensions always exit about the supervisory roles” (p.176).

Moreover, traditional mentoring has been criticized for being a hierarchical relationship. Several research studies have documented the so-called “misused power” in the mentoring relationship between students and their teachers (Bilinski, 2002; Kopp & Hinkle, 2006). It can be seen that in this relationship the mentor has more power and status than the mentee (pre-service teacher). In other words, this traditional mentoring relationship fosters an unequal balance of power (Eisen, 2001; Le Cornu, 2005; Maguire, 2001; McGuire & Reger, 2003) because in the relationship, the mentee tends to be overly dependent on the mentor and the authority lies with the mentor (Halai, 2006; Woodd, 1997). The hierarchical structure of mentorship diminishes their opportunity to speak openly and make them “vulnerable to exploitation” or make it difficult for them to “find their own intellectual niche” (McGuire & Reger, 2003, p. 57). As a result of this hierarchical status in mentorship during student teachers’ teaching practice, Stanulis and Russell (2000) found that student teachers tended to be reluctant to admit gaps in knowledge and ask for help due to fear of being evaluated by their mentor. More specifically, the unequal relationship with the mentors puts pre-service teachers in the
situation in which that they are reluctant to resist what their mentors tell them to do (Liu, 2005; McGuire & Reger, 2003), even if their teaching philosophy conflicts with that of their mentor. Further, it is hard to “refuse her/his mentor’s non-work related requests” (McGuire & Reger, 2003, p. 57). In a recent case study of the failure of a pre-service teacher during her practicum, Farrell (2007) found that observation by university supervisor and cooperating teacher can cause nervousness to pre-service teachers. Therefore, in some cases, mentoring sessions with their teacher mentors can lead to “a face-threatening situation” (Hyland & Lo, 2006, p. 163) for the mentees.

Apart from these pitfalls of mentoring, in the field of foreign language teacher education, an additional hindrance to the process of mentoring has been found in pre-service teacher mentoring. This is related to pre-service foreign language teachers using the foreign language as a means of instruction as the current trend is to shift from traditional foreign language teaching to communicative language teaching methodology. Cooperating teachers (mentors) are expected to be at a particular level of foreign language proficiency and have specific foreign language pedagogy so that they can mentor preservice teachers to reach a certain level of professionalism during the practicum. However, the reality is different. In a recent study, Nunan (2003) found that in the Asia Pacific countries surveyed, the English language proficiency of teachers in public schools was very poor and that there was a lack of adequate teacher preparation programs to implement communicative language teaching in their classroom. Furthermore, the lack of familiarity with the foreign language, language culture, and new trends of foreign language specific pedagogy were likely to cause misunderstandings (Benedetti, 1999) and conflicts between school mentors and mentees (K. E. Johnson, 1996; Liu, 2005). Therefore, these conditions lead to the dilemma that such teachers may be unable to provide pre-service teachers with sufficient and necessary assistance to develop their teaching practice skills. In these circumstances, pre-service teachers may not see the relevance of their learning-to-teach experience. Instead, they tend to apply survival strategies to help them get through their experiences rather than finding a way to be more flexible and reflective in their teaching. Thus, it is unlikely that they will make full use of their early field experience.

In sum, although it is impossible to deny the role mentor plays in providing personal and professional assistance to pre-service teachers, this kind of relationship seems to be limited in a variety of ways with those that are especially problematic, including its hierarchical structure and its limited availability. These issues, to some extent, affect the quality of the teaching experience. It can be seen that relying solely on this type of relationship has its disadvantages for the pre-service teachers. Meanwhile, student teacher peers seem to be under-used in the teaching context (Hawkey, 1995). Therefore, in a climate of limited resources, there is a need for more additional strategies to be developed to complement traditional mentoring and to make pre-service teachers’ field experience more meaningful. One of suggestions in foreign language teacher education literature is the use of more collaborative or collegial relationships to create more chances for teacher reflection and negotiation of their teaching practice. To this end, Hawkey (1995) champions the need for research with peers learning from peers on school-based teacher education as a result of the fact that “what they learned from peers was different but
complementary from what they learned from their mentor teachers and resource staff" (Gemmell, 2003, p. 1)

In response to a call for a more equal and collegial relationship, several approaches such as faculty peer mentoring (Harnish & Wild, 1993a), co-mentoring (Bona, Rinehart, & Volbretch, 1995; McGuire & Reger, 2003; Mullen, 2000), collaborative mentoring (Mullen, 2000), critical constructivist mentoring (Wang & Odell, 2002), mutual mentoring (Harnish & Wild, 1994; Landay, 1998), or peer-based relationships (e.g., Kram and Isabella, 1985) have been described. Although they are not exactly the same, these commonly address the limitations of traditional mentoring in its unequal power structure and its availability. Among those approaches, peer mentoring seems to be a strikingly innovative strategy which emphasizes the relationship of equality in mutual expertise, and empathy which are often missing from traditional mentoring (Kram & Isabella, 1985). However, the use of different terms suggests there is no universal agreement about the definition of peer mentoring. This concept has been applied in different ways in different contexts. For example, in the field of business, peer mentoring is defined as “an intentional one-on-one relationship between employees at the same or similar lateral level in the firm that involves a more experienced worker teaching new knowledge and skills and providing encouragement to a less experienced workers” (Bryant, 2005, p. 321). In another situation, peer mentoring simply is understood as “a paired relationship within a mentoring program that is established between co-workers” (Williams, 2004, p. 29). In these definitions, peer mentoring is regarded as a formal process within an organization that promotes the career development of both mentors and mentees and benefits the organization.

Similarly, in the educational literature, according to Gilmour, Kopeikin, and Douche (2007), “peer mentoring is defined as being a mentoring relationship where the mentor and mentee are similar in terms of age and/or status” (p.37). Sharing the basic tenet, Le Cornu (2005) also refers peer mentoring to “participants becoming directly involved in each other’s learning by being mentoring for each other” (p.362). These definitions are grounded in the concept of mentoring which is also not universally uniform. Similarly, Harnish and Wild (1993b) conceptualize mentoring as a “mutually helpful situation” (p.272) in which “both participants have something of value to contribute and to gain from the other” (p.272). These definitions foreground the dynamic of two-way peer mentoring in which both mentors and mentees are equals in terms of their hierarchical status and both parties can experience being both a mentor and a mentee at different times. Building on the limitations of traditional mentoring and valuing the equality in peer relationship, McDougall and Beattie (1995) define peer mentoring as “a process where there is mutual involvement in encouraging and enhancing learning and development between two peers, where peers are people of similar hierarchical status or who perceive themselves as equals” (Beattie and McDougall, 1995 as cited in McDougall & Beattie, 1997, p.425). Similarly, Kram and Isabella (1985) simply define peer mentoring as a peer-based relationship. Sometimes, in the field of education, peer mentoring refers to as peer coaching which allows two or three teachers assist each other in developing more expertise in teaching (Showers & Joyce, 1996).

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While other definitions from business and educational literature can be quoted, it is believed that in general, examination of the various definitions of peer mentoring reveal several common themes peer mentoring. It refers to an equal or nearly equal peer based relationship in which a peer plays the role of mentor to the other. The peer mentors are usually equals in terms of age, expertise, power, hierarchical status, whose relationship bases on the reciprocal and mutual beneficial relationship and learning partnership rather than traditional transmission of expertise and experience from experts to novices.

The benefits of the use of peers in developing pre-service teachers’ teaching practice are widely documented in the literature. Much research on peer observation or peer coaching among pre-service teachers has been carried out in pre-service practicum settings to emphasize the benefits of peer observation in developing pre-service teachers’ teaching practice (Anderson et al., 2005; Hasbrouck, 1997; Kurtts & Levin, 2000; Lasater, 1994; Morgan et al., 1992; Rauch & Whittaker, 1999; Vacilotto & Cummings, 2007). It is believed that peer observation in a teaching situation, where the pre-service teacher had frequent opportunities to teach and observe peers teach, might facilitate reflection and provide more feedback to improve instruction. According to Stoynoff and Sayavedra (1999), peer observation enables the observed pre-service teachers to gain additional insights into their teaching and the observer “a chance to see how their peers approached the same teaching situation” (p.7). Morgan et al (1992) studied the effects of peer coaching on targeted teaching behaviors of five pre-service teachers in their practicum. The findings of this experimental study shed light on the important role of peer coaching in pre-service teachers’ teaching practice. More specifically, the study reported that peer coaching “increased the effective teaching behaviors and decreased the ineffective teaching behaviors of the participants” (p.257). This is confirmed in Rauch and Whittaker’s (1999) which investigated the perception of pre-service teachers regarding peer observation and feedback during student teaching by means of both qualitative and quantitative data collection. Forty seven students in art education or special education who participated in the study reported that they learned from their peer observation and feedback in both roles: observer and teacher. This improved their teaching. The study confirms previous studies by emphasizing the benefits of peer observation and feedback in developing collaborative experiences and reflective teaching in the preservice education course programs.

In a recent study, Vacilotto and Cummings (2007) also investigated the effectiveness of the peer coaching model for pre-service ESL/EFL teachers and its possible application in a specific context in Brazil. The findings has confirmed the previous studies by showing evidence that the peer coaching model for pre-service EFL teachers in Brazil facilitates “the exchange of teaching methods and materials among student teachers, fostering development of teaching skills, stimulating the rethinking of personal teaching methods and styles, and raising awareness of the most supportive behaviors in professional relationships”(p.158).

In an ethnographic case study investigating the feedback experiences of twelve early childhood education student teachers paired to give feedback to one another, Lasater (1994) found that even though there was no feedback training, they self reported the
psychological and professional benefits of feedback if it was done in the environment of trust and cooperation. In another investigation of peer coaching for pre-service teachers by McAllister and Neubert (1995) and in-service teachers by Slater and Simmons (2001), pre-service teachers and in-service teachers reported learning, specifically from giving and receiving feedback from their peer coach.

However, most of these studies pertain to variations of teacher peer observation and peer collaboration, which aim only at improving the trainees’ technical skills or knowledge which is not sufficient to promote trainees’ personal and professional growth. They tend to focus on the specific technical aspects of pre-service teaching practice in the classroom, which certainly play an important role in trainees’ initial field experiences. However, these approaches seem to aim only at technical aspects, but not to address other psychological or non-technical issues encountered during their practicum. In addition, little empirical research has focused on peers playing a mentoring role for each other (Bryant, 2005) while much literature has proved that peer learning is a valuable source of development strategy. As a result, this research argues for the use of peer mentoring which as the following review provides shows not only technical support but also non-technical support to expand academic mentoring options and as a complementary approach to improve the quality of pre-service teacher education.

Besides, not much research has been done into the use of peer mentoring as a strategy for developing EFL teaching practices for pre-service EFL teachers during their field experience. Therefore, this research advocates the use and benefits of peer mentoring in preservice teacher education programs. More specifically, this research examines the impacts of the peer mentoring experience of pre-service EFL teachers during their practicum.

This study sought to add to the research on teacher education practicum by examining the impact of peer mentoring experiences on pre-service EFL teachers’ teaching practice by (1) using quantitative data (by the means of survey questionnaire) to assess the instructional practice of the participants in comparison to a group of pre-service teachers who do not participate in the peer mentoring experience, and by (2) using qualitative data to identify the key components of the peer mentoring experience that facilitated teaching practices, and explored the perceived benefits and the effectiveness of the peer mentoring experience for the participants (by the means of interviews and practicum journals).

Sixty students participated in the study during their 6-week practicum in a pre-service EFL teacher education program in Vietnam. Thirty of them volunteer to participate in the peer mentoring program. Participation in the peer-mentoring projects was included as one of the many requirements of student teaching but not compulsory. Two-group quasi-experimental design is used to achieve the aims of the research. Thirty student teachers in an experimental group and the rest is located in comparison group. The comparison group does the practicum only while the experimental group both do the practicum and attend the peer mentoring programs integrated in the practicum. The researcher provide a training workshop for experimental group in which she will explain the peer mentoring process, the orientation of the program, roles and responsibilities of peer mentors, peer mentoring activities, and peer mentoring attributes. Each student teacher will be asked to
select a partner early in the semester. They are required to follow major peer mentoring activities during their practicum such as peer observation, peer feedback, and support meetings.

Data will be collect during the practicum and at the end of the practicum and analyzed quantitatively and qualitatively.

The results are expected to indicate that the participants in the peer mentoring program make significant improvements in their self assessment of their teaching practices. In addition, the study will highlight the essential components of peer mentoring for preservice EFL teachers during their practicum. It is hoped that based on the findings, peer mentoring will be shown to be an effective way to improve pre-service EFL teacher’s teaching practice, and their personal and professional development during their practicum. The findings from this study should be of significance to a variety of educational groups, interested in peer mentoring to improve the quality of preservice teacher education programs.
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Assessment in Teacher Education: Task master or Tool?

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Abstract:

The current initial teacher education context includes two appositional influential factors. On the one hand the funding climate emphasises completion rates while the rhetoric and aspirations of conceptual frameworks aim for the development of beginning teachers who “teach who they are” (Palmer, 1998) and are committed to ‘responsive, transformative and relational teaching’. Such aspirations are often embedded in a commitment to the development of the reflective practitioner. This paper considers how assessment tasks are an integral part of teacher education pedagogy so they contribute to personal professional development rather than being hoops through which pre-service teachers jump on their road to ‘course completion’.

Findings presented in this paper are drawn from one section of a doctoral study focused on the contribution of course work to the development of a reflective neophyte teacher. The study indicates that pre-service teachers discriminate between course approach and assessment designs which are more likely to contribute to their development as reflective practitioners. Also, they demonstrate clarity about characteristics of assignments and courses which contribute to this end - in terms of both negative and positive factors. Factors include ‘personal connection’ demonstrated through ownership of learning and meta-cognition across multiple phases or facets within the assessment task. Reference is made to some current assessment examples influenced by the doctoral findings.

Introduction

Assessment design is a critical influence on pre-service teachers’ approach to the teaching and learning relationship (Scouller, 1996). It acts as a signal to point students to what educators and institutes consider most important to learn (Boud, 1998). We are familiar with the beginning of semester scene when students receive their course outlines. The teacher educator wants to talk about the course goals, approach and learning intentions: the contribution the course will make to the development of a relational, transformative and responsive teacher (BTI Conceptual Framework, 2004). But, the rustle of paper indicates pre-service teachers’ eyes turning to the assessment tasks. In many instances, and from a pre-service teacher’s perspective, a course is equal to completion of those tasks. For a range of institutional, staff or student related reasons a mis-match can exist between what is heralded as critical in the learning and teaching process and what is required for assessment. Where teacher educator programmes are guided by conceptual frameworks, it is of maximum importance these shape all course work components, including aligning assessment practice with the claims and aspirations made therein. This paper presents findings from one small section of a doctoral study which asked the question, How does pre-service course work contribute to the development of the reflective professional? Findings indicate that pre service teachers can experience
assessment tasks as external to course pedagogy in which they are viewed as tasks to be completed. However, when assessment tasks are an inherent component of the teacher education pedagogy, they have much potential as “tools for learning”. Two characteristics of assessment tasks as pedagogy are described. These include the need for ‘personal connection’ demonstrated through ownership of learning and the opportunity to be involved in meta-cognition through multiple phases or components within the assessment task. Reference to some current examples of practice influenced by those findings is also included.

The study

Pre-service teachers’ interpretations of their initial teacher education experience are at the heart of the doctoral study which is situated within a three year, Bachelor of Education (Teaching) programme preparing primary teachers for New Zealand schools. Data was collected over a two year period using a range of tools, two of which are represented in this paper. In the first instance, two cohorts of pre-service teachers enrolled in Teaching of Science (a methods paper) were involved with regular reflective writing (Cohort 1, n=19; Cohort 2, n=20). At the conclusion of the paper, students submitted a meta-reflection as one portfolio component. This meta-reflection analysed and reported themes from pre-service teachers’ regular reflective writing and focused on their development as a teacher of science. After all assignments were marked and grades were processed through the Board of Examiners, an invitation was extended to release their meta-reflections as data for the study. Data drawn from meta-reflections are identified by the letters MR. Another data collection tool represented in this paper is a questionnaire focused on pre-service teachers’ perception of how the institute and its initial teacher education programme had prepared them as developing reflective professionals. This questionnaire was completed by the same pre-service teachers (n=40), twelve to eighteen months after the Teaching of Science paper, and at the conclusion of their initial teacher education programme. Data drawn from final questionnaires are identified by the letters FQ.

Initial beliefs influence assessment and learning

It is acknowledged that pre-service teachers begin their initial teacher education programmes with firmly established beliefs about teaching (Fletcher, 1997; Hatton & Smith, 1995; Kagan, 1992; Lowery, 2003; Zhou, 2002). These beliefs “serve as powerful templates for the ways in which they practice as teachers” (Berry, 2004, p. 1302). The broader study found that pre-service teachers’ prior experiences not only influence the ways in which they practice as teachers, but also how they present themselves as learners. Pre-service teachers enter their initial teacher education experience with a very definite learning mold which is a hindrance to developing as a reflective practitioner. For example, Alibee shares the challenge of undoing a reliance on a transmissive approach and replacing it with an active, critical and reflective approach:

In all of my reflections on prior knowledge it would seem I have definitely brought along with me to Science lectures some distinct patterns of learning. I am finding it hard to unlearn these old ways and learn the new ways. I admit the new ways are not hard to understand, it is the unlearning of the old ways that is proving to be the most difficult. (MR)

Hindrances to reflective thinking identified in the study resonate with those from Sumsion’s (2000) longitudinal study. Expectations of Alibee’s ‘old way’ of learning and transversal internal disconnected learning with a simplification of teaching as an
who tells. This results in pre-service teachers seeking to accumulate tools and techniques to ‘apply’ in the ‘real world’. Learning, including assessment and the process of reflection, become task completion where one seeks the ‘right’ way. On the other hand, findings related to components of initial teacher education which support the ‘undoing’ of this old mold of learning tend toward personal connectedness, ownership and justification of thinking, self-awareness and openness to multiple perspectives. In keeping with LaBoskey’s (1994) findings, pre-service teachers who have overcome the constraints of their ‘old mold’ are committed to asking higher order questions – in particular the question “Why?”

The sense of personal connectedness, increased self-awareness and characteristics of one who is professional (see Norsworthy, 2003) identified in the broader study, appear critical to “developing a context within which to hang learning that is personal to my own philosophy” (Mary, FQ).

When invited to identify course work which contributed to their development as reflective thinkers and active learners, the majority (74%) of pre-service teachers identified the programme’s ‘approach to learning’ and ‘assessment design’ as the major contributors. (See graph to right).

![Figure 1: Contributors to development of reflective practitioner as identified by pre-service teachers.](image)

**Assessment design**

Data analysis identified an interesting juxtaposition between the assessment process as pre-service teachers experienced it, and their ideas of assignments which would definitely encourage students’ growth as reflective thinkers. This is not surprising given that assessment is “a vital part of teaching and learning” (Boud, 1998, p. 2). However, the degree to which its contribution is aligned to the institutional goals or programme’s conceptual framework cannot be assumed. Typically, teachers approach assessment on the basis of both a long “apprenticeship of observation” (Lortie, 1977) and “apprenticeship of participation” (Norsworthy, 2005). In this sense, assessment is seen as what I have termed ‘presentism’ – giving the teacher the ‘one right response’ s/he is presumed to want. Accordingly, it is not surprising that as teacher educators we may also pattern our approach to assessment on our own apprenticeships in observation of, and participation in, tertiary life. There is a sense of security in the known and familiar. However, for those with a commitment to transformational learning and the development of neophyte teachers who are reflective about their thinking and practice, such an approach does not fit. Understanding pre-service teachers’ thinking about assessment may help us break the power of such apprenticeships and turn assessment from task master driving toward completion, to learning tool.

The paper will now turn attention to the identification of assessment design characteristics which are inherent to course pedagogy and contribute to this intended development rather than being perceived as hoops through which pre-service teachers jump on their road to course completion. Pre-service teachers appear to have strong ideas about assessment design in terms of both positive and negative factors. Negative characteristics include a perception that the task requires the reproduction of content ‘received’ from the course/course lecturer, no expectation to think for...
themselves, and a belief and expectation that there is one ‘right’ answer. The level of engagement with learning and whether it is viewed as a task or a process is influenced by feelings and memories. Feelings of boredom, apprehension or inadequacy about assessment can hinder their connection with an assessment learning experience. Not all pre-service teachers involved in this study were convinced that the assessments experienced throughout their initial teacher education programme had either required or developed reflective thinking. For example, one pre-service teacher noted an assessment driven schedule which was not as much about “self-betterment as it is fulfilling the criteria or achieving the outcome” where “students know what a lecturer prefers and so write to that” (Abdooljaba, FQ).

As indicated, findings indicate that for assessment tasks to be an inherent component of course pedagogy, certain characteristics are needed. The first of these positive characteristics is the requirement for pre-service teachers to personally connect with the learning experience in such a way that it leads to ownership and justification of content, higher order thinking such as synthesis and evaluation, multiple phases which allow both personal connection and ownership to grow through meta-reflections. While 30% of respondents desired that assessment tasks included a sense of development, improvement or growth, according to Peter Piper1, assignment design contributes to development of reflective practitioners when they “challenge us to think, explore and expand”.

While pre-service teachers identified a range of positive characteristics, two of these, personal connection and multiple phases, appear to be key.

**Personal Connection**

Assessment tasks most likely to contribute to the development of a teacher who is reflective about their thinking, require pre-service teachers to process information through a personal filter and sense of fit. In other words, assessment tasks which were influential were deemed to be “personal to me” (Kava, FQ). According to Kava, such assessment tasks get “me to dig deep into personal values, looking at character, something I have struggled with” (FQ). This same sense of personal connectedness can be illustrated when Lily (FQ) identified a high level of self-awareness in assessment tasks which “make you think carefully about how you are forming your ideas and what is informing your attitudes/involvement”. This belief and apparent desire for personal connection and engagement with assumptions is a reason why Sue rejected exams as an appropriate assignment.

Exams usually are just what’s in your head (imp. I know) but not much about what’s really “inside” (FQ).

This sense of connectedness is at the heart of the reciprocal processes of learning and teaching and yet when it comes to assessment design, our own experiences suggest that an objectivist epistemology reigns. Palmer (1999, p. 1) asks why this sense of connectedness appears difficult to be valued as academically valid, “when we know with considerable certainty that it is connectedness that allows us best to pursue our mission, the mission of knowing, teaching, and learning?” He answers the question, noting the academy’s commitment “to an epistemology, a way of knowing which claims that if you don’t disconnect yourself from the object of study – your knowledge will not be valid”. And yet, paradoxically, we realise that transformative learning does not come without a “deep and often costly investment of selfhood”. For Palmer, such a view is “morally deforming” because “it sets students at arm’s length from the world they are studying; they end up with a head full of knowledge but without any
sens of personal responsibility for what they know, no sense of connectedness to the
world that their knowledge reveals to them” (1999, p. 2).

An insight from this study is that if pre-service teachers are going to teach differently
to the way they were taught, they will need to learn differently to the way they have
learned. For this to occur, assessment experiences will need to challenge the
“apprenticeship of participation” which so clearly shape expectations. Jeremy, a pre-
service teacher, noted that assessments were beneficial, “only if you maximised it
personally” (FQ). If the assessment task could be completed without a strong personal
connection it was probable that it would indeed be seen as something to complete.
However, one valued way in which personal connection was seen to be maximised
was through developing and justifying a rationale, or personal justification for choices
or ideas. 22% of pre-service teachers who answered the assessment design question
within the final questionnaire (n=27) nominated the need for a rationale or
justification and 26% nominated ‘extended thinking’ as a desirable characteristic.
Laura claimed that she:

“... always finds essays helpful and challenging, taking a lot of
thought. However, any activity where a rationale or justification
needs to be given stimulates this type of thinking” (FQ). Pre-service
teachers drew attention to their experience of developing and
justifying a rationale for teaching science as an example of this type
of assessment.

The development of a rationale for teaching science presents a necessary, but difficult
task for pre-service teachers. On the one hand, it is not unusual to find teachers who
‘do teaching’ but have not articulated a personally owned Passionate Creed
(LaBoskey, 2004) to underpin their teaching. For many pre-service teachers, ‘because
the curriculum requires them to teach science’ appears reason enough. The writing of
a rationale challenges initial orientations toward “one right answer” and “give the
teacher what she wants” attitudes as answers are required to demonstrate personal
ownership. Cassandra noted:

This activity of writing our own definition helped in creating a
personal rationale of why we would teach science. Writing this
rationale was a great way to structure our own thoughts to what
science includes through our own personal definition and why we
would teach this subject. (FQ)

As well as valuing assignments which require personal connections as indicated
above, pre-service teachers identified the need for an assignment to be a multiple
phased event as a critical characteristic of assignments which developed their
reflective thinking.

Interestingly, this had been the process available to the cohorts for one of the
assignments within the Teaching of Science course. This assessment task was, and
continues to be, referred to as a ‘tool for growth’ and the teacher educator clearly
defines her different roles before and after assignment submission. Until the
submission date, pre-service teachers are invited to discuss any aspect of their
developing rationale or send a sample of their writing for feedback. This can be time
consuming but enables mentoring and modelling of critical, reflective thinking where
the teacher educator scaffolds, in the Vygotskian sense, as a critical friend. In the light
of a history of disconnectedness, such interaction appears invalid, and almost
‘cheating’. However, over time, pre-service teachers come to understand the
importance of this connection and dialogue. While initially hesitant, the invitational
approach gradually is accepted and through these discussions connections are made
with previously unarticulated ‘passionate creeds’ (LaBoskey 1994) which have the

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potential to provide ongoing motivation for both learning and teaching. This process is seen to engage pre-service teachers in reflective thinking about the very motivations of their own being. Their passionate creed is described as ‘developing’ and becomes critical to their growth as reflective thinkers, learners and teachers, providing one of the lenses for the reflective process.

Multiple phased assignments
22% of pre-service teachers valued assessments which were either multiple faceted and/or multiple directional. These included notions of revisiting assessments through feedback in the development process, or after marking as well as one phase of an assessment task being foundational to another phase. For example, Pippa posited that a good assignment for this purpose would enable you to practice a myriad of skills: “hypothesise on a theory, or write a unit – then actually do it. After this, return to the assignment and critique it. Maybe even try again??” (FQ). The opportunity to build on the learning from one phase of course work or assessment is commensurate with effective learning principles and yet seldom included as a valid and valued component. One pre-service teacher’s (Sharon, FQ) focus on constructing a teaching resource with an interesting mix of external critique and practitioner reflection has potential for developing collegial, rather than individualistic, learning:

This resource can be critiqued by lecturer and associate teacher and reflected upon by practitioner.

In the following quote, it is not clear whether Peter Piper shares this faith in external critique or whether he sees himself in the teacher role, or is referring to common institutional practice with teacher educators and pre-service teachers through course evaluations. His suggestion was an assignment which required:

designing a unit that includes evaluation from both students and the teacher, then the teacher examines and critiques student evaluations, to improve/suggest modifications to the unit.

Some students, such as Tania, wanted this ‘follow-up’ or revisiting phase as she viewed it to be critical to “ensure improvement”(FQ). This sense of improvement or growth is another factor valued for its contribution for its development of a reflective practitioner. Typically, as identified by pre-service teachers in this study, feedback information they receive on assignments comes after teaching on the topic is completed and when they are least likely to benefit from such. Some pre-service teachers sought multiple interactions with the lecturer throughout the assessment journey. For example, Rachel indicated that she wanted teacher educators who “help and give advice at various steps as opposed to at the end once finished” as this was ‘not helpful due to having already finished assignment’(FQ).

While, as in the examples above, the multiple phases may be distinct events; this does not have to be the case. Some pre-service teachers such as Daisy suggested that effective assessment required reflective thinking which looked back and drew forward ideas to then be critiqued or justified, resulting in a challenge for future thinking or action:

An assignment that requires me to reflect on the past and challenge myself toward the future. (Daisy, FQ)

Another way in which an assessment task may have a sense of multiple facets is through the involvement of others. 15% of pre-service teachers included input from others – peers, school or campus-based teacher educators. It is interesting to note that those pre-service teachers who identified the formal process of reflection or journaling as positive tended to attach some form of pre-requisite component or characteristic to that process. For Sue, “Journaling is an appropriate way once a relationship has
been built and you feel free to be truly honest’. The need for this trusting relationship was evident throughout data as a pre-requisite for being vulnerable as reflective thinking tends to require. When one identifies and considers personal assumptions and the beliefs which shape them, you put yourself under the microscope. For pre-service teachers such as Kava, Sue, and Lynelle, character qualities such as honesty and integrity were viewed as pre-requisites for an effective journaling process. The need to be self-aware but also to have the security to name and own one’s values and beliefs enables the level of critique required to identify how those beliefs shape teaching and learning. Self-awareness is valued in recognition that teaching and learning are autobiographical events (Henderson, 2001; McDrury & Alterio, 2001; Manternach, 2002; Palmer, 1998; Seifert, 2004).

The journaling process which is valued is not an isolated event or completed task. It is a journey, and according to Marika (FQ) enables critique of ideas in the light of one’s worldview, experience, and a range of theories. Rather, than one right way, an ‘owned’ or justified way is sought. An assignment with these characteristics seemed to require personal connection and self-awareness. Multiple phases in assessments have the potential to encourage the disposition for, and tendency toward, metacognition and the ability to manage a sense of disequilibrium. This process of “questioning one’s own learning, or thinking about one’s own thinking” (Loughran, 2006, p. 93) contributes to an understanding of assessment as part of the transformational learning journey. It is indeed, “dramatically different to being told what to know and how to think” (ibid, p. 93).

Another way in which assessment tasks may be multiple phased is related to what happens to them after marking. Most often assignments are marked and returned to pre-service teachers to be filed away and not revisited. While the development of unit plans was seen to be an effective assessment task, Doris noted that it was of little help, “unless you put it into practice and then reflect on it”. Once again, a belief that without multiple phases and interactions with a task, anything other than completion is unlikely. On the receipt of marked rationale essays, within the Teaching of Science course, pre-service teachers were invited to identify what they learned from re-reading their material, from my marking (content and process) and the interaction of these two (i.e. the way they felt and thought about the marking). Overall pre-service teachers’ response to this opportunity was positive as demonstrated by the following:

Sue: “. . . I think being made to re read with the various comments opens up my thinking to things not really perceived – like the underpinning of the principles behind other’s statements.”

Rose “Again, I really enjoyed reading the markings of the essay – especially when you challenged me about something.”

However, in some cases, a pre-service teacher revealed important inner concerns. For example, Cassandra replied to the above invitation with helpful information for the teacher educator to address:

“To be honest – [I have learned that. . .] that I am not very good at academic writing at all no matter how hard I try, re write, re read, re word etc. Everything always gets jumbled up and comes out worse than how I think it…….”It is based on your perceptions and ‘the old tapes you play/watch’”

Interestingly, 78% teacher educators (n=9) also identified the advantage of multiple phases linked to practice, reflection on that practice and identifying learning appropriate for ‘next time’. Only one teacher educator (Marie Antoinette) commented about the inclusion of both informal and formal feedback throughout the crafting of an
assignment: informal feedback occurring throughout and the formal feedback midway through. Such investment in pre-service teachers’ thinking is pre-submission and indeed, a ‘tool for learning’.

When it comes to developing as reflective practitioners, pre-service teachers realise that their growth results from multiple factors. As Leigh noted:

It is a real mixture of community, open door, policies, practicums, papers, and assignments that contribute to students becoming teachers and going into schools and put it all into practice. (FQ)

However, findings indicate the existence of an institutional culture or ‘way of doing things’ which in itself can either contribute to learning or maintenance of the ‘old way of learning’ which pre-service teachers bring to their programme. For example, though the institution seeks to develop responsive teachers, bureaucratic requirements meant that assessment tasks are designed and printed in course outlines before the needs of students are known. Such modelling suggests that “stability is the natural order of things and goals are shared and unproblematic” (Angus, Seddon and Poole (1990) cited by Smyth, 1992, p. 272). On the other hand, pre-service teachers recognise that “the ethos of the institute encourages risk taking and values originality” (Marion, FQ). This notion of encouraging pre-service teachers to be risk takers, committed to originality and to ‘think outside the box’ was identified by Dennise as a component of the institutional approach to learning, by Mary as an important characteristic of effective assignments and by Pippa as a tendency of the modelled way of being which teacher educators present. Institutional characteristics which encourage this risk taking are linked to both teacher educator practice as well as an outworking of secure relationships where encouragement focuses on student learning rather than one right way. According to both teacher educators and pre-service teachers, the institute showed its commitment to reflection through its “constant examination of theory”, and “posing of provocative questions, encouragement of professional research and dialogue, debates and discussions within lectures”. These are descriptors to which pre-service teachers refer as giving them a sense of security to be risk takers. When they see that their teacher educators are continually engaging and examining the ideas and contexts with which they work, it appears to provide them with a visual image of self as risk taker too. This institutional value is closely linked with the establishment of relationships and connection to pre-service teachers as holistic, developing persons.

Recent experiences
The insights gained or confirmed as a result of the above study continue to influence assessment design and practice. In particular, we have sought to increase opportunities for assessment learning experiences to include multiple phases; personal connection leading to ownership and justification of learning, and self-awareness (on a range of foci) as a focus for learning and personal professional growth.

For example, last year in Planning, Assessment and Evaluation paper, pre-service teachers provided a written scholarly rationale for the role of assessment in authentic learning, presented a short summary of that rationale to a small group of their peers, collaboratively developed criteria against which the oral presentation would be critiqued, and then undertook a self-assessment of how they responded to feedback from both teacher educator and peers. In particular, pre-service teachers reported that they gained much self-knowledge through the process of developing and using criteria and then reflecting on their own responses to feedback. “Individuals come to know themselves by becoming conscious of the sources of their perspectives” (Cranton, 2006, p. 141). Such self-knowledge is liberating and transformative. Students were also required to assess their work against the criteria and identify the grade they think
they deserve and why. Such a process contradicts prior experiences and challenges pre-service teachers’ expectations of teacher/learner roles (Cranton, 2006).

Previously, within a paper called, *The Reflective Practitioner*, participants’ theoretical understanding of the process of reflection and its contribution to effective teaching or leading was sought through an essay. In the past two years participants have been required to present a personal crest, or shield with five visual components (metaphor, colour, character, phrase, and symbol) supported by a scholarly paragraphs to explain and justify choices of the visual components. Donelle (see right) used her in-depth knowledge as a surfer to shape a metaphor for reflection, presenting surfing and reflection as a careful consideration of belief or supposed form of knowledge (Dewey, 1910). Donelle celebrates her personal Maori heritage in her choice of the koru as her symbol. She expertly links this to the three pre-requisites for reflection identified by Dewey (1910) when she writes:

The Koru symbol shows ‘open mindedness through the unfolding of the koru and the gap in between the two sides that meet the middle. Responsibility on considering the outcome is illustrated in with the larger side of the Koru represented as myself ‘the teacher’ encompassing the smaller side ‘the child/ren’ and one side connected to the other. The Koru design is in the shape of a heart thus representing the wholeheartedness of the teacher. It is for this reason that this Koru design was created because I believe that it is essentially my ‘genuine enthusiasm’ and passion for the children that will essentially drive me toward an effective and reflective practitioner.

The results of such opportunities have often been transformative, and the assessment task a tool for personalised learning.

*Assessment as learning*

While funding allocations in New Zealand currently relate to completion rates, it is paramount that teacher educators focus on the personal and professional development of the person who is the teacher. By designing assessment tasks which seek personal connectedness, ownership and justification of knowledge, and self-awareness, we increase the possibility of also developing neophyte teachers who are reflective thinkers. As such, assessment tasks are an inherent component of teacher education pedagogy. If, as Larrivee (2000) suggests, the path to development as reflective thinkers, learners and teachers “cannot be prescribed” but "must be lived" and involves "infusing personal beliefs and values into professional identity” then we seek assessment experiences which enable personal connection leading to ownership, self-awareness and justification. The likelihood of achieving this appears to increase when assessments include multiple phases or facets.

If assessment is to be a tool for learning rather than a task master for completion, then it behoves us to remember that, “It is not a matter of content alone, but students need to be ‘ready, willing and able to engage profitably with learning” (Claxton & Carr, 2004, p. 87). As Loughran (2006, p. 7) encourages teacher educators to “teach in ways commensurate with the “messages and practices” that was the content”, it appears that assessment has more potential to contribute to the complex process of ‘being and becoming’ a reflective teacher when it includes the opportunity to personalise learning, leads to ownership of the knowledge and learning, to build capacity through multiple phases and is supported through facilitative dialogue and
scaffolding before submission for marking. In order to avoid being ‘task master’,
assessment practices need to interrupt the pre-service teachers’ apprenticeship of
participation and observation, be viewed as an integral component of course
pedagogy, and provide opportunities for “ways of being” teacher as described in our
conceptual frameworks.

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Tuning into podcasts: Collaborative research into the value-adding nature of podcasts in teacher education

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Abstract

Digital pedagogy has become an increasingly viable, popular and effective component of higher education teaching and learning at Edith Cowan University and elsewhere. Components of digital pedagogy are diverse with new examples, such as podcasts, regularly being created, released for use and adopted in educational, recreational and business contexts. Consequently, university students use much of this technology both in their employment and recreational lives. This study explored processes of using and developing the students’ existing technological skills within their university studies.

This paper documents the processes and findings of a collaborative research project that was implemented across six units of study during two semesters in an undergraduate teacher education course. During this period, podcasts were produced and broadcast to purposely increase student reflection and involvement in their own learning processes. These podcasts included question and answer sessions, teacher-student and student-student conversations, lecture presentations, summaries and reviews. Students were provided with opportunities to contribute to and nominate the content of these podcasts. Data were gathered and analysed from both the students’ and the teachers’ perspective about the perceived effectiveness of podcasts. Findings from this data were considered especially in terms of the value-adding nature of podcasts in undergraduate courses to better engage students. Finally, the research study’s results will be compared with findings from other recent studies using podcasts for educational purposes.

Introduction

Educators are often quick to embrace new technologies in an attempt to motivate students and improve opportunities for learning. University students, especially those entering directly from high school, are often early adopters of technology, with many arriving at lectures and tutorials in a ‘wired’ state, with an MP3 player, of which the ipod is one, clipped to an arm or belt (Chan, Lee, & McLoughlin, 2006; DeBell & Chapman, 2006; Maag, 2006). The researchers wondered whether this perceived interest in using this type of technology could be harnessed for more than listening to ‘head thumping, heavy metal’. Perhaps the dulcet tones of a lecturer waxing lyrical about educational philosophy or, better still, the thoughts of a fellow student distributed via the web to MP3 players would resonate with students and improve learning. Hence the following research was born – out of a desire to improve learning outcomes, a desire to try something new – and the chance to play with an iPod!
Initial discussions among the researchers indicated that each researcher had different ideas of what a podcast was and how the technology might be used to support and enhance the learning of our students. The range of views can be plotted on a continuum with simply recording a lecture at one end to student-generated podcasts at the other. This continuum represented a change in the locus of control of the content. It was decided to try variations within these parameters and gauge student reactions via a survey and, later, interviews and focus groups. As the researchers were also participants in the research, phase two of the research will involve the lecturers being interviewed to elicit their own beliefs about the value, or lack thereof, of podcasting as a support for learning.

**Background**

Podcasting is still in its infancy in educational contexts, however, there is clear evidence that this technology is being embraced in a variety of education settings (Cebeci & Tekdal, 2006; Chan et al., 2006; Leaver, 2006; Read, 2005b) as well as being questioned (Atkinson, 2007). A brief summary of some of the podcast related literature is provided as background to this study and the thinking behind it.

Podcasting is a way of accessing and distributing audio files over the internet via a method of online subscription or “syndication feeds”. Most podcasts combine audio technology, used to create sound and voice files, with web-based broadcasting technology whereas the production and dissemination of video files is commonly referred to as vodcasting.

Schools have already identified that iPods are a technology that appeals to young people (Australian Associated Press, 2006). One school library, for example, produced podcasts in order to promote reading with the podcasts including comments from both librarians and students (Balas, 2005). In Tasmania a school has been selected by an ‘elearning’ company ‘Etech’ to work with other schools internationally to trial incorporating the iPod into part of the learning platform in schools (Australian Associated Press, 2006). Primary school children in Perth are also broadcasting their podcasts worldwide with their program called “Podkids Australia” (Fuller, 2007). With this infiltration of podcasting and iPods into the Australian school system, a conflict of opinion is emerging, ranging from the desire to ban them totally to making use of them as a valuable learning tool. Also, iPods are currently being used in foreign language lessons, sport and to record life histories (Lallo, 2007).

Universities are using podcasts as part of their teaching and learning programs (Kaplan-Leiserson, 2005). This has been a natural progression for universities who were already creating audio files for their students. Already lecturers are finding that podcasts may be used in a more versatile manner than simply recording lecture content. Concerns have been raised that students might stop turning up to lectures if they can simply download the content. There is an argument, however, that there is nothing quite like ‘being there’. Cohen (2005) asserts that students are still turning up to the lectures using the podcast as a supplement to lectures rather than replacing them. With institutions such as Duke University still allocating 15% of student marks to attendance, podcasts are not necessarily intended to replace on-campus teaching and learning.
Other universities have created learning opportunities that are more active experiences (Read, 2005a). Students in the higher education setting can also be the voice in the podcasts and can use this technology to give peer feedback in student presentations (Kaplan-Leiserson, 2005). At Drexal University, podcasts are used to encourage creativity. For example, students have interviewed well known educators and used these as the basis of the podcasts. In this way students are being encouraged to be active participants in their learning (Read, 2005a).

One innovative way to use podcast audio files is to provide motivational encouragement which can be far more successful in the spoken rather than the written word. At the beginning of the course University of Illinois professor, Michael Cheney, welcomed his online students to class via podcast (Cheney, 2005). Alternatively, Psychology professor, Noland White, has found a new way to free up hours spent in the office; a podcast of the week's most asked questions (Bluestein, 2006). Other university lecturers are asking their students to complete their course assignments by using or creating podcasts (Leaver, 2006; Pownell, 2006; Read, 2005b).

Space does not permit in this paper for further discussion. However, suffice to say that just a cursory glance at the literature indicates that the potential for iPods is far ranging. What remains to be questioned is whether the potential will be realised. With this information in mind, and a preliminary review of the literature, the researchers involved in this study gathered together to design a research framework that would further extend our understanding of how educators and students are using podcasts to enhance their learning.

**Research framework**

Teachers often embrace the ‘new’ without thoroughly considering the impact of the ‘new’ approach, or technology in this case. As part of this project a group of lecturers from various learning areas were keen to try the ‘new’, while still remaining circumspect as to the benefits in terms of the learning outcomes. Our exploratory research framework was informed by survey data and, later, interview data which was then deemed appropriate to inform the future direction of the research. As the research progressed, our understanding of the process of podcasting developed as did our conversations about our own epistemological beliefs and how these impacted on our use of podcasting technology.

To ensure rigour and a more comprehensive understanding of the phenomena, it was decided to consider three separate cases; a first year education studies/educational psychology unit, a first year ICT unit and a second year mathematics education unit. The use of podcasting varied across these three cases. A survey instrument was used across all cases with the aim of collecting some basic quantitative data. This data was then combined with some “richer” qualitative data which allowed us to construct a more complete picture of the value-adding nature of podcasts in education. This design enabled us to gain a better understanding of the phenomena from both the students’ and the lecturers’ points of view. Miles and Huberman (1994) noted that research findings become more meaningful and the validity of the research is
enhanced when multiple cases are used. The use of several cases allowed for differing approaches to podcasting to be tried, examined and evaluated.

As the research progressed, it became apparent that the study needed to be extended. A second and a possible third phase will need to be added to the research to further explore the issues that were raised as a result of our literature review, early feedback from the students and our own discussions. Phases two and three will be the subject of a later report. For the purposes of the extended study, the researchers plan to employ a discourse analysis method in order to delve far deeper into the data. This will assist with the triangulation of the data gathered to date.

The study

This collaborative research study explored the processes of using and developing pre-service teachers’ existing technological skills within their university studies. It involved university lecturers and students creating, broadcasting and evaluating podcasts across varied units of study. Rather than simply recording lecture content to broadcast to students, the process was made interactive. We felt that this would encourage more learning and reflection to take place than simply podcasting lecture content. As most lectures are interactive and involve much more than a talking head we felt a great deal of the “being there” would be lost on audio – much like listening to a comedian performing a live show.

To guide our research in this project, the following questions were used:
- Do our students know/understand what a podcast is?
- Is there a general interest in podcasting content?
- Does the flexibility of podcasting add to student motivation to actively reflect on lecture content?
- Are there notable differences in student behaviours in different year levels?
- Did our students access and listen to podcasts? How did they access them?
- How did our students’ perceive the value of podcasts for their learning?

So, in the first semester, students used reflective processes to review some of the weekly lectures in their tutorials, and passed on suitable questions to an Interview Panel of up to 5 volunteer students. These students compiled significant questions and submitted them to the lecturer. An interview between the lecturer and the panel was then recorded and podcast to the students through BlackBoard (online courseware). These podcasts included question and answer sessions, teacher-student and student-student conversations, parts of lecture presentations, lecture summaries and reviews.

Due to the trial nature of this study, as well as the unknown factor of how adept the students and teachers in the study were at using podcasts, the use of podcasts in these units was not compulsory. Rather, they offered an additional or alternative resource to assist students to revise unit material, to understand assignment and examination requirements, to ask questions about the unit content and to access lecture material in an audio format after the lecture event.

Once the podcasts were created and broadcast to a number of students across different units of study, questionnaires were distributed to students at the end of the second
semester in 2006 and, from this questionnaire, data were gathered from 178 first and second year undergraduate students. A small group of students were also interviewed via email about their experiences of using podcasts. Lecturers were also requested to record their use and ideas about podcasting in their own units of study.

The data were gathered primarily to explore the students’ and teachers’ perceptions of the nature of podcasts and how they were perceived as helpful or otherwise for their learning. The data presented in this paper have been drawn from open and closed questionnaire items, some interview data and lecturer reflections to determine perceptions of podcasting technology.

Due to some difficulty in gaining access to iPod technology and the time required to update our own skills and knowledge as researchers, the pilot study was completed across one semester with a repeat study planned for 2007. This phase of the project focuses upon repeating some of the strategies used in 2006 to enable comparative analysis of data and to effectively evaluate the success of the project through further collection of data. Data is currently being gathered and analysed from both the students’ and the teachers’ perspective about the perceived effectiveness of podcasts. As a result, the findings from this data will be considered, especially in terms of the value-adding nature of podcasts in undergraduate courses to better engage students.

Discussion and results

The results from the data gathered during the first phase of this study provided us with information about both the lecturers’ and the students’ understanding of podcasts and the use of podcasting equipment. Although most of the data gathering strategies that took place during the project were focused on the students’ perceptions of podcasts and their use patterns of such technology, the students’ lecturers were also asked to reflect on their beliefs.

The five academic staff involved in this project documented their beliefs about the use of podcasting technology in education and they also reflected on how they used such technology in their own teaching in higher education contexts. An analysis of their comments revealed their purposes for using podcasts in their teaching were primarily related to intentions about providing students choice, utilising effective means of communication, providing interesting and educational resources, and encouraging student independence, as is evident from the following sample of their comments:

*Our intention with this project was to find a way to make use of this technology that was interesting and educational. I believe that it needed to be more than just a matter of creating audio files of lectures for students.*

*Often students asked important questions on an individual basis that other students would benefit from being part of, so we invited their questions and podcast both their questions and our responses on the Web. This became particularly pertinent immediately before assignment and exam time, when students were clarifying their understandings and reviewing the content of the unit.*

*As a university teacher who uses podcasts for teaching and learning purposes, I find them to be particularly useful for providing an extra avenue to access and interpret content material. Because podcasting technology utilises technology*
that many of our students are familiar with, I believe that podcasting is a useful way to "reach" our students.

I do not believe that they [podcasts] should be used alone - rather, they should be used in conjunction with other online, face-to-face and print-based learning and teaching materials.

One way to assist students to become independent learners and be proactive in their learning is to make information about teaching processes and curriculum content accessible in a time and space independent way and provide as many options as possible.

Students are given ample choice to use the information provided in the way they see fit. With this right to access lectures face-to-face, in print, through audio in combination or separately, there is an obligation to access the material in a way that is conducive to maximum learning.

Like the academic staff involved in the project, the students’ understanding of podcasts was varied and developing along with the technology itself. So, as well as investigating how students used and valued podcasts, our research firstly set about to determine students’ familiarity with podcasts, their experience in listening to podcasts and their preferred method of accessing podcasts. The questionnaire data revealed that 81% of the 178 students (including 98% of first year students and 66% of second year students) involved in the project knew what a podcast was and 49% of students (including 70% of first year students and 30% of second year students) had listened to podcasts before.

Data from the questionnaires showed that, despite the popularity of mobile players such as iPods and MP3 players, 81% of students in the study reported using computers as one of the methods used to listen to podcasts and more than half of the students (53%) used their computers as the only method (Figure 1). Almost half of the students (48%) used iTunes to listen to podcasts on their computers whereas 8% used another software program. These results mirror those found by Maag (2006) who investigated the podcast listening habits of a group of undergraduate and postgraduate healthcare students. Maag found that more than half (55%) of the participants in her study reported using their computer as the primary means of accessing and listening to podcasts. So, although mobile players are very popular with today’s students, this research shows that most students use computers to listen to podcasts. When the participants in the study were asked “Do you listen to podcasts more than once?” half of them reported that they did not, one third responded “sometimes”, 8% responded “yes” and a further 8% indicated that they were unsure.
Overall, these results, which related to the students’ familiarity with podcasts and podcasting equipment, indicate that students are relatively familiar with the concept of podcasting, are reasonably skilled in using and accessing podcasts, and have access to a number of software and hardware alternatives for listening to podcasts.

Students were asked to evaluate the value of podcasts for their learning in general as well as for how valuable they considered podcasts to be for each unit of study which used podcasts. When the participants in the study were asked “In general, how valuable do you find listening to podcasts for your learning?” and “For this unit, how valuable do you find listening to sound files or podcasts for your learning?” their responses indicated that they found the podcasts valuable but the unit-specific podcasts were perceived as being particularly valuable for their learning (Figures 2 and 3).
When asked if they would recommend listening to podcasts to other students, 16% of the participants said “Definitely” and 42% of participants said “Possibly”. A further 11% said that they would not recommend podcasts to other students and 31% of participants indicated that they were unsure. The first year students appeared to be more likely to want to recommend podcasts to other learners.

As well as the questionnaire items that were reported above, the students’ responses to the open-ended questions on the questionnaire also offered interesting data about how they perceived the use and value of podcasts. There were four major themes that emerged from the comments offered by the study’s participants about the use of podcasts for learning: (1) the possible use of podcasts; (2) value of podcasts for reflection and revision; (3) the flexibility associated with using podcasts; and (4) comments about podcasts in relation to attendance at lectures. For example, although there were some students who did not know what podcasts were, or who had never listened to a podcast, even these students could see the value of them, as indicated by the following comments:

- Although I have circled that I didn’t use any podcasts provided for this unit, I can see that they could be useful.
- I would of [sic] used them if I knew about them.
- Have not had a chance to explore them yet, but am keen to.
- If I understood podcasts I would use them and recommend them to peers.
- Although I didn’t listen to any podcasts this semester, I certainly will be next semester.
- I’m going to listen to them next semester.
- From what I hear, it sounds like a useful technology.
- I don’t use them, mostly because I forgot they were there and I’m not sure how to use them. I would like to though.
- Even though I don’t listen to them, I think they can be beneficial.
- I have not listened to them yet! I think it’s a very good idea ‘cos I learn better through sound.

Without doubt, one of the most significant benefits that students noted about using podcasts was the ability to revise unit material in their own time at their own pace.
However, although the researchers’ intentions in this study were to enable students to have opportunities for reflection, the students largely viewed podcasts as being useful for revision rather than reflection. The following comments reflect the students’ perceptions of the value of podcasts:

Podcasts are good to recap.
I only used the podcast once, but having them available meant I was able to get clarification on any issues that were arising throughout the assignment.
I think the lecture podcasts are quite helpful as even if you go to the lecture then you can go back over and listen to anything you missed or write any extra notes.
I think it’s a great idea you had podcasts of previous students for the assignment.
Podcasts are useful tools for refreshing what you have learnt to consolidate your learning.
Good to be able to relisten to lectures.
Great for revising.
I find it valuable to listen to podcasts of lectures as it is difficult to absorb all that is said in a lecture.
I use podcasts for exam revision – it’s always helpful.

As well as recognising the benefits of podcasts for reflection and revision, the students also noted flexibility as an advantage of using podcasts for teaching and learning purposes.

With hideous time issues, I can download the podcast and listen to it in my car on the way to work, or when I was off uni with the flu, I listened to lectures and podcasts in bed.
I think it’s great for those who have children as it’s hard for them to attend all lectures. However, at times, it is frustrating when people are lazy and do not come to lectures because they can listen to them online.
Being a full time student and mum of three, podcasts have been extremely beneficial for times I have been unable to attend lectures due to priorities of children.

Although it was not a major theme to emerge from the students’ comments about podcasts, some students’ comments linked podcasts to attendance issues. Although the podcasts accessed, created and/or broadcast during the study did not only include lecture material, the students’ comments which related to attendance tended to mention attendance. These comments included references to how podcasts could be used by students who could not attend lectures regularly. However, many of these comments were coloured by either a mixed or a disapproving attitude to this use of podcasts which may indicate that lecture podcasts were not necessarily seen as a valid learning alternative by these students:

I think podcasts are great for those who have children or if you have accidentally slept in. However, it can make it too easy for those who are lazy.
Good as a backup to the lecture but not good as a replacement for actually attending and participating.
When asked about how podcasts could be used in the future in the course, students offered a range of suggestions. As well as including the types of podcasts they had recently accessed specifically for their units of study, they also included other suggestions for how podcasts could be integrated into future units. Their ideas about how podcasts could be used in the future include the following suggestions:

- Lectures; assignment advice; interviews with students; FAQs; instructions on how to make websites; tips and hints for completing the unit; ideas from previous students; articles and readings; speeches; instructions for software use; important tutes; linked ideas for further reading; guest lectures; demonstrations; explanations of difficult maths problems; everything!

So, in relation to the actual research questions which drove the design and implementation of this study, the results of this study provided an indication of the students’ understanding and use of podcasts based on a limited sample. Further, the research provided us with some insights about the students’ understanding of the value-adding nature of podcasts in relation to learning. Most of the students in both the first and second year of the course did understand the nature of podcasts and were interested in them. In fact, even the students who had not yet accessed or listened to podcasts were interesting in using them in the future. Although the flexibility of podcasting was attractive to students, their positive attitude to the value of podcasts was viewed as being largely related to their use in terms of revision rather than reflection. In general, the students in our sample primarily accessed and listened to podcasts on their computers with some also using mobile players. There appeared to be little difference between the different year levels except for the fact that the first year students taking part in the research were, at the time of data collection, enrolled in an ICT-related unit during the period of this study which may have influenced the ease with which they adapted to podcasting technology. Overall, the participants in the study (both teachers and students) perceived podcasts as being useful for learning.

**Implications**

An analysis of the data gathered from this study so far indicates that podcasts are seen as being useful technological tools to enhance students’ learning at the higher education level in the three cases focused upon in this paper. Both the lecturers and the students involved in each case perceived podcasts to be useful in general. However, the students in each case demonstrated a heightened impression of the effectiveness of podcasts if they were designed to specifically suit their unit of study. For example, although students found podcasts about mathematics education topics useful to listen to for their own development as pre-service teachers, they found podcasts which were created specifically for their current unit of study to be even more relevant and valuable. Additionally, many of the students in the study perceived podcasts as being more valuable for revision purposes than their lecturers, who mainly focused more on the use of podcasts for reflection purposes.

This tendency may be indicative of diverging beliefs about teaching and learning, where some students, especially in the early phases of university education, may hold a view of teaching and learning processes that are based on a transmission model of education, rather than a constructivist model that would require deep reflection on the
part of students. Maybe students in the latter years of the course may begin to appreciate the use of podcasts for reflection as their educational beliefs become more complex. Nevertheless, a substantial number of students indicated great interest in the idea of using podcasts and communicated their intentions to do so when enrolled in future units of study.

In terms of patterns of podcast use, the findings from this study correlate with those of other early studies in the field which have investigated the methods used to access podcasts. This study suggests that, despite the availability of various types of mobile playing devices (such as MP3 players and iPods), most students listen to podcasts using a desktop or laptop computer. Therefore, students who do not own one of these mobile players are not disadvantaged when it comes to listening to podcasts.

Although the issue of how the use of podcasts could impact on student attendance at lectures and tutorials was not a goal of this study, many of the students who participated in the study indicated that having podcast material available would provide them with the motivation to revise the material in audio format if they missed a lecture. However, there was not a strong indication from an analysis of the data gathered during this study that having online access to podcasts would necessarily impact negatively on student attendance at on-campus classes and lectures. Maag’s results in this area are similar: “And, much to a critic’s chagrin, the majority of the students reported the availability of the podcasts had no significant effect on class attendance” (2006, p. 490).

Lastly, like other studies that have begun preliminary investigations into student perceptions of the value of podcasts, the findings from this study correlate with those of other recent similar studies. For example, Maag (2006, p. 487) reports that 32.4% of students in her study selected the “very valuable” option when asked “How valuable did you find the podcast lectures posted on the instructor’s website?”, 14.7% replied “somewhat valuable,” while 52.9% responded “not accessing” the podcast lectures. Similarly, like the results of this study, Maag’s (2006, p. 487) results encouraged the lecturers with continuing to use podcasts in their teaching: “Overall, student satisfaction was very favourable and qualitative comments at the end of the course encouraged the instructor to use podcast technology during the subsequent semesters.” To compare with the students’ perceptions about the value of podcasts, our small study also indicates that the lecturers involved in this study held similarly positive impressions about the use of podcasts in association with student learning. It appears that students really are tuning in to podcasts to assist their university studies, as are their lecturers.

**Conclusion**

Specifically, this research has attempted to use podcasts in a higher education context beyond the “talking head”. The purpose of the study was not just to provide audio recordings of on-campus lecture presentations. Instead, the researchers involved in the project attempted to explore ways in which university students and teachers could work together to create audio resources that would enhance student learning and encourage student reflection about their learning.
In more general terms, this study aimed to contribute to the new branch of research which focuses on the use of podcasting technologies in education. Although some studies about podcasting are beginning to emerge (Cebeci & Tekdal, 2006; Chan et al., 2006; Leaver, 2006; Weiss, 2007), more are required to evaluate the overall value of using podcasts to enhance students’ learning in university contexts.

In conclusion, our preliminary research into the perceived value of podcasts for university learning and teaching has left us with just as many questions as it has offered answers:

- How can podcasts be effectively integrated into university courses of study to enhance student learning?
- What are the qualities of a “good” podcast?
- How can university educators design innovative ways in which to incorporate the use, access and creation of podcasts into student assessment tasks?
- Can university students be expected to be involved in creating, using or accessing podcasts if the task is not allocated assessment marks?
- How can university educators and university students extend the traditional use of audio files (i.e., listening to recordings of lectures) into their everyday teaching and learning processes?

These and other questions that we haven’t yet considered will surely be answered by future podcast researchers.

Stay tuned.

References


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Maria Northcote is a lecturer with the School of Education at Edith Cowan University. Currently, she is working with teacher education students who are preparing to become teachers in Kindergarten through to Year 7 classrooms. Her main teaching interests include assessment, planning, professional documentation and the use of computerised technology for learning. With a background in instructional design, Maria’s university teaching incorporates elements of online and offline learning technologies. Her recently completed PhD study focused on the educational beliefs held by teachers and students in higher education contexts. Maria was awarded a Vice Chancellor’s Teaching Award in 2007.

Linda Marshall began her career as a primary teacher. She has had wide experience as a demonstration teacher, a mathematics consultant in WA District Education Offices, and in the WA Education Department Central Office, where she was one of the writers of the 1989 WA Primary Mathematics Syllabus, and later a
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Eva Dobozy is a lecturer in the School of Education at Edith Cowan University, where she lectures in education studies and values education curriculum to undergraduate students. Prior to her appointment at Edith Cowan University, Eva was a visiting scholar at the Paedagogische Hochschule in Solothurn, Switzerland. Eva is an experienced early childhood/primary teacher and teacher educator. She has been involved in education for over twenty years. Her passion for innovative teaching practices is well documented. She acted as a consultant to the Swiss National Early Childhood Education Association (Verband Kindergartnerinnen Schweiz KgCH) and last year received the prestigious Early Career Award from the Western Australian Institute for Educational Research.

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Developing quality teaching through authentic assessment and school-university partnerships

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Abstract

This paper examines the development of authentic assessment tasks focusing on the dimensions of quality teaching for pre-service teachers. Assessment tasks designed for students to continually put teaching skills into practice are essential to develop quality teachers. The process involved student and teacher consultation and the establishment of additional school-university partnerships. The purpose of the research was to review the school-university partnerships and to determine whether these links have been beneficial to the students and the schools involved. Forty physical and health education students in their final year of pre-service training were surveyed (questionnaire and interviews) along with personnel from schools and school-related organisations. Results indicated that the links have been well established and that there have been mutual benefits. Students found the tasks and experiences meaningful and useful for their future teaching careers whilst participating personnel indicated a desire to continue the partnerships. Timetabling issues, transport, the need for coordination and guidelines for schools and tertiary institutions to follow when establishing partnerships are discussed.

Introduction

Traditionally, pre-service teachers gain their teaching experience through practicum sessions in schools, putting the theory learnt at university into practice in the classroom. Much has been written about school-university partnerships and the role that they play in providing experience for pre-service teachers and developing their teaching skills. However, there are many more opportunities for pre-service teachers to experience working partnerships with schools and other workplaces. Tertiary institutions are an excellent resource that can be accessed in order to assist the development of many sporting programs. The following are examples of the links that have been established between a number of schools and community sporting associations interested in the promotion of physical activity, games and sport and a university located in NSW, Australia. A number of ‘informal’ partnerships with the university, schools and sporting organisations have been consolidated over the years to form strong working relationships. Whilst many programs within the university have utilised the skills and experience of external personnel, this paper will focus on the utilisation of these partnerships with undergraduate physical and health education (PEH) students in relation to enhancing quality teaching through authentic assessment.
Developing partnerships

It has long been argued that there can be much better utilisation of resources to achieve common goals in physical and coach education through collaborative partnerships (Graham, 1988; Fiorentino, Kowalski & Barrette, 1993). There are several success factors that can be used by organisations building a partnership with a university. The first is communicating a shared vision for success (Meister, 2003). When managing education through strategic relationships with universities, existing infrastructure should be utilised. Experiences need to be relevant, flexible and be designed by all stakeholders. At the start of the partnership, all key stakeholders should meet to assign roles and responsibilities with a champion (someone that is keen and will take a major role in coordination of the initiative) from both the association and the university. The next goal should then be to mutually devise a recruitment and marketing program to communicate the benefits of the partnership (Meister, 2003).

The Royal Life Saving Society Australia (RLSSA) has established links to the university through number of university physical and health education staff who are instructors and examiners for the RLSSA. The RLSSA Bronze medallion and Austswim instructor’s award are part of undergraduate programs for PEH students. Similar partnerships have been established with Surf Life Saving Australia, NSW Surfing, Professional Association of Diving Instructors (PADI) and Aquatic Rescue Management (a private accreditation agency) from mutual contacts that have resulted in sharing of resources to provide a variety of water sport accreditations and work experience opportunities for students.

Other sporting associations that the university has developed ongoing partnerships with include Australian Sports Commission, National Rugby League, Australian Rugby Union, Australian Touch, Lacrosse NSW, Triathlon NSW, Cricket NSW and Hockey NSW. Once again, initial contact was through university staff involved in these associations. The partnerships have been sustained through ongoing relationships with sporting association personnel including past and present students who have taken up roles within the associations. These partnerships provide students access to external experts who work with university staff and students to offer a variety of accreditation and work experience opportunities.

Additional partnerships have been developed with other associations and promoters of physical activity to provide sport-related work experiences for students. For example, the Active After School Communities (AASC) program coordinators have developed a relationship with the university in terms of training and employing students. AASC is a national program that is part of the Australian Commonwealth Government’s $116 million Building a Healthy, Active Australia package. It provides primary aged school children with access to free, structured physical activity programs in the after school time slot of 3.00 pm to 5.30 pm. The program is designed to engage traditionally non-active children in physical activity and to build pathways with local community organisations, including sporting clubs (ASC, 2005). This organisation emphasises ‘Playing for life’ approach to coaching that uses games as the focus of development. The ‘Playing for life’ approach is based on the Teaching Games for Understanding (TGfU) model that maximises participation and learning. By concentrating on game-based activities, children are able to ‘develop skills within a realistic and enjoyable context, rather than
practising them in isolation and from a technical perspective and become maximally engaged in dynamic game-based activities that use a fun approach to developing a range of motor skills’ (ASC, 2005, p.53).

Many students have also developed strong relationships with individual schools and have the opportunity to assist in the organisation and implementation of sports carnivals and coaching various sporting teams. The university has developed a formal partnership in this regard with the local Catholic Education Office Sports Organiser. A list of the year’s sporting events is provided to students who then select events at which they can assist, depending on their interest and experience. Thus, there have been a number of partnerships established with schools and other organisations that can provide teaching experiences for these pre-service teachers in addition to their traditional practicum periods.

A combination of factors must be developed to form effective partnerships. Hart (2005) emphasises the importance of satisfying the needs and interests of all stakeholders for effective partnerships. The relationship of the partners involved is crucial to the success of the partnership. Hart (2005) outlines a number of characteristics that will develop and sustain partnerships. These include: involving all stakeholders in planning; determining roles and responsibilities for all participants; creating relevant opportunities that foster mutual learning; and continual evaluation to improve the partnership. These factors have been addressed in the development of partnerships with the university in relation to how the dimensions of quality teaching can be enhanced.

**Quality teaching**

Most research on quality teaching (QT) has focused on classroom lessons with limited research on practical classes, particularly on the teaching of games. Stirling and Bell (2002) explored effective teaching and quality physical education, placing emphasis on the process of teaching and learning as well as the outcomes. They suggested that quality teaching only occurs when relevant teaching strategies combine with a quality teaching pedagogy. The Department for Education and Skills (2004) in England highlights the importance of inclusiveness in physical education with an emphasis on teachers having a deep knowledge and understanding of effective teaching strategies with a focus on student engagement and enjoyment.

*Quality teaching in NSW public schools* (NSW Department of Education and Training, 2003) proposes a model of pedagogy that contains three dimensions for quality teaching and learning. The model was developed by Dr James Ladwig and Professor Jennifer Gore from the University of Newcastle in consultation with and on behalf of the NSW DET. It is based on research of authentic pedagogy (Newmann et al, 1996) and productive pedagogies (QSRLS, 2001). The three dimensions of the model are:

1. **Intellectual quality** refers to pedagogy focused on producing deep understanding of important, substantive concepts, skills and ideas. Such pedagogy treats
knowledge as something that requires active construction and requires students to
engage in higher-order thinking and to communicate substantively about what
they are learning. Research has demonstrated that pedagogy focusing on high
levels of intellectual quality benefits students, whether they are high or low
achievers, from backgrounds typically identified as educationally disadvantaged
or gifted and talented, or students identified with special needs.

2. **Quality learning environment** refers to pedagogy that creates classrooms where
students and teachers work productively in an environment clearly focused on
learning. Such pedagogy sets high and explicit expectations and develops positive
relationships between teachers and students among students. Research into
effective teaching, authentic and productive pedagogy, teachers’ expectations,
students’ time-on task and student engagement has consistently demonstrated that
classrooms in which there is a strong, positive and supportive environment
produce improved student outcomes.

3. **Significance** refers to pedagogy that helps make learning meaningful and
important to students. Such pedagogy draws clear connections with students’
prior knowledge and identities, with contexts outside the classroom, and with
multiple ways of knowing or cultural perspectives. That is, pedagogy that
promotes intellectual quality and produces a quality learning environment also
requires some means by which teachers link the work of their students to
personal, social and cultural contexts (NSW DET, 2003, p.9).

While intellectual quality is central, all three dimensions are essential for improved
student outcomes. Each of the three dimensions of pedagogy can be described in terms of
a number of elements. These elements draw from research that links quality pedagogy to
improved student outcomes. Elements are observable characteristics of pedagogy. These
are summarised in Table 1 below:

<table>
<thead>
<tr>
<th>Intellectual Quality</th>
<th>Quality learning environment</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep knowledge</td>
<td>Explicit quality criteria</td>
<td>Background knowledge</td>
</tr>
<tr>
<td>Deep understanding</td>
<td>Engagement</td>
<td>Cultural knowledge</td>
</tr>
<tr>
<td>Problematic knowledge</td>
<td>High expectations</td>
<td>Knowledge integration</td>
</tr>
<tr>
<td>Higher-order thinking</td>
<td>Social support</td>
<td>Inclusivity</td>
</tr>
<tr>
<td>Metalanguage</td>
<td>Students’ self-regulation</td>
<td>Connectedness</td>
</tr>
<tr>
<td>Substantive communication</td>
<td>Student direction</td>
<td>Narrative</td>
</tr>
</tbody>
</table>

Table 1. The dimensions and elements of the NSW model of pedagogy (NSW DET, 2003, p.9)

In working with the model there are four key questions:
1. What do we want students to learn?
2. Why does this learning matter?
3. What do we want the students to do?
4. How well do we expect them to do it?
Obviously, the focus of the model is to increase the quality of education and the best way to do this is through pedagogy, which has been shown to have most influence on quality of learning (NSW DET, 2003). The model is designed to promote improved student learning outcomes, cater for a wide variety of individual differences and to deliver equitable student outcomes.

The majority of research that does link quality teaching and games tends to focus on Teaching Games for Understanding (TGfU) (Pearson, Webb & McKeen, 2006). Elements associated with the quality teaching dimensions such as deep understanding, higher order thinking, student direction and inclusivity can be difficult for teachers to implement into practical lessons. When effectively implemented, TGfU is one strategy that allows teachers to address these elements when teaching games in physical education and sport. TGfU places an emphasis on the play, where tactical and strategic problems are posed in a modified game environment, ultimately drawing upon students to make decisions. Research (Crespo, Reid & Miley, 2004; Harrison & Blakemoore, 2004; Light, 2003; Turner & Martinek, 1999; Werner et al, 1996) indicates the strengths of the TGfU approach and the desirability of it as one of the major approaches to the quality teaching of games. Light (2002) highlighted the effectiveness of TGfU for engagement and cognitive learning. Higher order thinking occurs from questioning and discussion about tactics and strategies and also ‘through the intelligent movements of the body during games’ (Light, 2002, p.23). Cognitive development through decision-making and tactical exploration are combined with skill development within modified games to provide meaningful contexts. Light (2002) suggests that it is difficult for some physical educators to address cognition in games. Teaching games for understanding is one pedagogical approach that may assist teachers and coaches to address this issue. Elements of TGfU have only recently been written into school syllabi and it is an important approach for physical and health pre-service teachers to utilise to effectively promote physical activity.

Pearson et al (2006) developed a matrix showing the relationship between the QT model and TGfU (see Table 3).

<table>
<thead>
<tr>
<th>Quality teaching dimensions</th>
<th>TGfU components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intellectual quality</strong></td>
<td>Critical thinking</td>
</tr>
<tr>
<td>Deep knowledge</td>
<td>Problem solving</td>
</tr>
<tr>
<td>Deep understanding</td>
<td>Focus on tactics</td>
</tr>
<tr>
<td>Problematic knowledge</td>
<td>Decision making</td>
</tr>
<tr>
<td>Higher-order thinking</td>
<td>Deep knowledge</td>
</tr>
<tr>
<td>Metalanguage</td>
<td>Deep understanding</td>
</tr>
<tr>
<td>Substantive communication</td>
<td>Communication</td>
</tr>
<tr>
<td><strong>Quality learning environment</strong></td>
<td>Small-sided approach</td>
</tr>
<tr>
<td>Explicit quality criteria</td>
<td>Large-sided approach</td>
</tr>
<tr>
<td>Engagement</td>
<td>Games for outcomes</td>
</tr>
<tr>
<td>High expectations</td>
<td>Student centred, self directed</td>
</tr>
<tr>
<td>Social support</td>
<td>Actively engaged (cognitively and physically)</td>
</tr>
<tr>
<td>Students’ self-regulation</td>
<td>Modification of games</td>
</tr>
<tr>
<td>Student direction</td>
<td></td>
</tr>
</tbody>
</table>
Table 2. Matrix linking quality teaching dimensions and TGfU pedagogy (Pearson, Webb & McKeen, 2006)

<table>
<thead>
<tr>
<th>Significance</th>
<th>Context of learning – tactics, rules, technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background knowledge</td>
<td>Caters for ranging abilities</td>
</tr>
<tr>
<td>Cultural knowledge</td>
<td>Gradual progressions</td>
</tr>
<tr>
<td>Knowledge integration</td>
<td>Concepts transferred to and from other game situations</td>
</tr>
<tr>
<td>Inclusivity</td>
<td>Game appreciation</td>
</tr>
<tr>
<td>Connectedness</td>
<td>Ownership of ideas</td>
</tr>
<tr>
<td>Narrative</td>
<td></td>
</tr>
</tbody>
</table>

Intellectual quality can be achieved through TGfU by effective questioning that promotes reflective thinking, decision-making and communication. The gradual progressions involved in TGfU pedagogy benefit all learners, whether they are high or low achievers, as the games and questions can be tailored to suit. Teaching games for understanding requires the learner to make the connections that lead to successful outcomes. Quality learning environment is supported through TGfU by providing opportunities to maximise students’ time on task and engagement. Students and teachers/coaches work together to solve problems and develop tactical solutions. Team/group work, collaboration and peer learning are all encouraged. There is a focus on inclusion and development of not only skills and tactics but also game socialisation. Significance is achieved through TGfU in that the skills, knowledge and understanding developed can be readily transferred to other games and situations. Each aspect of the game and associated skills and tactics are put into context to become more meaningful for the learner.

If the goal is to make students think, the TGfU approach to teaching games is far more appropriate than skill-based. With the tactical approach, players learn the structure of the content taught and the relationships between the concepts that comprise it and are able to transfer these concepts to other situations (Butler, 1996). TGfU allows students to understand how to use the skills they are acquiring and why they need these skills to play the game. The TGfU approach challenges teachers and coaches to understand the deep intellectual structures of playing and learning to teach a game effectively (Hopper, 2002).

The QT model (DET, 2003) and Personal Development, Health and Physical Education syllabus outcomes (Board of Studies, 2003) highlight the need for students to not only participate, but also to be cognitively involved in games. Quality teaching is about what students learn, not just about what they do. Many teachers still view a successful physical education lesson as one that has a high participation rate, is enjoyable and has minimal misbehaviour (Webb, Pearson & McKeen, 2006). However, physical education teachers must also provide opportunities for students to gain knowledge. TGfU is an approach that provides teachers to engage students in learning. The monitoring of standards and the quality of teaching performance has become very apparent in NSW public schools and requires teachers to adopt effective teaching strategies. It is essential that quality physical education has student learning as a central consideration and focuses on developing knowledge for life-long physical activity (Hickson, 2003).
Authentic assessment

Authentic assessment aims to evaluate students’ abilities in ‘real world’ contexts, demonstrating meaningful application of essential knowledge and skills. Hall (2004) highlights the importance of authentic assessment in pre-service teacher education suggesting that students’ knowledge and skills can be evaluated through authentic assessment but are also developed through the assessment process.

The assessment example cited in this paper is an assessment task given to third/fourth year Bachelor of Education pre-service physical and health education students at an Australian university. Sports Studies is an elective subject that provides students with opportunities to gain additional coaching accreditations in a sport/recreational activity of their choice. There is also opportunity for students to undertake work experience in sports related areas. These opportunities allow students to pursue studies in their area of interest and provide them with increased employment opportunities. The subject also focuses on the implementation of the TGfU approach to teaching games.

The task is a work placement (a minimum of five days in a sports related work environment) as opposed to teaching a class on practicum. The assessment involves individual contracts between the student, lecturer and workplace. Students are evaluated on satisfactory completion of the workplace experience indicated by documentation provided by the workplace supervisor and the completion of a resource folder for the work experience containing:

- An overview of the work that students have completed
- Times and dates that students attended (this needs to be signed off by the coordinator/employer with a contact number provided for verification)
- Application of TGfU principles demonstrated in the experience
- An evaluation and analysis of the work – its aims and objectives, structure, people involved, employment opportunities and any other relevant comments
- Copies of any relevant materials or resources utilised in the work
- An extended bibliography of publications relevant to the workplace or sport/activity being promoted.

The established partnerships with external associations and sporting groups accommodate this process. This assessment task is planned to be current, relevant and meaningful for all students and one that is useful for their future careers.

Traditionally, the main, if not only, university partners for teacher education students have been schools. The majority of teacher education students begin their careers in schools and much of their training needs to be school-related. However, there has been an increase in recent years of physical and health education students from the university on completion of their degree accepting positions in sport-related careers other than teaching in schools. As such, it was deemed appropriate to increase work related experiences and opportunities for the students in addition to practice teaching in schools. Job advertisements in the Australian sport sector continue to grow with almost 2000 positions
advertised in 2004, an increase of 23% compared to 2003. The data shows the market continues to enjoy strong growth with the number of jobs in sport at its highest level in eight years (Sportspeople, 2004). Coaching and instructor jobs topped the survey, while community sport, leisure and fitness centres and the Government sector continued to lead the market in terms of employment opportunities (Sportspeople, 2004). ‘The 2006 Melbourne Commonwealth Games also made a positive impact, with 150 jobs advertised, while initiatives such as the Active After-school Communities (AASC) program played a significant role in the jobs market with 131 appointments across Australia in 2004’ (Sportspeople, 2004, p.1).

The establishment of partnerships with schools and other associations in relation to undergraduate physical and health education students has provided the opportunity to enhance quality teaching through authentic assessment. Traditional practicum for pre-service teachers is accompanied by high costs that threaten its continuing success. Exploring other partnerships and alternatives that can provide teaching experiences without the associated costs may become a necessity for teacher training institutions.

**Description of the study**

In 2006, forty physical and health education students (18 male, 22 female, aged 20-22 years) from the university undertook an elective subject that required them to take part in a variety of coaching, refereeing and sport-related accreditations and other sport-related work experiences. Sports Studies is an elective subject offered to third and fourth year undergraduate students. Some of the outcomes for this subject require students to demonstrate a variety of skills in selected sports areas, analyse pedagogical issues in coaching/refereeing/administration, apply appropriate teaching techniques to certain sports, and develop an understanding of physical and recreational benefits, risk assessment and safety precautions related to sport. In addition to the 40 students, six personnel from different partnerships were surveyed. These partnerships included the Australian Sports Commission (Active After School Communities) Rugby League, Touch, Lacrosse, RLSSA and the local Catholic Education Office.

Part of assessment for this subject required students to complete the work experience task as outlined in the previous section. This task was designed to be authentic assessment in that the students would have the opportunity to perform teaching skills in schools and other settings. They had to evaluate and analyse their experience as well as being evaluated on their own performance.

The questionnaire and interview questions focused firstly on the partnerships that had developed between the associations and the university – the positives and negatives. For example, students and school or sporting association personnel were asked to describe the advantages and disadvantages of having students involved in the work experience that was conducted. Secondly, the assessment task itself was reflected on and evaluated by the students and partnership personnel.
Results

A summary of the results from the survey is shown in Tables 3, 4 and 5. Tables 3 and 4 relate to responses in regards to the partnerships that have been developed. Table 5 relates to the authentic assessment task that was developed.

Responses on the partnerships:

<table>
<thead>
<tr>
<th></th>
<th>Participant responses (number out of 40)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive</strong></td>
<td>• Partnership personnel took into consideration prior learning (32)</td>
</tr>
<tr>
<td></td>
<td>• Participating in work experience where most participants have similar backgrounds (21)</td>
</tr>
<tr>
<td></td>
<td>• On-site experience - easier for transport arrangements (24)</td>
</tr>
<tr>
<td></td>
<td>• Choice in selection of work experience (38)</td>
</tr>
<tr>
<td></td>
<td>• Credit as part fulfillment of subject assessment requirements (31)</td>
</tr>
<tr>
<td></td>
<td>• Opportunity to ‘get foot in the door’ with potential employers (23)</td>
</tr>
<tr>
<td><strong>Negative</strong></td>
<td>• Do not get to mix with others from different backgrounds and experiences (11)</td>
</tr>
<tr>
<td></td>
<td>• Takes a while to get confirmation of work experience (paperwork) (14)</td>
</tr>
<tr>
<td></td>
<td>• There is inequity in expectations and involvement of students from different partnership organisations (15)</td>
</tr>
</tbody>
</table>

Table 3. Summary of participant responses

<table>
<thead>
<tr>
<th></th>
<th>Provider responses (number out of 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive</strong></td>
<td>• Excellent venue and facilities able to be utilised at the university (5)</td>
</tr>
<tr>
<td></td>
<td>• Assistance from lecturers/students in administration (6)</td>
</tr>
<tr>
<td></td>
<td>• Good foundation of knowledge of participating students (5)</td>
</tr>
<tr>
<td></td>
<td>• Opportunity to access students who may not have had an existing association with the sport or association (4)</td>
</tr>
<tr>
<td></td>
<td>• Reputation of the university students (4)</td>
</tr>
<tr>
<td></td>
<td>• Potential for developing/selecting future employees (6)</td>
</tr>
<tr>
<td><strong>Negative</strong></td>
<td>• Linking in with university timetable (5)</td>
</tr>
<tr>
<td></td>
<td>• Parking in university grounds can be a problem, particularly with a lot of equipment (6)</td>
</tr>
</tbody>
</table>
Table 4. Summary of work experience provider responses

The results indicated that the benefits of the partnerships far outweighed any negatives for both the students and the sporting associations. Students can follow their sporting interests and gain valuable sport related work experience as part of their university qualification whilst schools and sporting organisations gain access to potential coaches with knowledge and experience of teaching and coaching games. Sports organisations and educational authorities recognise the benefits of qualified coaches teaching in the school system. A number of sporting associations were able to utilise the university campus and facilities for conducting programs in which the pre-service teachers were involved. This enabled some students the opportunity of not having to find alternative travel arrangements to attend their work experience.

There appears to be great variation in the roles and expectations of students from different partnership organisations. Consistency is enhanced through fulfilment of all outcomes of the assessment task that requires students to compile a resource folder including an overview of the work completed, times and dates that students attended, application of TGfU principles and an evaluation and analysis of the work – its aims and objectives, structure, people involved, employment opportunities and any other relevant comments.

Recommendations from the study for sporting organisations to develop and sustain partnerships with tertiary institutions are summarised as follows:

- establish a contact from the university (collaborative planning and commitment)
- be flexible with the expectations and demands of the participants so as to fit in with university student goals and assessment (eg. acknowledge prior learning, timetable restrictions)
- utilisation of mutual/existing resources/facilities (if possible)
- involve staff and students in the administration and delivery of the program.

Responses on the assessment task:

<table>
<thead>
<tr>
<th>Question</th>
<th>Responses (number out of 40)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>1. The task was appropriate for the subject</td>
<td>30 8 1 1 0</td>
</tr>
<tr>
<td>2. The task provided me with a valuable experience</td>
<td>32 6 1 1 0</td>
</tr>
<tr>
<td>3. I enjoyed the task</td>
<td>28 6 1 1 0</td>
</tr>
<tr>
<td>4. I was able to implement TGfU principles</td>
<td>21 12 4 3 0</td>
</tr>
<tr>
<td>5. The task reinforced QT dimensions</td>
<td>20 13 4 4 0</td>
</tr>
</tbody>
</table>

Table 5. Student responses on the assessment task

Overall, the authentic assessment task that involved work experience with the partnerships and which incorporated TGfU to enhance quality teaching was viewed by
students very positively. In evaluating the task, 95% of students stated that the task was appropriate and valuable for their teaching. Most students enjoyed the task, although there were comments from some that the practical work experience was more beneficial than the completion of the resource folder. The majority of students indicated that they were able to incorporate TGfU principles into their experience and that the task reinforced the dimensions of quality teaching. Twenty (50%) of the students that completed the assessment task gained continuing part-time employment from the partnership organisations.

Comments from the partnership personnel were quite specific to the type of work experience involved but were very positive and they worked with the students to achieve the outcomes of the set task. The resource folders submitted were all of professional standard and contained useful information for students’ future teaching.

**Conclusions**

The university will continue with existing partnerships by working with schools and sporting organisations to improve the quality of programs. New partnerships will be sought and developed to offer greater variety of opportunities for students by exploring student and partnership needs. Ultimately, the long-term success of such partnerships is dependent on the on-going building of relationships between all key stakeholder groups. By working together, more can be achieved.

Authentic assessment tasks, such as described in this paper, provide pre-service teachers with opportunities to develop teaching skills. The TGfU principles incorporated in the program have shown to be one way of demonstrating the dimensions of quality teaching. Whilst TGfU is not the only pedagogical model for teaching games, it is most certainly one that can be used effectively to achieve student outcomes by addressing the intellectual quality, quality learning environment and significance dimensions of the quality teaching model.

Many sporting authorities (for example, Australian Sports Commission, Australian Touch Association, Australian Football Federation, Australian Rugby Union), universities and state education bodies have promoted the TGfU approach via professional development and accreditation courses over the last decade. Teaching and coaching resources have been developed and continually updated. A number of tertiary institutions across the country involved in physical education and sports coaching have incorporated TGfU concepts into their curricula. However, it has only been recently that the concept of TGfU has been written into secondary school syllabus documents in response to the Quality Teaching model. In 2005, a new *Personal Development, Health and Physical Education (PDHPE) Years 7–10 Syllabus* (Board of Studies, 2003) was implemented in NSW secondary schools. One area that has undergone major changes within the syllabus has been that of the teaching of games, with the move towards a TGfU framework. This change has implications for practicing teachers in relation to both the content and teaching strategies traditionally utilised in the teaching of games.
Involvement of pre-service PEH teachers in assessment tasks as outlined in this paper is one way of providing them with authentic experiences in this area. As teachers we need to be creative, flexible and demonstrate quality teaching. Partnerships between schools and other organisations with tertiary institutions along with authentic assessment provide opportunities to develop such processes. Further partnerships need to be explored to provide all pre-service teachers continuing experiences in schools and other settings.

References


The Principal’s Role in Supporting Early Career Teachers to be Successful

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(with grateful acknowledgment of the participants in this research: Justin Bond, Kathryn Bruggemann, Andrew George, Tina Gladigau, Pam McRobbie, Terena Pope, Steve Portlock, Karen Simmons, Melissa Thomas, Sue Toone and Teresa White)

Abstract

It is widely agreed that teacher education is a career long proposition. Yet in Australia there has been little attention given to the quality of education provided for teachers in the first five years of teaching. In fact until recently there has been little or no systemic support or professional development for early career teachers. Even the recent advent in some states of a variety of mentoring and induction programs has, in the main, been targeted at first year teachers only. As we know, there is a high attrition rate of teachers in their first five years of teaching, but there are also many who stay the course to become highly successful professionals. This paper presents the findings from a South Australian study of six successful early career teachers (in their 3rd to 5th year of teaching) and their principals. It examines the impact of the principal’s role in the development of successful early career teaching in the absence of sustained quality teacher education for teachers in the first five years. The findings reveal what early career teachers and principals want from each other, and how school leaders contribute to the success and ongoing education of early career teachers.

Introduction

It has long been recognised that student success depends on the quality of the teaching provided and that teaching effectively is related to teacher education opportunities that extend well beyond graduation (Owen, 2007). Fieman-Nemser (2001) used the term ‘professional learning continuum’ to describe the differing needs and appropriate curriculum for teachers in different phases of their career (p. 1050). Yet in Australia there has been little attention given to the quality of education provided for teachers in the first five years of teaching. In fact until recently there has been little or no systemic support or professional development for early career teachers. Even the recent advent in some states of a variety of mentoring and induction programs has, in the main, been targeted at first year teachers only (see for example White and Hay, 2005; McCormack & Thomas, 2003; Sharp, 2007). Yet we know that in Australia and overseas attrition rates in the first five years of teaching are running as high as 30% (Australian Senate, 1996; Ramsey, 2000). Even more worrying are the findings of a
recent survey of beginning teachers by the Australian Education Union which indicated that 45.6% did not see themselves teaching in ten years time (AEU, 2006).

It is clear that there is a need for greater understanding of the needs of teachers in the first five years of teaching and the conditions that enable them to develop successfully and commit to the profession on a long-term basis. A great deal of attention has been paid to the need for formal and ongoing induction (see for example the recent report into teacher education by the House of Representatives Standing Committee on Education, 2007). Formal induction of beginning teachers is mandatory in some parts of the world (for example England, Scotland and much of the USA) and other parts of Australia (for example Queensland) but not in South Australia at the time of writing. Based on a review of current research Darling-Hammond (2003) concluded that, in addition to formal induction, other ‘key conditions include teacher participation in decision-making, strong and supportive instructional leadership from principals and collegial learning opportunities’ (p. 12). Wood (2005), having studied the induction of beginning teachers in five Californian schools, concurred that the role of the principal was central to effective induction and to whether they remained in teaching. She argued strongly for the need for further research into the principal’s role, claiming that the majority of articles written on the subject are policy based, rather than empirical studies.

One of the aims of the study reported here was to develop further insights about the conditions that support the development of successful early career teachers (ECTs). In this paper we focus particularly on the impact of the principal’s role in the absence of any system wide induction or ongoing teacher education. The findings reveal what early career teachers and principals want from each other, and how school leaders contribute to the success and ongoing education of early career teachers.

Methodology
We have been consultants to the DECS (Department of Education and Children’s Services) initiative Learning to Learn since 1999. It is an innovative South Australian project aimed at teacher learning and curriculum policy for the future around the central question of: ‘What does it mean to educate for a future that matters?’ To date, approximately 160 sites have been involved in the project in three successive phases. We chose to recruit our participants from Learning to Learn schools in the third phase of the Project because they have a particular focus on developing conditions that optimise teacher learning which means there is the potential to identify a range of supportive factors for early career teachers related to this focus. The participants were five principals and six teachers (two were from one school) whom the principals consider to be highly successful in their third to fifth years of teaching. Only two of the ECTs were in permanent positions. All had held a range of roles and five had taught in multiple sites. As leaders in Learning to Learn schools all of the principals saw themselves as ‘leaders of learning’. The five sites are in the northern and southern suburbs of Adelaide and all offer a range of teaching challenges in terms of moderate to high levels of complexity and diversity.

The study was qualitative in nature. According to Berg (2001), ‘quality refers to the what, how, when, and where of a thing – its essence and ambience’ (p. 3). Our aim was to achieve a rich and detailed representation of the ‘what, how, when and where’ of successful early career teaching. Data collection procedures comprised:
- an individual taped interview with each teacher (90 minutes);
- a follow up group interview with five of the teachers (120 minutes)
- an individual taped interview with each principal (45 minutes).

Interviews were transcribed and returned to participants for checking. A grounded theory approach was used in the analysis of the data whereby theory was inductively derived from the data (Bernard, 2000). Transcripts of the interviews were coded and categorised. As categories were developed they were reviewed to identify similarities, differences and other patterns that linked them. This process led to the themes that form the basis of this paper.

What do principals want from early career teachers?

In an earlier paper we presented findings about what the principals in this study perceived to be the characteristics of successful ECTs (Authors, 2006). It is reasonable to conclude that these characteristics represent the essence of what principals want from those new to the profession so the findings are summarised here.

The data revealed that principals value five key characteristics in ECTs. The first of these is having passion. Principals agreed that feeling passionate about teaching and learning, and related personal interests, was at the heart of perceptions of successful teaching. Statements such as, ‘I think that teachers need to have passion for what they are doing’ (P 5), typify the views of all participants. The second characteristic is being a proactive learner. Principals ascribed a high level of importance to the ongoing and active pursuit of learning as a characteristic of success in teaching at any level. One principal described it as ‘not necessarily knowing the answers but knowing the questions’ (P 5). Another characteristic principals wanted from ECTs was the ability to be interactive and collaborative. They perceived well developed interpersonal and communication skills as central to the success of the ECTs. Their commitment and ability to develop positive relationships with students, parents and caregivers, teaching colleagues and leaders was highlighted in all responses. Principals also wanted ECTs who are self managing. It would appear that from the earliest days the ECTs in this study demonstrated a level of self-management that enabled them to perform at a satisfactory level and manage the related stress. That is not to say that the principals expected the ECTs to operate without support, but they wanted them to have the ability to be organised and consistent. Finally, as would be expected, all participants acknowledged the importance of a focus on students and their learning as an essential characteristic of successful ECTs. Comments such as ‘the good ones really look at the students they have got … and then go from there’ (P 4) typified their views.

What do early career teachers want from school leaders and how are these needs met?

Needs identified by the ECTs fell into these four broad categories:

- opportunities for employment
- emotional support
- practical support
- opportunities for development
These categories are used in this section to describe their needs and the ways school leaders responded to them.

**Opportunities for employment**

In the uncertain employment conditions that have prevailed in primary teaching in Australia for the past decade the most pressing need for any ECT is to find employment. Not only is this an economic imperative but it is only through employment that they have opportunities to further develop their knowledge and skills through practice as well as having access to the learning experiences that arise through employment.

Even though these ECTs graduated more than three years ago, and were considered highly successful in their current settings, only two had attained permanent employment. In South Australia providing employment opportunities in government schools is largely the province of DECS, but it was evident that these ECTs also saw school principals as having a major role in providing such opportunities. To secure employment in their current schools they cited examples of registering with the school for Temporary Relief Teaching; visiting the principal having heard of a possible contract position (ECT 1); ‘pestering the leadership staff’ over a holiday period to secure a contract (ECT 2); and registering their interest with the principal in taking up future contracts in other year levels (ECT 3). One of those who secured permanent employment in a Coordinator’s position also consulted with the principal about whether she should reapply for it at the end of the initial three year term (ECT 2).

It was evident that all the principals in this study valued the contribution that ECTs could make to the school and the profession and so actively sought to recruit them. Their commitment to employing ECTs was evident in comments such as:

> Here particularly, we have been lucky enough in some cases to have open school choice, so it has been a bit of an opening for new teachers and we are lucky to have a really good balance of experienced teachers and new teachers. I love that balance – very critical. (P 3)

They cited a range of attributes they felt ECTs brought to their settings including their passion, energy and enthusiasm for students, their new ideas and skills and their different life experiences, views and values. They felt that by bringing these into a school ECTs provided a potential source of stimulation and challenge to their more experienced colleagues helping to ‘create that culture that accepts change’ (P 4).

All of the principals had been proactive in recruiting ECTs by ‘play (ing) the system’ (P 2). Both of the ECTs who had won permanent positions had already been employed in short term positions in their schools, while the four non permanent ECTs had all had a series of consecutive contracts at their current schools, largely due to the influence of school leaders. Although they had been able to create some opportunities for ECTs, they were also aware of the potentially debilitating effects of the lack of permanent employment opportunities, both for the ECT and the schools. Once they had ECTs working in their schools, they made sure they became familiar with their strengths so that they could put them into suitable vacancies that arose. For instance,
one principal reported that she was so impressed with the way the ECT worked with a student with Down Syndrome that she offered her the chance to work with the Special Needs class the following year (P 5).

**Emotional support**

All of the ECTs spoke about the emotional stresses that had accompanied their first forays into the profession, new roles and new schools. One put it this way:

> Worried that there wouldn’t be any support. Will I be able to do the job and did I know enough to actually teach the kids. Were my literacy and numeracy skills up to date and good enough to teach the children? It was worrisome. (ECT 4)

Although most had outside support networks they all spoke of the importance of a supportive culture within the school. In particular they needed to know that colleagues and school leaders valued them and were willing to listen and be accepting of the mistakes that come from inexperience. Several of them were able to cite instances of early career acquaintances who had left teaching or were considering leaving because of lack of support.

All the principals also understood that the first years of teaching place enormous demands on ECTs. One summarised these demands in this way:

> … the job can be overwhelming because you come out of college and all of a sudden it is just you, so sorting through even the administrative stuff can be quite daunting, let alone the volumes of SACSA, the reporting, the assessment strategies, the 30 sets of parents you have in a class. (P 5)

They were also aware that ECTs, especially those in non permanent positions, often are reluctant to ‘let the cracks show’ (P 4). They focused on providing a supportive culture – one in which ECTs’ emotional needs for encouragement, positive engagement and acceptance of mistakes and risk taking were met. This did not necessarily mean trying to develop a culture that was specifically focused on supporting ECTs, but one that was supportive of all staff:

> I think what we have done as a team is trying to develop and continue to develop a culture which is a learning culture that no matter what stage of your career that you are at we are here as learners in the best interests of the students. (P 5)

This comment encapsulates the intent of Learning to Learn which is to transform the learning culture for students and teachers in ways that enhance the learning opportunities for both. One of the supportive structures created in many of the schools was that of learning teams and buddying teachers for mutual support was another strategy used in some schools. One principal commented on the potential for reciprocal learning in such collaborations:

> (We) support them to build their confidence so that they are able to share the skills, knowledge and expertise that they have with others, but are also open to listen to the wisdom of some of the people in our sites. (P 1)
The principals also closely monitored the ECTs on their staffs to make sure they were not ‘drowning’, as one put it (P 4). They made sure that the ECTs knew they had an ‘open door’, visited them in their classrooms and initiated regular personal interaction with them. All principals emphasised the importance of feedback in supporting ECTs.

Follow up, follow up – don’t ever think it is OK because you haven’t heard from them because it would be great if they came to us but it doesn’t happen very often. It is up to us to be visible, dropping in all the time so they have got a chance to ask, to be listening and talking. (P 3)

Some also reminded other staff members of the importance of adjusting expectations to allow for ECTs’ inexperience, and also talked to the ECTs to help them understand the reasons behind the negative attitudes they sometimes encountered from other staff. One principal also stressed the importance of encouraging social interaction amongst the staff and emphasised positive acknowledgment and celebration as a part of the school culture. S/he did this through recording thank you messages in the day book, personal visits to classrooms, notes in pigeon holes and performance management meetings (P 5).

Practical Support

Most ECTs had experienced multiple placements and roles in their short careers. One critical need they identified was to be given thorough induction in any new site. Their experiences showed that this had been a ‘hit and miss’ affair, with formal induction by DECS only available to beginning teachers who achieved permanency, and some school leaders expecting them to ‘sink or swim’. As one said about her first placement, ‘I just got told to do it’ (ECT 3).

Although these ECTs had come to be considered highly successful in their current contexts, they all spoke about feelings of inadequacy in their first teaching experiences. Responses such as the one below indicated that no matter how successful they had been in pre-service practicums, they still found ‘going it alone’ in their own classrooms challenging and stressful:

I think the difference is weaning yourself off of your (practicum) mentor because you know that if something goes wrong in that classroom there is always that extra pair of eyes or extra hand to help you out, whereas when you are in your own classroom you are there by yourself… (ECT 3)

All had experienced some initial anxiety about their ability to provide a sound learning program for their students:

Every now and again you think ‘not sure if I’ve done that right’ but I think you get that with any job. Usually it is fine but I think it is still the thing ‘have I done it right?’ (ECT 4)
Even though this had been alleviated to some extent over time, they still valued release time and opportunities to observe other teachers and talk to colleagues and school leaders about good practice:

I have been exposed to observing different teachers here and seeing how they do things and the more you can get ideas off of other teachers and how they do it the better you are because you only learn from experience. (ECT 6)

It was important to these ECTs to have regular access to feedback from more experienced colleagues and school leaders as a source of reassurance and learning, as can be seen by this response:

You need to...be willing to take advice and other people’s opinions and don’t feel that they are criticising you but giving you constructive feedback. (ECT 1)

Other areas that were identified as needing early and ongoing support included student behaviour management and interactions with difficult parents. Several ECTs commented on the positive effects of having support from leadership in these areas.

At that time, it was on the spot and I had been told not to become confrontational with this person or not to be alone too much if things are getting heated. I reported it and let people know what had happened and they were supportive here – the counsellor at the time and (the principal) were supportive. (ECT 5)

Conversely, one ECT had been so distressed by the lack of support from leadership in these areas that s/he gave up a long-term country placement and returned to the city to apply for other positions.

The principals were all aware that ECTs do not commence teaching with knowledge and skills equivalent to those of more experienced teachers. One principal described it as experienced teachers having a ‘bigger grab-bag of tools with which to work’ (P 4). They also realised that each time teachers move into a new context they are faced with a complex array of unique factors and that this is especially daunting for those new to the profession. Hence they all provided comprehensive induction and ongoing support for new teachers in their schools. They also used the learning teams and buddying structures referred to in the previous section as a means of providing practical support for ECTs and to give them ‘a much greater chance of a greater say in a small group’ (P 2). One of the principals described such processes in the following way:

Initially when teachers come to us and we have a fairly lengthy induction process so we have an initial meeting then we have weekly meetings. We provide release for more experienced teachers to work with our less experienced teachers and that is at their request. We make sure they are buddied up with an experienced mentor, so those incidental questions they can ask without feeling embarrassed or they need to make any formal approach. We set up classrooms so there are lots of opportunities for collaboration. (P 5)
Principals reiterated the views expressed by the ECTs that help was needed in working with parents and dealing with challenging student behaviour. In regard to the latter one principal encouraged the view amongst staff that ‘a child in your class is not just your problem…they are everybody’s problem and everybody had a role in supporting that child and the things that need to happen’ (P 4). Another mentioned the importance of supporting ECTs to work with students with special needs by providing information and access to support agencies (P 1).

Opportunities for development

Teaching for a number of years had developed the ECTs’ expertise to the point where they all felt confident about their teaching, but all of them acknowledged a strong need for ongoing learning opportunities. They all acknowledged the important role school leaders played in encouraging them to participate in a range of professional development opportunities:

I find that the leadership team are very supportive, very encouraging for you to do training, to take on PD days. There are a lot of opportunities. (ECT 1)

Two were engaged in further study and one was considering it. Another reported that the requirement in her school for staff to undertake action research was important, as a way to ‘put yourself out there so people can see who you are and what you are doing and have fun with it’ (ECT 2), while those who worked in or met regularly in teams acknowledged the power of the collaborative learning that occurred through such collaboration:

As well as working with the 3/4’s I am also in a learning team with the 6/7’s. We are focussing on enterprise still but now our team can go from year 3-7. We can actually track it and I can instigate it within the classroom. If you need to do more, you just get with that group. (ECT 6)

All the ECTs were eager to develop their skills by experiencing diverse roles either in the classroom or the wider school. In addition to providing valuable learning opportunities, being given opportunities to work beyond the classroom provided needed affirmation as can be seen from this comment:

Being given the opportunities that I have had as well, being offered permanency and in the front office, being responsible in other roles, you can tell you have been successful. It might not be direct but you are seen as doing the right thing to be offered and to have parents recommend you for their child and just those little things. (ECT 5)

The principals agreed that the ECTs were fortunate to be placed in schools that had an ongoing focus on teacher learning which had been strengthened and developed by their involvement in Learning to Learn. They felt that many of the opportunities for ECTs’ ongoing development were school based such as their involvement in the
learning teams already described. The teams did not focus only on the day to day
challenges of classroom teaching and organisation, but also engaged in reading and
inquiry around new areas of learning. Some principals also structured staff
performance management so that it involved opportunities for ongoing learning:

…early second term a much more formal process so it is looking at how we
program, what are your educational beliefs, what do you understand about your
teaching and learning philosophy? (P 3)

Principals also ensured that all staff had the chance to engage with outside expertise
by providing relevant resources and opportunities to engage in structured professional
development courses. These included the many opportunities provided by the
Learning to Learn Core Learning Program, a yearly program of seminars, workshops
and course provided by leading experts from Australia and overseas, and
opportunities to engage with locally provided professional development:

I see the professional development for all staff as a high priority in a budget so
we have a lot of money for release time, for staff to be involved in learning team
discussions and that sort of thing. (P 2)

Engagement in such opportunities usually requires teachers to be absent from their
classrooms and one principal commented that ECTs need particular encouragement to
participate as they sometimes feel guilty about such absences:

I think he has a struggle in his own mind in relation to ‘I need to spend time
with my kids’ I need to be in the classroom. (P 1)

The principals also created learning opportunities for ECTs by encouraging them to
take on new roles. For instance all ECTs had been encouraged to take on a range of
year levels and three of them had had the chance to act in leadership positions, while
another one had been encouraged to take on a Special Needs class.

Discussion

This findings from this study revealed what the ECTs and principals wanted from
each other and the impact of the principal’s role in the development of successful
early career teaching. It can be seen that principals wanted ECTs who were passionate
about teaching and their students and prepared to take advantage of opportunities for
ongoing development, while the ECTs wanted emotional and practical support and
opportunities for employment and ongoing development.

In particular the findings have highlighted the critical role played by school leaders in
the support and continuing development of ECTs in their schools. The ECTs in this
study did not have access to any systemic support in terms of formal induction,
release time or resources. Their continued teacher education relied solely on their own
initiatives and any support provided to them in the schools in which they were placed.
As can be seen, they benefited most when they worked with principals who saw
teacher induction and the pastoral and professional care of staff as key components of
their leadership roles. These principals valued the contributions of ECTs and actively recruited them, recognised and provided for their needs for emotional and practical support and expected and facilitated their involvement in ongoing learning opportunities. These findings are reminiscent of those of Wood (2005) in her study of beginning teacher induction in five Californian schools which illuminated the key leadership roles of ‘culture builder’, instructional leader’ and ‘novice teacher recruiter’. In particular the leadership role of principal as ‘culture builder’ is one that has been emphasised in Learning to Learn schools and will be discussed in more detail in this section.

It is clear that the schools that were selected for this study had developed what is often described as a ‘learning culture’. Barth (2002) described a school culture as ‘a complex pattern of norms, attitudes, beliefs, behaviors, values, ceremonies, traditions and myths that are deeply engrained in the very core of the organization’ (p. 7). He then made the point that ‘the most crucial element of school culture – is an ethos hospitable to the promotion of human learning’ (p. 9). The term ‘learning communities’ is used in the teacher development literature to describe a positive and enabling context for teachers’ professional growth where the professional learning of teachers is shared and problematised (McLaughlin, 1997; Groundwater-Smith & Mockler, 2003). The school reform literature is rich in examples of schools working towards becoming ‘learning communities’ by making changes to the ways they are organised and structured as well as changes to develop more collaborative school cultures (see for example Peters, Dobbins & Johnson, 1996; Lee & Smith, 1994). There is also much in the literature about the benefits of ‘learning communities’ for teachers, such as enriching teacher and student learning, retaining talented teachers and enabling teachers to work together towards a common goal (Grossman, Wineburg & Woolworth, 2001). As Seymour Sarason (1990, cited in Grossman et al, 2001) recognised years ago, ‘we cannot expect teachers to create a vigorous community of learners among students if they have no parallel community to nourish themselves’ (p.993).

The teachers in this study were nourished by the learning communities that had developed within their schools through their involvement in the Learning to Learn project. Even where the ECTs did not personally access the Core Learning Program provided by the project, they were challenged by the new thinking of colleagues who had. They were supported to translate and implement new learning at the school and classroom level by their school leaders, who were intent on developing the learning culture of their schools. This learning culture provided a high degree of both intellectual and emotional support. Both were necessary as the ECTs spent time talking with colleagues and reflecting on their teaching practices and the new learning to which they were exposed. They were supported to take risks as teachers and learners and to accept and manage the uncertainty associated with change. The importance of dialogue has been recognised in the literature as a vital first step for renewal (Newmann & Associates, 1996; Feimen-Nemser, 2001; Snow-Gerono, 2005). Based on this study, we would argue that dialogue also seems a vital step in sustaining ECTs. As Feiman-Nemser (2001) explained, ‘regular opportunities for substantive talk with like-minded colleagues help teachers overcome their isolation and build communities of practice’ (p. 1043).
There is no doubt that the leader has a key role to play in shaping the learning culture in a school (see for example Le Cornu, Peters, Foster, Barratt & Stratfold, 2005; Darling-Hammond, 2003; Frost & Durrant, 2003; Wood, 2005). Frost & Durrant (2003) explained that leaders do this by fostering a climate where individual teachers can take on leadership roles and mutual learning can flourish. This certainly seemed to be the case for the ECTs in this study. Other writers in the field have also stressed that it is the way principals interpret their leadership role that is critical in transforming school culture from ‘bureaucratic organisation’ to ‘communal organisation’ (Day, Harris, Hadfield, Tolley & Beresford, 2000; Lee & Smith, 1994). Such terms as ‘transformational leadership’ and ‘constructivist leadership’ have been used to capture the move from the single leader position to some sense of shared leadership (Lambert, 2000; Dimmock & Walker, 2004). The principals involved in this study were committed to the notion of transformational leadership and provided their staff, including the ECTs, with many opportunities to learn and assume various roles and responsibilities.

The highlighting in this study of the role of the principal as ‘culture builder’ has important implications for broadening aspects of the recent focus on supporting beginning teachers. Much of this focus has been on the provision of release time and formal systemic induction. For instance, the recent report into teacher education by the House of Representatives Standing Committee on Education (2007) recommended the following for the first year of teaching: a structured induction program; a 20 per cent reduction in teaching load; allocation of a trained mentor; and access to a structured and tailored program of professional development (p. 93). There is no doubt that these are important initiatives and ones that would be highly valued by the ECTs and principals in this study. However, the research reported here has revealed two additional implications for early career support and development related to the personal support provided by the principals, and the learning cultures they were able to develop in their schools. The first implication is that in addition to the measures highlighted above, attention should be paid to formally supporting leaders in their roles as educators of ECTs. For instance, in California the principal’s important role is recognised in the provision of ‘training for site administrators so that they learn about the induction program and can become fully supportive of it’ (Wood, 2005, p. 50). In a recent Australian study Sharp (2007) also highlighted the need for clear guide-lines and training for principals when reporting on the lack of impact in many schools of new teacher induction policy in Queensland which directs principals to play a leading role. The second implication is that in addition to receiving support for working specifically with ECTs, principals must be supported in their efforts to build effective learning cultures for all staff. In these five schools, Learning to Learn provided both the funding and high quality professional development opportunities to enhance the learning of leaders and teachers, which in turn contributed to the growth of the ECTs. Not all schools receive such support, but we would argue that they should.

Conclusion

It is clear from this study that principals played a critical role in meeting the needs of ECTs in their schools both by implementing strategies specifically targeted at ECTs, and by leading the development of supportive learning cultures for all staff. The need
for such cultures for ‘new’ teachers was stressed by Feiman-Nemser (2003) when she wrote:

> Whether the early years of teaching are a time of constructive learning or a period of coping, adjustment, and survival depends largely on the working conditions and culture of teaching that new teachers encounter. (p. 27)

It is evident that principals are central to the development of positive working conditions and teaching cultures. It is also evident that illumination of and support for their roles should be a key part of any policies and practices intended to improve teacher education in the early years of teaching.

References


The loneliness of the long distance principal: The experience of principals in isolated central schools

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Abstract

This paper reports on a current research project that examines the experiences and issues that are of concern to principals of isolated central schools in one Australian state. New South Wales has developed its own model of school-based management which devolved some responsibilities from the state office to schools and advocated greater participation at the school level by staff and local communities (Scott, 1989, 1990). This followed a global trend to decentralisation of public school systems (Bjork, 2003; Bottani, 2000; Derqui, 2001; McGinn & Welsh, 1999; Pascoe & Pascoe, 1998; Sahid, 2004; Sayed, 2002; Wylie, 1995).

This ongoing project examines the principals’ perceptions about some of the outcomes claimed for school management reforms. The study is based on a state-wide survey of central school principals in New South Wales in 2006 and a series of case studies of twelve of these principals.

Findings to date suggest that principals’ concerns include areas such as matching mandates from state office with quality teaching in their schools, fostering parent awareness of the value of quality education, difficulties in finding and securing trained teachers in secondary specialist areas and providing in-school professional development for both newly trained teachers and teachers teaching additional subjects outside their area of training. Principals from primary backgrounds expressed the need to learn about the secondary curriculum and pedagogy in order to ensure that teachers provided quality instruction to matriculation level. Principals were concerned that teachers needed professional development to provide for students coming from poor and declining rural communities. Principals experienced professional, personal and social isolation in dealing with these issues.

Historical introduction: Decentralisation and the changed role of principals

The policy of decentralising state school systems has been advanced as one means to remedy the perceived shortcomings in public schools. In Australia ‘decentralisation’ has often meant the delegation of authority and responsibilities from a central state office of the relevant Department of Education to smaller regional or district offices and then to the schools themselves. The term has also been used in NSW and other jurisdictions to describe a process of delegating decision-making within a school from the principal to the staff and stakeholders in a school community.
The major historical influences for the current decision-making structures in New South Wales schools have resulted from the development of major decentralisation reforms in New Zealand (New Zealand. Taskforce to Review Education Administration. & Picot, 1988), New South Wales (Scott, 1989, 1990) and Victoria (Directorate of School Education Victoria, 1993). The earlier proponents of decentralisation worked in a context where governments were concerned about limiting the expenditure in government departments which in the 1970s had been experiencing historically unprecedented growth. Decentralisation was advocated as a way of reducing the expense and restrictions of bureaucratic controls and hence improving the economic efficiency of state education departments (Scott, 1989, Aims item 4) and responsiveness of public schools (Scott, 1989, Aims item 2). The rationales about educational advantages, in some cases, appear to have been written after the initial reforms. For example, perhaps the earliest educational rationale for the Victorian reforms was documented by Caldwell and Hayward (1998), five years after Mr Hayward, as the Education minister had introduced the Victorian reforms (Directorate of School Education Victoria, 1993).

Following the widespread implementation of these policies in Australian public school systems during the 1980s and 1990s, it is important to investigate the nature of the decentralisation as well as its outcomes and the extent of the success of these policies, particularly in regard to the development of quality teaching in public schools in later decades. It is also important to consider implications for future policy with respect to the structure and practices of state school systems. Mulford (2003), for example, argues that historically the major approaches employed by governments to ensure ongoing educational reforms have been old public administration, new public management and organisational learning. He suggests that inconsistencies within and between these approaches, such as the focus on centralisation in old public administration but decentralisation in new public administration, have created their own pressures on schools and their leaders and that the cumulative demands and resulting fragmentation and incoherence could undermine the capacity of schools to deliver quality education.

The historical rationale for and the extent and practice of decentralisation in Australian public school systems had many parallels with the rationale, extent and practice in other countries. However, there have been significant variations in national variations of international trends. For example, the Organisation for Economic Co-operation and Development (OECD) (2004) research suggests that despite the decentralisation trend in education systems in OECD countries Australian schools remain highly centralised, especially in respect of resource allocation and use, planning and structures, and personnel management but less so in respect of the organisation of instruction. McGinn and Welsh (1999) provide useful definitions of the different types of decentralisation and examples in the variation in how different public education systems have decentralised.

This research has compared the rhetoric of decentralisation with the reality of how much control has remained with the central authorities. Braun (2001) in his historical study of legitimisation of state power over education in 19th century New South Wales and
Tasmania helps to explain the continuation of considerable residual control by the central authorities in the Australian state education systems.


The collection of data from current central school principals was intended to clarify those aspects of decentralisation which were favoured by principals as current stakeholders and those which were their concerns. The decentralisation reforms appear to have succeeded in the aims of controlling state education expenditures and some aspects of teacher satisfaction, but the indicators for student achievement are much more complex and researchers have been less confident about any findings of measurable improvement in student achievement. Caldwell (1997) reported that “research on school-based management continues … to reveal little or no impact on student learning” (p. 1).

Overseas research, such as Latham (2004) on New Zealand teachers’ and principals’ perceptions of school leadership after 14 years of decentralised school-based management, has found some common results. While principals have appreciated the increased autonomy in their work, there has been an intensification of the workload of principals and staff and an uncertainty about whether the reforms have resulted in improved teaching and educational outcomes for students.

It would be plausible to expect that the improved responsiveness to local needs would be most evident in schools which served communities that were different because of distinguishing socio-economic, cultural, ethnic or geographical factors. In this study of principals of remote schools, not only was remoteness a distinctive issue, but many of the principals also had to deal with significant and distinctive socio-economic, cultural or ethnic factors in their school communities.

**Research methodology**

The study used both quantitative and qualitative methods. A survey questionnaire was distributed to 64 principals in all except two atypical central schools in the New South Wales public education system and 27 (42%) completed the questionnaires. The two schools not surveyed were considered atypical because one was on a Pacific island and one was a very large community school near the Sydney metropolitan area. The survey questionnaire was accompanied by an invitation to participate in interviews at their schools. Thirteen principals (20% of all central school principals) offered to participate in follow-up interviews in their schools.
Survey questionnaire

Section A of the survey asked principals about their perceptions of school-based management, especially about the extent of flexibility in their decision-making and any perceived benefits in the quality of teaching and educational outcomes for students. The first question asked principals to give an overall view about whether the current structures in decision-making could be described as school-based management. The next four questions asked principals to indicate the extent of school flexibility in deciding on matters of property, discipline, welfare and curriculum. A further five items asked for principals’ perceptions of the extent of benefits in resource management, staffing, staff morale, student achievement and professional autonomy under the current structures.

The next four statements provided indications of the school’s influence on staff professional learning and on the achievement levels of students. The last four statements in Section A alluded to the value of accountability procedures such as mandatory student testing and programs for reporting to the Department of Education and Training (DET) and school communities.

Section B of the survey asked principals to compare the expectations of the DET for the times they spent on 28 typical tasks undertaken by a principal and the amount of time the principals thought these tasks should take in an ideal self-managing school. These tasks included staffing operations, student discipline and welfare, staff meetings, parent meetings, meetings with DET officers and other agencies, development of school programs, professional development, supervision and welfare of staff, communications, documentation, financial and property management. This section was designed to obtain an indication of pressures of time needed to complete tasks and the extent of principals’ autonomy in allocating appropriate time for various tasks. Section C used six items asking principals to provide demographic information about their gender, professional training, school size, experience as a principal, experience at the current school and age group.

Characteristics of principals and their schools

Male principals outnumbered female principals in the ratio two to one whereas in the whole teaching service males constitute only a low percentage, only 32% of teaching staff in 2004 (Ministerial Council on Education Employment Training and Youth Affairs (MCEETYA), 2004). The low percentage of males in the teaching profession has been a matter of concern at both state and federal levels of government.

A small majority (56%) of the principals were in the last decade of their anticipated working career. None of the respondent principals were working beyond the nominal retiring age of 60. In contrast, a young principal commented during a subsequent interview that he was not necessarily committed to continuing his career in school education.
Typically central schools are located in small, rural townships which are not big enough to support a local high school. Most central schools are also inland and situated long distances from any neighbouring townships and much longer distances to the major population centres of Sydney, Newcastle, Wollongong and coastal growth areas. Most (74%) of the principals were originally trained as secondary teachers. In recent years, the curriculum in NSW central schools has been extended and nearly all central schools provide a curriculum to matriculation level. Also being aware of the media focus on Higher School Certificate results, this has prompted principal selection panels to look favourably on applicants with secondary backgrounds on the presumption that they would be better able to assist in the professional development of secondary staff and improve the retention rate of students to matriculation level.

A majority (63%) of the respondent principals had been principal of the current school for three or less years and for most of these principals (82%) the current school was their first principal appointment. This is a reversal of the historical pattern in which the primary-trained principals would have had previous principalship experience as primary principals. Two thirds (67%) of the schools were in the middle range of sizes and had between 100 and 300 students.

Thus typically the current principal of a central school is male, secondary-trained, taking up his first principal appointment in the last decade of his career and supervising a school in a remote inland area with between 100 and 300 Kindergarten to Year 12 students.

Results - Data from survey questionnaire

Section A: Characterisation of education system, flexibility in school decision-making

Survey respondents had definite views either agreeing or disagreeing that the current education system could be characterised as school-based management. A slight majority (56%) disagreed with the proposition and very few chose the neutral option. In contrast to a normal distribution of scores in which middle range scores have the highest frequencies, in this case the distribution was bimodal with a large negative measure for kurtosis (-1.6); that is, there was a preponderance of responses at each extreme of the range of possible scores. Large majorities (74%, 85% and 78%) agreed with the statements that the school had flexibility respectively in student discipline, student welfare and teaching the core curriculum. However, a large majority (70%) disagreed with the statement that the school had flexibility in properties and maintenance.

Benefits of current level of school-based management

Principals were evenly divided about agreeing or disagreeing on the benefits of the current system for efficient management of resources, staff morale, student achievement and encouraging teachers to think and act as professionals. A small majority (59%) of the central school principals disagreed with the proposition that the current structures had benefits in staffing of schools. The terms ‘staff’ or ‘staffing’ include the tasks of securing permanent or casual staff and supervision of staff. In subsequent interviews principals raised the issue of staffing in their schools as being one of their biggest concerns.
To sum up the role of principal, it’s interesting, this is the most difficult job I’ve
done, and in a school this size the biggest problem that I have is staff, and staff
issues. They would be taking 95% of my time (Principal T1).

Principals were asked about the extent of their agreement with three statements about
achievement levels namely: “The principal has more influence than the DET’s state and
regional offices on the school’s success”; “Satisfying Departmental requirements means
that the school is also providing a quality education for students”; and “The school has a
major say in decisions which most affect student achievement”. Significant majorities
(89%, 63% and 74%) of respondents agreed respectively with the above three statements.

Benefits of mandatory testing and accountability
Most principals (74% and 78% respectively) agreed that the mandated school management
plan was school-based and was a useful guide in school planning. Respondents had definite
views about whether the mandated standardised tests were a benefit for students. Very few
chose the neutral option with most indicating strong agreement or strong disagreement.
This was reflected in a large negative kurtosis (-1.7). Survey responses indicated a high
level of disagreement (30% disagreed and 30% strongly disagreed) with the proposition
that the mandated school self evaluation process and annual school report were useful for
the school and its community. The annual school report is in a standard format with
prescribed sections for principals to complete. Interviewees also referred to the preparation
of the annual school report as a time-consuming chore, which did not improve outcomes for
the school or the students.

Section B: Intensification and hours of work
In the survey questionnaire, principals were asked two questions about each of 28 typical
tasks performed by principals. The first question asked them about their perception of an
ideal self-managing school and whether they should spend less, the same or more time on
each task. For most of the tasks, a high percentage of the principals had a self-perception
that they should be spending more time on the task concerned.

Table 1   Principals’ perception of how much time they thought they should spend

<table>
<thead>
<tr>
<th>Principal task</th>
<th>% Less time</th>
<th>% Same time</th>
<th>% More time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student welfare</td>
<td>24</td>
<td>28</td>
<td>48</td>
</tr>
<tr>
<td>Development of school curriculum</td>
<td>4</td>
<td>19</td>
<td>78</td>
</tr>
<tr>
<td>Development of teaching/learning programs</td>
<td>7</td>
<td>11</td>
<td>82</td>
</tr>
<tr>
<td>Development of student assessment procedures</td>
<td>4</td>
<td>19</td>
<td>78</td>
</tr>
<tr>
<td>Development of reporting to parents</td>
<td>4</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Supervision of and mentoring of staff</td>
<td>0</td>
<td>11</td>
<td>89</td>
</tr>
<tr>
<td>Professional development at school</td>
<td>0</td>
<td>26</td>
<td>74</td>
</tr>
<tr>
<td>Professional development off-site</td>
<td>7</td>
<td>33</td>
<td>59</td>
</tr>
<tr>
<td>Principal’s professional development</td>
<td>0</td>
<td>37</td>
<td>63</td>
</tr>
</tbody>
</table>

Note: These tasks are a selection of the 28 tasks listed in the questionnaire. For nearly all tasks a
majority of principals thought more time or at least the same time should be spent on the task.
\* The percentages may not add to 100 because original percentages have been rounded off.
For each of the typical tasks the principals were also asked their perceptions of how much time the DET expected principals to spend on the task. Again high percentages of principals perceived that the DET expected them to spend more time on nearly all of the typical tasks. Further, the percentages of principals perceiving that the DET expected them to spend more time were even higher than the percentages of principals thinking that in an ideal self-managing school more time should be spent on the typical tasks.

Table 2  Principals’ perceptions of how much time the DET expected principals should spend

<table>
<thead>
<tr>
<th>Principal task</th>
<th>% Less time</th>
<th>% Same time</th>
<th>% More time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student welfare</td>
<td>4</td>
<td>42</td>
<td>54</td>
</tr>
<tr>
<td>Development of school curriculum</td>
<td>8</td>
<td>39</td>
<td>54</td>
</tr>
<tr>
<td>Development of teaching/learning programs</td>
<td>0</td>
<td>39</td>
<td>62</td>
</tr>
<tr>
<td>Development of student assessment procedures</td>
<td>0</td>
<td>31</td>
<td>69</td>
</tr>
<tr>
<td>Development of reporting to parents</td>
<td>4</td>
<td>23</td>
<td>73</td>
</tr>
<tr>
<td>Supervision of and mentoring of staff</td>
<td>4</td>
<td>23</td>
<td>73</td>
</tr>
<tr>
<td>Professional development at school</td>
<td>8</td>
<td>69</td>
<td>23</td>
</tr>
<tr>
<td>Professional development off-site</td>
<td>19</td>
<td>50</td>
<td>31</td>
</tr>
<tr>
<td>Principal’s professional development</td>
<td>8</td>
<td>42</td>
<td>50</td>
</tr>
</tbody>
</table>

The questionnaire responses indicate that principals’ self-perceptions of their duties combined with the principals’ perceptions of the DET’s expectations would combine to create pressure on principals to work significantly longer hours.

Interviewed principals talked about working for 70 to 80 hours a week as if this were the norm and commented on the intensification of their work. While some referred to having health regime strategies to maintain their physical and mental fitness to cope with their workload, others mentioned taking periods of long service leave as a way to recover and restore their energy levels.

Interviews

Twelve of the principals were visited in their schools to be interviewed. Interviews were recorded on audio tape, the tapes were transcribed and the NVivo software program used to code, categorise and compare the interview data. The initial interviews were semi-structured, which helped in establishing rapport with the principals interviewed and their responses provided a basis for making the questions in the second interview more specific. In the semi-structured initial interviews, principals were asked to describe their professional background and what led them to become the principal of a rural central school. They were asked about any special features of the school such as characteristics of the student cohort, staffing experience and availability, special programs and curriculum, the socio-economic background of parents and the community and their relationships with the school. The principals were asked about the main issues that confronted them at the beginning of their principalship and what issues developed later.
About six months later, a second and more focused interview was being conducted with nine of the principals (one principal had resigned after experiencing difficulties with a local community, one principal declined further interview and a primary-trained principal transferred to a primary school principalship in a more favoured location). The questions asked in the second interview provided more data on the issues raised by the principals in their previous interviews. In the later interviews, the principals were asked more specifically about the effects of geographic isolation on the school and their principalship. They were asked about relationships with other schools, dealing with parent complaints, the level of support from Departmental officers, the degree of autonomy in their role, their hours on duty, their career path and major plans for maintaining and developing the quality of teaching in their schools.

Several principals expressed appreciation for the opportunity to talk about their issues during the interviews and said that central schools were often overlooked because they were few in number (66 out of over 2200 government schools in NSW) and remote from state and regional offices. Despite the perceived lack of interest shown by some DET officers, the central school principals commented about the heavy workload of providing documentation to the DET for both primary and secondary departments. Often they would be supplying double the documentation required of their primary or secondary school colleagues.

**Results - Data from personal interviews**

**Issues raised in open-ended first interviews**

There were big variations in the issues raised by principals. Some had big losses in enrolment because of the drought while others, usually nearer large provincial cities, were unaffected. Some had massive social welfare issues, e.g. drug and sexual abuse affecting large numbers of students. One principal (Principal S4) of a medium-sized central school expressed the fear that every child in the school had suffered from sexual abuse. In contrast, others enjoyed the serenity of relatively problem-free student cohorts. Some despaired in suffering on their own with threats and attacks including violence by parents.

I bought a house and had my house torched last year, and I’ve had threats issued and it just happens to be one of our parents and I think, “Am I going to have the house torched again if I report [a known local paedophile]” … [The staff] know it’s quite life threatening at the moment (Principal S3).

The worry is the volatility of the community … and the extreme violence … even more extreme that what we’d been used to (Principal W1).

I can remember going home at Recess one day scared that this guy was going to come around to my house … In a small town you don’t have the luxury of going elsewhere, he knows where you live, your phone number and everything about you (Principal T1).
While some described their supervisors’ support as being excellent, others felt that the senior officers of the DET undermined their positions.

You are by yourself and the pressures are coming from the bottom and the pressures are coming from the top, and you are in the middle. I have a basic philosophy that I think that central schools are the most appallingly treated schools within the department (Principal T1).

It is fair to say that the last two principals here were essentially forced out… [In response to local complaints] most of the important people in the “department” visited this school once and did not come back (Principal S5).

Principals raised issues related to rurality and living in declining rural communities and sometimes talked about how isolated they felt in their current position. Some wished they still enjoyed the collegiality they experienced as curriculum/subject head teachers. Some expressed the disappointment that because they were subject to more direct influence by the DET and the local community, they now had much less autonomy in decision-making as principals than they had when they were curriculum/subject head teachers. Older principals were less positive in their responses when asked whether state office policies resulted in positive outcomes in staffing, quality of teaching and student achievement.

Isolation, both professional and personal, was the most commonly raised issue. This was most strongly felt by the 74% of principals who were from a secondary background. They had a perception that they were not well understood either by departmental officers or by their colleagues in high schools.

**Professional isolation of the principals**

**Historical pattern of primary-trained principals**

A number of factors contributed to the heightened sense of isolation experienced by the secondary-trained central school principal. In the historical pattern, primary-trained principals started with appointments to principalship of a small primary school followed by a promotion to principalship of a central school. Most central schools only included the junior years of secondary education. Access Programs, which used audiographics technology to allow clusters of central schools to provide common matriculation courses, only began in 1989. The principal needed to make relatively few adjustments in professional skills. Central schools were viewed as extended primary schools catering to isolated rural students who were required to continue their education until they reached the mandated leaving age after a few years of junior secondary school. Students who aspired to complete a secondary education or to matriculate needed to attend a high school in Sydney or a larger provincial centre. Historically, the overwhelming majority of students in a
central school were primary-age students in school years, Kindergarten to Year 6 with a reduced number of Year 6 students continuing into the junior secondary years at the local school.

Geographically, new primary-trained principals may have relocated relatively modest distances from their previous primary schools to take up the new appointment and they had access to the collegial support and understanding of principals or teachers-in-charge of neighbouring primary schools. Although the remote primary schools were much smaller than their urban counterparts, they were still quite numerous in remote areas.

**Current pattern of secondary-trained principals**
The secondary-trained principals had very limited opportunities for keeping in contact with their colleagues in high schools. They had much greater distances to travel before reaching any nearby high schools. For example, in the inland area of Riverina Region excluding the city areas of Albury, Griffith and Wagga, there is only one public high school for every six public primary schools. In the four Sydney Regions there is one high school for every three primary schools and for the whole state the ratio is one to four (New South Wales Department of Education and Training, 2006, p. 9). In the non-government sector, the proportion of secondary schools to primary schools in remote rural areas is even smaller.

For the secondary-trained central school principals the physical distance in contacting their networks of colleagues in high schools is much greater than is the case for the small minority of central school principals who have come from primary school backgrounds.

Unlike their primary-trained counterparts, only a small number of these secondary-trained principals had previous experience as classroom teachers in central schools and all started their principalship as principal of a central school. Most of the more recently appointed principals from a secondary background had been promoted from the position of head teacher to that of principal of a central school. Generally, head teachers in high schools would not have had any extended periods as a relieving principal. Many of the secondary-trained principals did not have even relieving principal experience before starting in substantive positions as principal of a central school.

I am extremely worried about the number of central school principals in New South Wales who are doing it tough, and one of my beliefs is that going from a head teacher into the principal's role does not give you the experience of dealing with the range of attitudes of parents and the different attitudes of primary and secondary staff (Principal T1).

Secondary-trained principals expressed some doubt about their future prospects of transfer to a more favourable location or a promotion to principal of a bigger school. They had no rights of automatic transfer to principalship of a high school. They could transfer to a deputy principal position in a high school or to a principalship of another central school or a primary school. In the latter case, they would be required to satisfy their local School Education Director that they had developed the specific curriculum knowledge and skills to be a primary school principal. Apart from transferring, principals could apply for advertised
positions as principals of high schools but some expressed the perception that selection panels in larger centres did not value the principalship skills they had developed in a remote area school.

**Family and social isolation**

Interviewees discussed the family and social isolation of their position in a small township. Most of the secondary-trained principals had moved considerable distances in their relocation to the position of principal of the central school. Usually their previous appointment would have been in a high school in a larger population centre. For some, relocation of their families over long distances to a small township with limited employment opportunities for their spouse also was a concern. For some principals, the solution to this problem was to live on their own in small townships hundreds of kilometres from their family.

**Decentralisation: The principal seen as “the Department”**

One aspect of the decentralisation reforms has been a repeated reduction of staffing in State and Regional offices. Administrative structures have become flatter. In principals’ meetings with Departmental directors, the principals are advised that the principals are the site managers of their schools and principals should regard themselves as being “the Department” in their communities. When a member of the public rings the NSW DET, the answering message advises the caller to contact the principal of their local school if they have any enquiries that need answering.

> I have a big issue with what I call devolution of responsibility and workload. There are not the people in the corporate side to deal with things anymore and it has to be done at the school level so the workload at the school level has increased inordinately (Principal S1).

Interviewees alluded to their surprise in discovering some unexpected responsibilities when they started as a principal. In some cases, they described feelings of insecurity when they were not sure when or from where the next crisis would come.

While some principals felt confident that their position was secure when they were careful to “follow the book” in every detail of Departmental requirements, other principals were less confident about maintaining the confidence of senior Departmental officials if their decision as principal happened to offend a politically active parent or group of parents.

> It’s fair to say that the last two principals here were essentially forced out by the community. One had been here a long time, and fell foul of a particular community group and the other suffered from falsely-based allegations, which created a public scandal (Principal S4).

In very small centres, the school may be the only visible government service in the town and the principal is perceived not only as the spokesperson for the DET but also as a
‘public servant’ representing the government in general. For remote townships dependent almost entirely on the fortunes of the local farming economy, governments based in Sydney are often perceived as being unsympathetic to their interests. During the hardship years of prolonged drought, farming communities can feel some distance from public servants who have guaranteed incomes and relationships between the community and the school principal are frequently strained.

**Conclusion**

After fifteen years of decentralisation, the current level of school-based decision-making is constrained by centrally imposed controls, which have increased the principals’ sense of bearing increased responsibility at the school level both for student outcomes and for dealing with any community dissatisfaction. At the same time, the demand for increased retention rates in remote areas has increased the propensity for principal selection panels to choose secondary-trained principals who experienced even greater isolation than their primary-trained colleagues in their principalships of remote central schools.

Although interviewed principals acknowledged difficulties such as coping with professional and social isolation, dealing with social difficulties in their communities and meeting the mandatory policy and accountability requirements of Staff Office (DET), they also conveyed a determined and confident attitude about the effectiveness and achievements of their school. Almost without exception the interviewees described significant changes they had introduced when they started at their schools and they were optimistic that they could solve school-level problems, maintain high professional standards in teaching and improve the achievement levels of students at their school.

**References**


“It’s all about experience.” The challenge of becoming a teacher in fragmented employment contexts.

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University of Tasmania

Abstract

This paper reports on an ongoing research project which in part considers how the current employment opportunities available to most beginning primary teachers in one Australian state, New South Wales, affect the ways these teachers are able to develop their professional knowledge base in the first two years of their careers. The current employment situation which faces most beginning primary teachers as they leave teacher education institutions in this state, is one of fragmentation of experience through the need to begin careers as casual teachers, a situation where teachers are often viewed as ‘baby sitters’ and where there may be minimal expected responsibility for student learning or for their professional participation in the culture and community of a school. For these teachers, the early years of teaching are often spent “on the fringe” of schools, classrooms and the profession often to the detriment of their development as practising teachers. This paper will report on some of the results of a state-wide survey and detail how this fragmented employment situation has affected the capacity of 241 beginning teachers to acquire personal practical knowledge of teaching and to participate in the process of professional socialisation.

Introduction

Changing concerns about beginning teachers

In the past five years, there has been renewed interest in the study of early career teachers’ experiences. However, discussion of the work lives of beginning teachers now occurs from a different perspective from that of discussions of two decades previously. Then, concern was for the private work lives of teachers (Grossman, 1990, p. 57; Huberman, 1995); now, this concern has been subsumed by a more public and systemic agenda. This agenda recognises beginning teachers as participants in a workforce comprising a significant number of experienced teachers preparing for retirement together with a worrying number of early career teachers withdrawing from the teaching profession within the first three to five years of career entry (Ministerial Council on Education, 2004. p.15).
This systemic concern has been prompted to some extent by the exigencies of the demographic changes besetting many (OECD) educational systems (Commonwealth of Australia Department of Education Science and Training, 2003). The emphasis is now on identifying not only what the experiences of beginning teachers are, and how to make these more positive, but also how these experiences relate to present and future workforce planning. There is a note of urgency in considerations given to the education, recruitment, induction, mentoring and development of early career teachers as it becomes increasingly evident that teacher shortages are looming, as significant numbers of experienced teachers retire within the next five to ten years and recruitment and retention of new teachers fails to keep pace with more rapidly increasing attrition. According to Ewing and Smith “in countries in the Western world...between 25 and 40 per cent of all newly-recruited teachers resign or burnout in their first three to five years of teaching” (Ewing & Smith, 2003). Research into the lives of beginning teachers now focuses on their perceptions of teaching as a career, whether short-term or long-term, and the potential of teacher education institutions, schools and systems to retain, rather than simply recruit, the teachers who will soon be needed to replace those leaving. In 2003, Skilbeck and Connell reported that “incentives for potentially mobile, high performing younger teachers to remain in the classroom depend more upon a broad spectrum of professionally fulfilling features of teaching and school life than upon salary and the prospect of a long-term career structure in teaching” (Commonwealth of Australia Department of Education Science and Training, 2003, p. 57). The career entry experience of many beginning primary teachers in NSW fails to deliver these incentives.

The purpose of the study

The study on which this paper is based examines the experiences of contemporary beginning primary teachers in New South Wales (NSW) in the transition from university student to practising teacher. It considers the effect on these teachers of beginning to teach in an uncertain and fragmented employment context that appears to be part of the wider global trend of workforce casualisation, characterised by short term contract work and successive rather than continuous appointments. The broader study examines the development of the professional knowledge base of beginning teachers in a range of employment contexts from three interconnected perspectives: participation in professional socialisation and the induction of teachers into the profession and its institutions; the construction of individual professional identity; and the acquisition of personal practical knowledge of teaching. These three components are taken together to comprise facets of the professional knowledge base of the beginning teacher; the study attempts to report the effects on each of these processes and therefore on the development of the professional knowledge base of many beginning teachers of learning to teach in multiple, uncertain and often fragmented employment contexts.

Understanding the experiences of beginning teachers: the historical context

Much of the literature which deals with the orientation and induction of beginning teachers to the profession is based on an assumption that beginning teachers are those who work in their own classrooms, in schools where they have some security of tenure, and who thereby have an accepted position as a member of both the staff of the school
and of the teaching profession itself. In this earlier literature related to the development of beginning teachers (Bennett & Carré, 1993; Bullough, 1989; Bullough & Baughman, 1995; Bullough, Knowles, & Crow, 1992), the experiences of beginning teachers are discussed in the context of the school to which teachers are first appointed, and this and the classroom of the particular teacher provide the macro- and micro-contexts in which these experiences occur and in which the task of developing teaching competence is more or less successfully attempted.

It is the contention of this paper that it is these contexts that have changed markedly for most contemporary beginning primary teachers. One of the problems faced by the majority of beginning primary teachers in NSW now is that of obtaining permanency, or even of gaining full-time, class-based temporary positions in the course of their first year of teaching. Where beginning teachers enter the profession in situations of fragmented employment, it appears that their opportunity to develop knowledge and understanding in three critical areas - of the profession, of themselves as teachers, and of the means to professional classroom competence - may be significantly constrained. It is this change in contexts, and concomitant change in understanding of the career entry experience, which may require some re-thinking of the role of teacher education institutions, schools and systems in both recruiting and, more importantly, retaining teachers for the future.

Understanding the experiences of beginning teachers: the contemporary context

The key task of the beginning teacher is to develop a personal professional knowledge base of teaching. The study on which this paper is based suggests that this is achieved through engagement in three mutually reinforcing, simultaneous, interactive and iterative processes: acquiring personal practical knowledge of the craft of teaching (Elbaz, 1983); participating in professional socialisation or adjusting to the culture of the work setting; and developing self-perceptions about professional identity; (Pietsch & Williamson, 2004, 2005). This paper deals with aspects of the first two processes and the effects on them of employment circumstances.

Where teachers begin their careers as own class-based teachers (i.e., teachers with responsibility for their “own” class) in one school, these processes can be entered into; where beginning teachers have only a tangential connection to one school, or even to several or many schools, engaging in these processes is problematic. Because of the iterative nature of the processes, the “Matthew effect” becomes evident – those who have access to a community of practice (Wenger, 1998) make progress that is cumulative in effect; those without such access engage in repetitious practice but make little progress.

Within the school, programs such as induction and mentoring are usually made available, formally or informally, and to a lesser or greater extent, these processes assist teachers to make the transition from the university to the workplace – from student to teacher; from membership of a university to membership of a specific profession with profession-specific cultural norms; and from novice to competent practitioner. It is within known classrooms and school communities that teachers construct their own professional identities as a teacher. And it is through membership of a school
community that socialisation into the profession by means of processes such as induction, mentoring, supervision and linkage to teacher institutes (in NSW) or state teacher registration boards occurs.

Methodology of the study

The data on which this paper is based comes from a broader study in which data were gathered from two cohorts of beginning teachers. Interviews of seven self-selected graduating teacher education students from one rural university in NSW throughout the first eighteen months to two years of their careers were complemented by surveys of all public primary and central schools in NSW returned at the end of the first year since leaving university. This dual process provided intensive and longitudinal information drawn from interviews and classroom observation of each of seven teachers in the course of the initial years of teaching, and extensive “point of time” information about the experiences of 241 graduates across NSW at the end of their first year. (Data on the more qualitative aspects have been reported in Pietsch & Williamson, 2004, 2005.) This paper will focus primarily on the results obtained from the state-wide survey, and consists of analysis of demographic information together with responses to forced-choice items devised to explore respondents’ perceptions of the development of their professional knowledge base. Analysis of these responses was carried out using a number of statistical processes contained in SPSS (Statistical Package for the Social Sciences, Version 14.0 for Windows).

Accessing a sample of beginning teachers

Survey respondents were contacted in late 2003 using as liaison contacts District Superintendents of each of the 40 (then) administrative districts of the NSW Department of Education and Training, and principals of the 1799 public primary and central (Kindergarten –Year 12) schools which comprised these districts. Principals identified 399 beginning teachers on their staffs and a survey of these teachers resulted in a return of 241 responses, a 61 per cent response rate. Survey respondents represented teachers from a range of geographic locations, employment situations and with varied personal attributes, and analysis of the survey data permitted comparisons to be made of the levels of professional knowledge base development achieved by teachers in different teaching situations.

Exploring differences in experience: the effects of personal attributes and professional circumstances

The survey explored a number of differences in the experiences of beginning teachers. Since difference in experience may be the result of personal attributes, professional circumstances or a combination of both, the survey obtained information related to both personal attributes and professional circumstances. In analysing the responses obtained, demographic information was reduced to four key variables related to personal attributes and four related to professional circumstances. Personal attributes were described in terms of age, gender, workforce participation prior to teacher education and teaching qualifications obtained. Professional circumstances were described in terms of four
situations which could be ascribed to teaching experience: location of school, employment status (whether permanent or casual), the number of schools within which a teacher had taught, and the extent of responsibility a teacher had for a specific class.

**Exploring differences in professional experience: perceptions of the first year**

The survey required respondents to respond to statements concerning teaching experience in terms of a five-point Likert scale. This paper is concerned with the responses obtained from five sets of items related to teachers’ own knowledge of teaching practice; the opportunities they had had to participate in school-wide programs; the support they had received; their preferred methods of improving their teaching; and the difficulties they had faced in the course of their first year of teaching.

**Findings**

A number of statistical processes (Burns, 2000; de Vaus, 2002; Pallant, 2005) were used to determine the reliability of results, to compile scaled composite variables more suitable to analysis using non-parametric techniques, and to identify statistically significant differences occurring for different types of professional experience. A chi-square test for independence was used to assess the relationship between each of the variables concerned with personal attributes and professional circumstances and those concerned with aspects of practical professional experience. These results were used to identify personal attributes or professional circumstances which gave rise to statistically significant differences in the ways in which teachers in different employment contexts experienced their first year of teaching.

**The relationship between personal attributes, professional circumstances and the development of the professional knowledge base**

**The acquisition of personal practical knowledge of teaching**

Using factor analysis, items related to perceived gains in practical knowledge of teaching were clustered in three categories: knowledge about planning for teaching; knowledge of inclusive practice in teaching; and knowledge about teacher-student relationships.

**Planning for teaching and the effect of gender, age and prior work experience**

In considering knowledge about planning for teaching, statistically significant differences arose largely from differences in personal attributes: age, gender, prior work experience and level of qualifications. For these respondents, teachers’ professional circumstances appeared to have no significant effect on their perceptions of personal gain in knowledge of planning for teaching.

The most frequently occurring difference in relation to knowledge of planning was that occasioned by gender. Male teachers, who comprised 13 per cent of the respondents, were less positive about their gain in knowledge of the syllabus; their capacity for
effective lesson planning and lesson timing; and their understanding of assessment of student learning. They were also less positive about their gain in knowledge of ways to improve their teaching.

Other than gender, age and work experience were also related to difference in perceptions of knowledge gained about planning. Older beginning teachers (those over 25 years) who comprised 33 per cent of respondents, and those with prior work experience (55 per cent of respondents) were less positive about their gain in knowledge both of ways to evaluate their own teaching and ways to improve it than were those who were younger and had less workforce participation prior to entering university.

Teachers were asked to rate difficulties they had experienced in their first year. In relation to knowledge of planning for teaching, no difficulties were related to personal attributes. However, professional circumstances appeared to result in some significant differences. Location was weakly related to difficulties in programming (teachers in metropolitan schools having more difficulty than those in rural schools) and difficulties in assessing were similarly weakly related to class-based experience, with those who had limited experience of teaching their own class experiencing more difficulty than those who had mostly own class-based experience.

**Inclusive practice and the effect of gender and location**

Responses to the second component of practical knowledge, that of knowledge of inclusive practice in teaching (teaching students with disabilities or learning difficulties or those who were identified as gifted and talented), revealed that although gender was again a factor, with male teachers less confident than their female counterparts in managing students with disabilities, there were also significant differences arising from location: teachers in rural schools were less positive about their gain in knowledge of teaching gifted and talented students than were those located in metropolitan schools.

**Teacher-student relationships and the effect of personal attributes**

The third component of practical knowledge was summarised as knowledge of teacher-student relationships and comprised items related to engaging students in learning, managing student behaviour, organising the classroom for learning and relating to students positively. Of these, only gender had any significant effect with male teachers significantly less confident of their gain in knowledge about how to engage students in learning than were female teachers.

When considering the cluster of responses relating to difficulties with students (gaining student respect, knowing students, managing student discipline and relating to parents) differences in gender, prior work experience and qualifications all had some effect on different responses to difficulties with students. Male teachers reported significantly more difficulty in relating to parents than did female teachers; teachers with prior work experience reported greater difficulty than those with no prior work experience in gaining student respect; and those with initial teaching qualifications reported greater concerns with student discipline than those with postgraduate qualifications.
Professional circumstances contributing to significant differences in the difficulties teachers experienced with students included location, and the extent of a teacher’s experience of managing their own class. Metropolitan teachers had greater difficulty gaining student respect, greater difficulty managing student discipline and greater concern in relating to parents than had rural teachers. Those who had limited or no own class-based teaching reported greater difficulty in getting to know students and in relating to parents when compared with those who worked mostly with their own class.

Acquiring practical knowledge of teaching is related in some part to personal attributes, especially gender, but the evidence of this survey suggests that location, the extent of own class-based teaching experience and the number of schools teachers work in during their first year have a significant bearing on the level of confidence they develop in their knowledge of many of the key responsibilities of practising teachers.

Participation in professional socialisation

The experience of professional socialisation was explored through items which required respondents to consider the roles they were able to play in school communities through group and individual participation in school activities, and the access they had to support from mentors within the school and the profession. Items related to participation in professional socialisation were clustered through factor analysis in several dimensions: participation in school-based group activities, e.g., meetings; participation in individual activities beyond the classroom e.g., liaison with specialist personnel; and participation in professional development. In addition, respondents were also asked to identify those from within the school and those outside the school who had provided support and who had thereby contributed to their professional development.

Group participation and the effect of age, location and class-based experience

Only one “personal circumstance” - age - was responsible for any statistically significant variation in professional experience in relation to group socialisation opportunities i.e., in teachers’ capacity to participate in parent meetings, to take part in school committees, to accept responsibility for a school program and to exercise capacity for leadership. When compared with the cohort of respondents over 25 years of age, a higher percentage of those 25 years and under reported that they had been encouraged to attend parent meetings and take part in a school committee. This was despite the fact that a higher percentage of teachers over 25 years of age than under 25 were permanent, had mostly own class-based experience and were employed in only one school.

Professional circumstances, rather than personal attributes, were related to a number of other significant variations in teachers’ group socialisation opportunities. These circumstances included the location of schools and the extent of teachers’ own class-based experience during the year. The location of schools had a significant effect on teachers’ attendance at parent organisation meetings and also on the capacity to exercise leadership within schools. Thirty-eight per cent of respondent beginning teachers were
located in rural or regional schools; the remainder (62 per cent) were based in schools in metropolitan districts of Sydney, Newcastle and Wollongong. Those based in metropolitan schools reported significantly less opportunity to participate in group-based activities than those in rural schools. At the time of the survey (at the end of teachers’ first year of teaching), 40 percent of respondents had had limited or no experience in managing a class of their own. The extent of own class-based experience also affected - to a highly significant extent - the degree to which teachers participated in whole-school programs or joined in school committees: those who had responsibility for their own class also had significantly more experience in group participation.

**Individual activities and the effect of professional circumstances**

This cluster of responses considered the extent to which teachers were able to make individual choices and exercise individual responsibility in participating outside their own classroom. It involved teachers’ experience in liaising with specialist staff (e.g., school counsellors); their opportunity to engage in discussion with parents; and their experience in the preparation of student reports for parents, an activity which frequently requires collaborative activity linking teachers to other teachers and to staff of the senior management team. Reporting of student learning constituted the individual activity in which one personal circumstance (age) and all professional circumstances significantly affected the opportunity to participate and the difficulties encountered by teachers. Other than preparing student reports, discussion with parents constituted the only other individual activity significantly affected by professional circumstances with those employed on a casual basis and those without own class-based experience significantly limited in their level of participation in such discussions.

In considering levels of participation in student reporting, age differences were the only personal attribute which significantly affected this individual activity. A small, but still significant, difference was identified: those over 25 years of age reported less opportunity to participate in student reporting. However, differences in participation in student reporting attributable to professional circumstances were highly significant. When asked to identify their role in reporting teachers who had worked in more than one school and who had had limited own class-based experience reported less encouragement to be engaged in student reporting.

Each of the four professional circumstances – location, employment status, number of schools and extent of own class-based experience - resulted in significant variation in the difficulties encountered in completing student reports. Reporting of student progress was perceived as significantly more difficult for those who were located in metropolitan schools, as well as for those who were permanently employed, those who were employed in only one school and those who had had mostly own class-based experience i.e., those whose appointment required participation in this activity. This reflects the results related to the level of encouragement given to teachers to participate in the reporting process: those who were casual employees, or in rural schools, those who worked in more than one school and those who had limited own class-based experience were among those least encouraged to participate in student reporting, the latter two groups to a highly significant degree. Again, the fragmentation of employment...
experience resulted in a large group of teachers who had limited opportunity to participate in a process that even their colleagues who were permanent teachers working on their own class within one school, acknowledged as difficult.

Professional socialisation and the role of mentors in providing professional support

Effective professional socialisation relies heavily on the presence in the workplace of more experienced colleagues able and willing to induct beginners into the culture of the school. Survey respondents were invited to rate on a Likert scale the degree of assistance provided by teachers and staff of the senior management team of the school in which they worked; consultants from the employing authority; teachers who were located in other schools or those who provided support from a basis of friendship or family membership.

The personal attributes of age and qualifications were contributors to significant differences in perceptions of the support provided by teaching staff, members of the senior management team, consultants, and friends or family who were teachers. Those over 25 years of age were less positive than those in the younger age bracket about the contribution to their development made by senior staff but significantly more positive about the contribution made by consultants. The small number of teachers with postgraduate qualifications (i.e., with more than four years pre-service education) were significantly less positive about the contribution made by teachers from within the school than were their less qualified colleagues: a higher percentage of more highly qualified teachers (80 percent compared to 52 per cent) agreed that consultants contributed to their development and they were also more positive about the contribution of family and friends who were teachers to their development.

Differences in personal attributes had little effect on perceptions of difficulties in gaining support. Those with postgraduate qualifications were more inclined to suggest difficulties with their supervisor than those with initial qualifications. However, professional circumstances – the extent of class-based experience and the number of schools in which teachers had worked - were evident as contributors to significant differences in professional experience with respect to the identification of those who provided support. Those with mostly own class-based experience had significantly more opportunity to benefit from working with consultants and from the input of family and friends who were teachers than did those who had little or no own class-based experience. Teachers whose experience had been in more than one school reported greater reliance on the informal network of teachers in other schools for their development than was the case for teachers who had worked in one school. These teachers were also less inclined to report difficulties with their supervisor than those who worked in one school. This may reflect the absence of an identifiable supervisor or a succession of supervisors in the case of those who worked in different schools and had limited own class experience.

Professional development: linking professional socialisation and practical knowledge
Access to professional development is both a form of professional socialisation and the link between socialisation and the development of practical knowledge. Access to professional learning opportunities is a key factor in increasing a teacher’s practical knowledge, and in demonstrating the degree of support provided by the school and the system for a teacher’s individual professional development. In New South Wales, schools hold funds to enable staff to access professional development provided by the local school or the system. Where teachers have no school to which they “belong,” their access to knowledge of and funding for attendance at professional development courses either within or outside schools is limited.

For beginning teachers, induction processes at the school are complemented by system-provided “induction courses” which tend to focus on systemic procedures, policies and priorities as well as providing information and opportunity for discussion on the issues of class teaching identified by participants. However, discussion and information provided at these venues still assumes knowledge and experience based on class-based teaching and provides little or no acknowledgement of the difficulties of other types of experience. Induction into a profession, as well as into a school is a significant outcome of the process of professional socialisation. During 2003-4, professional development activities, whether provided within or outside schools, provided teachers with opportunity to extend their knowledge of both syllabus and pedagogy. In 2003, primary teachers across the state were grappling with a range of recently introduced syllabus changes, a new mathematics syllabus and a new pedagogical framework (the NSW Quality Teaching Framework) all of which were expected to be known and understood by all teachers, but to which not all beginning teachers had access. The extent of participation in professional development activities within and beyond the school provides therefore a practical measure of opportunity to participate in socialisation in the pursuit of skills and knowledge development required by all members of the profession.

Access to professional learning and the effect of personal attributes

Access to professional development was considered from two perspectives: the encouragement teachers received to participate in professional development both within and outside the school (i.e., at cost to the school) and the degree to which professional development provided a means of improving teaching. Encouragement to participate in professional development activities outside the school was weakly related to only one personal attribute – that of prior work experience – with those who had had prior work experience reporting stronger encouragement to participate in school-funded professional development than those with no prior workforce participation. When considering the effect of professional development on improving teaching, male teachers were less likely than their female counterparts to report success from participation in within school hours (i.e., school-funded) professional development and those with postgraduate qualifications reported more improvement than those with initial qualifications from participation in professional development provided outside school hours (i.e., at limited or no cost to schools). This may in fact reflect their satisfaction with their postgraduate education.
Access to professional learning and the effect of professional circumstances

Access to and improvement gained from professional development was more significantly related to the professional circumstances of beginning teachers than to their personal attributes. Access to activities organised by both school and outside bodies (including departmental providers such as consultants as well as external providers) and occurring both within and outside school hours, was significantly affected by the location of schools, the employment status of teachers, the number of schools within which teachers had worked and the level of own class-based experience teachers had had. Those in metropolitan schools were more likely than those in rural schools to access professional development; those in permanent positions had greater access to professional development than their counterparts in casual positions. Teachers who worked in more than one school had far less access to professional development both on the school site and outside it than did those who worked in only one school and those who had responsibility for their own class had far greater opportunity than those with limited or no own class-based experience.

Being a casual teacher, working in more than one school, working in a rural school and having limited own class-based experience were all professional circumstances which constrained access to and gain from attendance at professional development activities. Beginning teachers, limited in their day-to-day practice by these circumstances of fragmented employment, were further disadvantaged by the fact that they were offered limited opportunity to engage in professional learning and in professional dialogue with other teachers.

Improving teaching: other means of professional learning

Teachers were asked to report on the methods other than professional development they had elected to use to improve their teaching. Teachers were asked to respond to seven items related to methods used to improve teaching, and these items clustered into two broad groups – formal and school-based methods (discussion with school-based teaching staff and with a teacher’s supervisor and attendance at professional development activities) and individual and private methods (critical reflection on teaching, professional reading and discussion with teachers from other schools).

There was little difference occasioned by professional circumstances in ways (other than professional development) by which teachers sought to improve their teaching. Personal attributes appear to have been more significant than professional circumstances in the success or otherwise of ways to improve teaching other than by attendance at professional development. Male teachers and teachers who had postgraduate qualifications were less inclined than female colleagues or colleagues with initial teaching qualifications to see discussions with their supervisor as assisting them in their professional development. There were also significant differences in age groups in reliance on critical reflection and professional reading to improve teaching with those in the older group relying on critical reflection and professional reading far more than
younger colleagues. Those in permanent positions were also more successful in using critical reflection as a tool than were those in casual positions.

Conclusion

The first year of teaching is for many teachers a time when the task of learning to teach appears an overwhelming experience as they attempt to adjust to the practical requirements of induction into schools, systems and the profession. For those who are appointed to permanent positions to teach classes within schools where support can be provided, the difficulties of developing their own practical knowledge of teaching can be ameliorated through participation in a process of professional socialisation. For those excluded by virtue of their experience as casual teachers, of working in more than one school and without the satisfaction of getting to know their “own” class, opportunity to develop as a teacher is significantly constrained.

Until education systems, tertiary education institutions and schools can begin to address these issues, the primary teaching profession in the near future is likely to be grounded on teachers who experienced a fragmented and often frustrating beginning to their careers, who remained teachers in spite of the difficulties rather than because of the very limited satisfactions. Whether beginning teachers, many of them often removed from the processes of induction available to their colleagues in permanent, own class-based positions in school communities, will survive their early years of teaching and in doing so will be able to sustain the profession or will instead flee from it, is problematic for the future of schools and students alike.

REFERENCES


Embedding the NSW Institute of Teachers Framework of Professional Teaching Standards into the Master of Teaching Secondary Program at the University of Western Sydney.

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Abstract:
The Framework for Professional Teaching Standards as articulated by the NSW Institute of Teachers describes clear benchmarks for identifying and describing effective teaching. The Standards provide a language that can be used by teachers to communicate within their community about their profession and in so doing advance the status and standing of the profession. This paper will report on how this Framework is being used as a common frame of reference in the professional experience units of the Master of Teaching secondary program at the University of Western Sydney where pre-service teachers are required to apply their knowledge and attainment of the Standards in varied contexts, both in and outside of classroom settings. The purpose of the Standards application is seen as a significant benefit to pre-service teachers in their preparation for their accreditation for teaching in their first year of teaching and throughout their teaching career.

Introduction

A recent development in education in New South Wales has been the introduction of the NSW Institute of Teachers. Its purpose is to advance the status of the teaching profession. As part of its responsibilities The Institute has developed a system of accreditation for teachers based on a framework of professional teaching standards.

“The Framework of Professional Teaching Standards provides a common reference point to describe, celebrate and support the complex and varied nature of teachers’ work. The Professional Teaching Standards describe what teachers need to know, understand and be able to do as well as providing direction and structure to support the preparation and development of teachers” (NSW Institute of Teachers, p.2).

New scheme teachers, that is, first employed during or after term four 2004, or who are returning to teaching during or after term four 2004 after a break of five years or more need to be provisionally or conditionally accredited in order to be employed in NSW schools. Teachers entering the profession must achieve and demonstrate the minimum standard of Professional Competence. As part of the NSW Institute of Teachers Accreditation Process New Scheme Teachers are required to provide evidence for accreditation in the form of a portfolio.

In our own pursuit of excellence in teaching we have several non-negotiable truisms. First we acknowledge the capacity of every young person to learn and they do that intellectually, spiritually, morally, physically socially and aesthetically. It would be so much neater if all this development was ordered and uniform but that conformist expectation does not allow any learner to ‘walk to a different drum’ or realize their
own unique potential. There is an insidious threat of this in the current trend set by the economic rationalists who conceal or distort the political and economic status quo.

Second we acknowledge the critical role of teachers and parents in this learning process. Supportive, nurturing but challenging environments contribute to the development of learners’ ‘self-worth enthusiasm for learning and optimism for the future’ (www.dest.gov.au/sectors/school/nationalgoals) where pursuit of excellence is validated and exemplarised. The Adelaide Declaration on National Goals for Schooling in the Twenty-first Century (1999) mandates this in terms of the need for young Australians ‘to contribute to social cultural and economic development in local and global contexts’ (p2) and avoid following the ‘school-to-prison pipeline’ (Darling-Hammond 2006) in which young people are ill-equipped to enter the labour market.

Set this in the framework of the Federal Government and the Labour Opposition’s commitment to introduce core curriculum as a way of improving standards and avoid syllabuses being hijacked by educational fads (Ferrari 2007) plus the national accreditation of teacher education courses and it certainly ensures constant contrary media pressure and publicity.

No one would disagree that ‘those who do not succeed in school are becoming part of a growing underclass cut off from productive engagement in society’ (Darling-Hammond, 2006, p.15). Thus all the above muted policies have good credence and many educators have dialogued about embedding these priorities into teacher education programs. At UWS this combined approach was addressed and will be presented in this paper in 3 sections.

1 Pedagogies for Learning
2 Professional Experience 1 and 2
3 Professional Experience 3

Embedding the Standards Framework in the Master of Teaching Secondary Course at the University of Western Sydney

The Framework of Professional Teaching Standards comprises four key stages, three teaching domains and seven elements.

The key stages of the framework are:
- Graduate teacher
- Professional Competence
- Professional Accomplishment
- Professional Leadership

The University of Western Sydney offers its Master of Teaching students the opportunity to take on cutting edge teaching and learning in its Pedagogies for Learning and Professional Experience units. A purposeful and integrated approach has been implemented in the course to embed the standards framework into the secondary program in the Pedagogies for Learning and Professional Experiences units. The Pedagogies for Learning (PED) unit is a foundation, core unit that all students in the course study. It forms the scaffold for understandings for units such as
Professional Experiences (PE). There are three PE units each with a specific skill set and knowledge requirement.

Pedagogies for Learning Unit

Pedagogies for Learning, directly related to professional experience, forms the basis for student teachers to develop the language and understanding of the Standards Framework. This unit emphasises teaching as a profession and particularly articulates the meanings of quality teaching and learning. The NSW Institute of Teachers Teaching and Learning Framework is scaffolded through discussions of the professional dimension of teaching and the nature of quality teaching and learning. The teaching and learning framework is examined and reflected upon through lecture presentations and tutorial activities over a five week period of a total of a thirteen week unit. Throughout the unit the student teachers are encouraged to critically reflect on their professional experiences in schools. This reflection is grounded in identifying standards achieved in relation of the Standards Framework.

Progress towards accreditation in schools by new scheme teachers includes supervision by an experienced teacher and targeted professional development where needed. New scheme teachers are supported by an experienced teacher through classroom observations and through meetings to review and analyse relevant documentation such as teaching programs and student learning outcomes.

In 2006, Teaching Australia produced a Consultation Paper on National Accreditation, for discussions proposing that National Accreditation Standards comprise program standards and graduate standards. It is especially the graduate standards that this paper addresses. The Graduate Standards are described in domains of professional knowledge, professional practice and professional commitment (Teaching Australia Forum, Sydney, March 2007). Currently the three eastern states of Australia demonstrate similarity of content in these graduate standards, although they call the domains by different names (Teaching Australia Synthesis 2007). In NSW these domains comprise seven elements, in Victoria eight elements, in Queensland ten elements. In embedding the NSW Institute of Teachers Framework, it is evident that the UWS graduates will be prepared for likely continuing developments towards a National Framework.

The PED unit at UWS is designed to model the accreditation process used in NSW schools. One of the two assignments for the PED unit is directly related to the Standards Framework. For the assignment student teachers are required to submit a Teacher Learning Portfolio based on evidence that shows their achievements towards the accomplishment of The NSW Institute of Teachers Standards for Graduate Teachers.

The assignment provides the student teacher with preliminary skills in collecting and annotating evidence. The process involves developing skills in collecting evidence to support the student teacher’s progress towards accreditation. The student teachers are required to provide appropriate evidence from their professional experience that explicitly demonstrates the standards that they nominate. The student teachers are asked to annotate the evidence that they include in the portfolio. The annotations should make specific links between the student teacher’s teaching practice and the
Standards. As part of the portfolio process, peers in tutorial groups act as mentors during a tutorial to assist student teachers to further develop their portfolio. The feedback provided by the student teacher’s peers utilises a similar mentoring process as that used by the new scheme teacher and their supervisor.

The student teachers are required to submit three pieces of well annotated documents, that is:

a) two lesson plans that have been developed and
b) one student work sample (with no evidence of the student’s name)

For the two lesson plans the annotations the student teachers are asked to describe how they used their knowledge of content and syllabus requirements; student learning, and pedagogy when planning for effective learning. They are required to include evidence describing

(i) why they selected the activities and resources that they used
(ii) and how this catered for their students’ learning needs.

For the student work sample student teachers are required to provide annotations that reflect on

(i) The student’s progress towards the learning goals that were established
(ii) The effectiveness of the teaching and learning that was planned and delivered
(iii) The extent to which different learning needs were catered for
(iv) The feedback communicated to the student and/or parent/caregiver

In a Pedagogies for Learning tutorial the student teachers present an interim draft of their portfolio to a group of 4/5 peers who provide them with feedback on their portfolio. The peers’ role is to act as mentors and provide written feedback to the student teacher which is then incorporated into a final assessable report.

The development of a portfolio is seen as providing the groundwork necessary for student teachers to gain an understanding of the portfolio process and its relationship to the accreditation process required of new teachers.

Professional Experience

The three Professional Experience Units (1 & 2 & 3) are core units in both the Bachelor and the Master of Teaching Secondary. They are designed to introduce, extend and maintain teacher education students at UWS to the philosophical, ethical, practical and pedagogical perspectives of becoming a teacher in contemporary secondary educational settings. Their core values are fostering a deeply held commitment to excellence in teaching, critical self-awareness and capacities to respond to individual needs of learners in schools. The competencies and expectations for learning and teaching experiences are clearly outlined in the UWS Secondary Professional Experience Handbook and the UWS Professional Experience Policies and Procedures Guidelines distributed to every student and Field Based Teacher Educator.

Within Professional Experience 1 and 2, both distinguished by the Focus Week Tasks as well as the continuous day-to-day teaching in a 3 and 4 week block, the NSW Institute of Teaching Elements were reshaped in to 3 major assessment items: the Questions and Reflections for Focus Week, the Learning Feedback Sheet and the Final...
Report.

When pre-service teachers first enter a school setting as part of their program, it is critical that it is not an observational vacuum or a personal discourse. Focus Week is an unsupervised professional experience where teacher education students are introduced to the complexity of teachers’ work with clarity and explicitness. It is therefore designed as an orientation to a secondary school, to focus students’ attention on educational matters, to probe their own developing reflective skills and to support them becoming intellectually perceptive, and is completed before the HECS census date. In this aspect, social justice is high on the School of Education agenda, considering the socio-economic needs of UWS students who may withdraw with no financial penalty.

Selected aspects the NSW Institute standards were condensed into a succinct, manageable 3 page document which detailed what we considered to be those most pertinent to UWS students. The students were directed to make effective observations and critical reflections and write a short response recounting a conversation or experience for each aspect that they determined assisted in their development as a teacher. This data was to be collected by observation, by interview, by collegial discussion and dated. The student teachers were expected to act in a professional manner at all times throughout these processes. It was completed with a 500 word personal reflection and was used as key tutorial material after they returned from Professional Experience. Sample items are:

- Teachers apply and use knowledge of their discipline in content-rich teaching and learning activities
- Teachers apply and use practical and theoretical knowledge of pedagogy in meeting the needs of their students
- Teachers use a broad range of assessment strategies to assess student achievement of learning outcomes
- Teachers manage learners’ behaviour and promote student responsibility for learning

A sample of student feedback was ‘I have found the emphasis on reflection particularly in the Pedagogies assignment invaluable. I hope it is skill I can carry throughout my career’ (Student 1, 4 April 2007). ‘Initially I felt confusion. But by the third day I felt much more confident and taught my lessons on day 4 and 5’ (Student 2, 4 April 2007).

‘Education and teaching involve the crucial act on intervening in the world and the recognition that human life is conditioned not determined….it is also invested with a critical self-consciousness regarding what it means to equip students with analytical skills to be self-reflective about the knowledge and values they might meet in their classrooms (Giroux, 2006, p 20). Mindful of this we deliberately structured both the feedback form and the final report with the same aspects to facilitate the development of the process for both teacher and student. They are to be implemented for the first time in semester one 2007.

The learning feedback sheet to be optimally used by the Field Based Teacher Educators for feedback at least once every day is titled the Secondary Program
Observation and Feedback Form. Research has shown that feedback is a critical aspect of professional growth (Darling-Hammond, 2006) and effective pre-service education is linked to slower attrition rates of beginner teachers (Henke, Chen, Geis & Knepper 2000).

With little knowledge or self-reflection, student teachers are more likely to rely more on rote methods, and are less skilled in dealing with the complexity of learning and teaching. Structuring frequent feedback from the school-based professionals is a joint professional responsibility of the UWS academics and the students themselves. Our community engagement responsibility coupled with our teacher educator role impels us to share professional knowledge with the teaching profession and adopting the new Institute Standards offers opportunities for a mutual language of reflection on this new approach.

There are 5 main criteria, with smaller expanded items under each major heading.

They are:
- Demonstrating knowledge of content and pedagogy
- Planning, assessing and reporting for effective learning
- Communicating effectively
- Creating and maintaining safe and challenging environments through classroom management skills
- Demonstrating professional knowledge

The indicators for the above are
- Well Developed for stage of development (WD)
- Competent for stage of development (C);
- Experiencing Difficulties for stage of development (ED);

We are of the mind that these structured reflections will illuminate the critical pedagogical and theoretical principles that we desire for our students. (As this is a 2007 innovation feedback will be sought from academics, students and teachers by focus groups and by survey and will be the subject of a subsequent paper). Towards a similar end, the self evaluation from Professional Experience 3 is a structured reflection. Professional Experience 3 provides teacher education students with opportunities for cutting edge teaching and learning and is located in alternative teaching and learning settings. The flagship of the unit is Learning Choices Next Generation (with connections to Take Five and Links to Learning). Other offerings include Plan it Youth, Maximising Potential (a leadership program) and Beyond the Line.

It is the students’ voices that are especially revealing here as they reflect on their completed experience in relation to Elements now established in the Institute’s Standards. In terms of Element 1, the aspect that is uppermost in PE3 is knowledge of pedagogy. In one-to-one and small group situations involving students with gaps in their education and challenging home lives, they apply their practical and theoretical knowledge to meet students’ specific needs. Research confirms that project based learning that engages students in authentic experiences can ‘turn around’ students who are disaffected and disengaged in the school environment. One such learning
experience planned by two UWS students was the design of a school magazine as part of a Take Five program. The project included the design of the magazine cover and a cover story using advanced graphic and multimedia tools. The adolescents involved in the project had to give a Powerpoint presentation to the school’s editorial board demonstrating their work. These learners were at risk of leaving their school.

In their reflections, the two UWS students on this project said:

*Initially we were a little nervous because these students were at risk of leaving school. We quickly realised, with added information from project co-ordinators, that these students do not like being reminded of the school environment and prefer an alternative setting. This was important because it was up to us to take into consideration the needs of these students... We had to adjust the lesson plans so that we varied between writing and working on the computers. We tried to work with the students at different levels. For example, sitting on the floor with the students and chatting; using the one on one approach or giving them free time when they felt frustrated or felt they were not succeeding in their task...Sometimes a student was aggressive because they probably had a difficult day or other personal problems. In such situations, the project co-ordinators told us to give them space. Later in the day these students joined our lessons! A very important lesson for us as beginning teachers.*

*These students gave us insights into their way of thinking. As adults we assume a lot, forgetting that these are adolescents who are still learning and have many misconceptions about life.... Talking about their likes and dislikes created a good rapport with them and humour was also a great ice-breaker. Some students lack self-confidence. When the magazine was completed, these students were so proud and the completion of the magazine lifted their sense of self-worth and belief in themselves.*

The two UWS students also reflected that their final professional experience block in schools was enriched by their confidence in teaching students with difficult patterns of behaviour. They used positive reinforcement, more patience and humour; and they described the reactions of students in the classroom as ‘phenomenal’. They realized that students saw them as approachable; and they felt that they ‘had grown as teachers and saw things from a different perspective.’

Powerfully, the UWS pre-service teachers reflect on PE3 in terms of Element 2, as an opportunity to know and respect the backgrounds of the students with whom they work in this unit – their social, ethnic, cultural and religious backgrounds. This was evident in many of the programs from which students chose their experience. One student who participated in a Beyond the Line experience to Moree, wrote:

*Approximately 36% of the student population is of Aboriginal descent; and Aboriginal Education Assistants help students negotiate their learning outcomes. There are issues of low self-esteem and low socio-economic background. However, having come from a rural environment in another country and with a passion for agriculture, I want to teach in the country. The experience provided me with the incentive to develop proactive partnerships with parents and local community to develop pedagogy that will be culturally balanced.*
Additionally, because this unit encourages small group and one-to-one teaching, UWS students have the opportunity to develop understandings about how students learn and what their skills and interest are. They particularly benefit from working alongside those who regularly engage students with challenging learning behaviours and they learn to apply effective strategies for teaching such students. They use such knowledge to enhance learning outcomes as is shown by one of the students in the Maximising Potential program who reflected on this at length:

Through this experience I was trained as a personal leadership coach, learning and improving skills such as questioning techniques which will help my teaching practice be more effective. Not only did I become a coach but I also received coaching which helped make me more focused on achieving goals I’d set for the future. Through working with two Year 11 students who were identified as significant cultural leaders within their school community, I have gained an insight into issues being faced by youth of Pacific Islander origin and have helped to establish an after school homework centre offering extra assistance with school work. This education setting enabled me to experience a more individualistic approach to teaching.

Within the PE3 unit, several programs require the pre-service teacher to plan with a budget. Consequently, they learn not only the identification of learning goals (a focus of Element 3) but also the design of achievable projects and the selection of resources to support students’ learning. This is closely related to the element of Explicit Quality Criteria in the Quality Teaching Framework. For the pre-service teachers, the assessment tends to be visible in a completed project that in turn informs their further planning. Their observations demonstrate that the experience has been significant for them as well as for their students:

My project was focused on animal anatomy. The students would make prototypes of animals with heavy cardboard pieces and a wooden jigsaw frame in which the pieces would be nested. The initial planning glossed over the practical reality of how to obtain specific resources such as the scroll saw. After two lessons dealing with a combination of task avoidance tactics I found the best approach was to provide a quick demonstration that sparked genuine interest in reaching a very obtainable goal for the day, then providing individual set-up and guidance. Each goal needed to be related to relevant experiences such as jobs sought. Only in a one-on-one nature did students respond to the task. The resource challenges for me arose because the carbon paper method I had trialled (to transfer the design to the wood) proved a difficult budgetary item; and a substitute method was more time consuming. I learnt there is no such thing as over planning and that the best planning is by trialling the project in the actual setting with the actual resources.

In project-based learning, the explanation of goals (an aspect of Element 4) is very important, as is the ownership of those goals. In the projects, the adolescents’ interests are given priority. The role of the teacher is one of facilitator, probing, understanding, re-interpreting, synthesizing, incorporating suggestions. UWS students demonstrated flexibility in adapting their plans:
I worked in a Take Five program with students aged 12-15 whose school attendance and behaviour had identified them as at risk of leaving school. It was definitely challenging for me but I have learned so much. These students struggle with behaviour, treatment towards others, completing work, reading, anger management and family issues. The program really gives an opportunity for students to think about their actions and choices, where their behaviour has led them and what they want for their future. I had arranged to run a few different projects over the weeks. The first was creating a vegetable garden with students involved in planting vegetable seedlings and caring for them till they were ready to harvest. To see students excited in the second week to check on their plants and scream when they could see a shoot in the soil was fantastic. I’d planned wooden toy-making as the second activity; but one of the students added to that with the idea of wooden key hangers. This project gave me the opportunity to learn teaching and managing skills with some of the toughest students in a classroom. It also taught me compassion, understanding and insight into their backgrounds. I know it will stay with me as I head into the classroom.

Probably the core of the reflections that are completed in PE3 are to do with the creation of a learning environment in which adolescents can experience respect and rapport. The disaffected students have often missed this. For the UWS students, the first priority is this element – the creation of an environment in which students can collaborate and enjoy feelings of successful learning. One UWS student wrote about her experience in an Intensive English Centre located in a high school:

I team taught with one of the teachers there and also advised some students how to seek employment or apply for a traineeship. It was rewarding to see students’ eagerness to learn and I was so impressed with the teacher’s ability to meet each student’s needs without compromising other students’ learning. I also felt very emotional because the experience reminded me of the difficult times when I was in an IEC. However, I think this assisted my understanding of the students’ needs. The majority of students at the time of my PE3 were from Arabic speaking backgrounds or African immigrants. As a result many students displayed writing difficulties and were not used to school routines. This was frustrating for teachers and they had to employ a variety of techniques to motivate the students. Specialist migrant counselors provide welfare and settlement support to students, including those from refugee backgrounds. Many students from Sudanese background needed counseling because of the traumatic events in their past. It was good to see how counselor and school teachers conversed about the best way to satisfy the students’ needs.

Another student reflected on her experience with at-risk students:

I found that building these students’ trust was essential. And I was willing to spend time in this area. I often found myself asking the question ‘Was I or anyone I knew like this when we were at school?’ I am glad that I experienced this teaching. Often in school, teachers may not see these students as anything but ‘bad kids’. I probably would have been like that, too without this experience. It has certainly changed the way I will approach teaching.
These innovations are being initiated for several reasons, one of which is that UWS does not want to travel down the USA path of ‘50,000 individuals entering teaching each year without adequate preparation, most of them assigned to teach the nation’s most vulnerable in the highest needs schools….because states have lowered standards to fill vacancies rather than increased incentives for quality teachers (Darling Hammond, 2006, p. 21).

In utilizing the Standards within these units at UWS, we as a teaching team believe it will optimally assess the skills, knowledge, understandings and values that enable students (both university and school) to expand the possibilities of what it means to be a lifelong learner and an authentic pedagogue. It has assisted in ‘providing the language’ within the academic team but more importantly it has given the teacher education students and the teachers in schools a common language to map progress and chart development in a professional way. It augers well to continue to be of significant benefit to our current and future students.

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Drawing upon ‘real’ classrooms to create a ‘virtual’ learning environment: Investigating what makes a virtual classroom an authentic learning space

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Abstract
It is widely accepted that well designed multimedia environments can provide an alternative to real-life settings without sacrificing the authentic context (Herrington, Oliver and Reeves, 2003). Advances in educational software allow for the development of software that supports users as they engage within the virtual context as they view real-life events with opportunity to slow-down, accelerate and review pertinent sections. ClassSim, an online computer-based simulation, was developed by a team of researchers (Ferry, Kervin, Cambourne, Turbill, Hedberg and Jonassen) to support pre-service teachers in understanding the work of a teacher in a Kindergarten literacy classroom.

ClassSim software was informed by Herrington, Oliver and Reeves’ (2003) design elements for authentic learning environments. The process of capturing classroom experiences from the field and transferring the essential elements into the design of the software to represent an authentic learning environment is described in this paper. Also the paper explores the views of practitioners from current, real Kindergarten classrooms as they experience the virtual classroom context as presented in ClassSim. These two avenues explore how literacy teaching is represented and reflected within the learning experiences encapsulated within the virtual environment and how this connects with classroom reality.

The paper also examines the virtual ClassSim environment, and how it represents the complexity of actual Kindergarten classroom environments. In particular, the similarities and differences between the virtual ClassSim environment and the actual Kindergarten classroom environment are explored. Furthermore, the reported research makes suggestions about how the virtual environment could be more representative of actual classroom reality. Two fundamental questions that frame this inquiry include:

1. How realistic does a simulation have to be in order for it to be regarded as authentic?
2. What features of the simulation engage users to think deeply about the complexities of their classroom experiences?

Introduction

Classroom learning environments are complex in nature. Teachers are called upon to make many difficult and intricate decisions as they operate within these environments. Indeed, teachers make “…literally thousands of decisions every day” (Eby, Herrell & Jordan, 2006 p. 3) and while it may not be possible to reflect upon each decision, it is necessary for teachers to have inbuilt mechanisms to support them to implement appropriate solutions to the problems and puzzles that confront them and their students everyday.
The virtual classroom (ClassSim) reported on in this paper aims to support pre-service teachers for a targeted purpose; it intends to be useful and relevant to pre-service teachers in their immediate tertiary situation and subsequent professional lives. The resource responds to the research into pre-service teacher education that argues that often universities do not prepare beginning teachers effectively for their entry into the teaching profession and pre-service teacher education courses often present a fragmented and decontextualised learning experience (for example, House of Representatives Standing Committee on Education and Vocational Training, 2007; Ramsey, 2000; Entwhistle, Entwhistle & Tait, 1993). Such research claims that many learning experiences in pre-service teacher education make it difficult for beginning teachers to retrieve knowledge from their university experiences when they are required to apply it in classroom situations. This happens because there have often been minimal previous links between the theory and the practice (Kervin & Turbill, 2003; Bransford, Sherwood, Hasselbring, Kinzer, & Williams, 1990). While these findings encompass a broad range of teacher education institutions, the development of the software was targeted to respond to the observed needs amongst pre-service teachers within one university.

Throughout the development of the simulated learning environment consistent effort was made for the software to be a tool to support pre-service teachers in connecting the theory of their studies to the reality of classrooms. Ramsey (2000) in his review of teacher education in New South Wales recommended that pre-service teachers receive quality classroom-based experience supervised by an accredited teacher mentor. Further, he emphasised that just providing more extensive classroom-based experience was not guarantee of quality experiences. Darling-Hammond (1999) has also highlighted this issue and conceded that school-based practical experiences often consist of a series of isolated, decontextualised lessons prepared and implemented according to the requirements of the supervising teacher. The creation of a learning environment that would provide additional classroom based experience within a focused and structured virtual environment, that could be deconstructed with the students to support their developing understandings, was the focus in the development of the software.

Such rationale when coupled with Herrington, Oliver and Reeves’ (2003) assertion that many researchers and teachers now accept that well designed multimedia environments provide an alternative to real-life settings without sacrificing the authentic context, provided the context for the development of this software. Advances in educational software have demonstrated that it is feasible to create a motivational simulation that supports pre-service teachers by providing them with tools that allow them to view the effects of their decisions within a virtual classroom context (Aldrich, 2004). A simulation allows its users to participate in the creation of a virtual-classroom world; make decisions like a teacher would have to, and then view and reflect on the effects of a multiplicity of classroom management decisions and teaching decisions. The development and use of a classroom-based simulation is one way to support the range of learning strategies incorporated within teacher education programs.
Developing ClassSim as an ‘authentic learning environment’: connecting the ‘virtual’ with the ‘real’

ClassSim, an online classroom based simulation, was designed to enable pre-service teachers to interact with a virtual classroom environment as they assume the role of the teacher. With the support of a large grant from the Australian Research Council entitled: *Investigating a classroom simulation designed to support pre-service teacher decision making in planning and implementing literacy teaching* (DP0344011) a team of researchers (Ferry, Kervin, Cambourne, Turbill, Hedberg and Jonassen) created iterative designs of the software. Two key avenues, each of which will be explored, guided these designs.

Throughout the development of the software the challenge was to make it an ‘authentic learning environment’ as elements of ‘real’ classroom environments were incorporated within the ‘virtual’. Guidance from the literature was sought and Herrington, Oliver and Reeves’ (2003) review of the literature, which identified nine design elements of situated learning environments, became the framework directing the software design. This framework was continually reviewed as design elements were considered within the software development.

While these design elements guided the process, trials of the software were conducted after each iterative design. Since 2004, more than 500 pre-service teachers studying within the Faculty of Education at the University of Wollongong have engaged with the software. An overview of research trials conducted is reported in Table 2. Data collected and analysed from each student cohort provided the researchers with considerations to take into subsequent versions of the software as the design principles for ‘authentic learning environments’ were further explored.

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-service teacher cohort</th>
<th>Number of students involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>First year students enrolled in alternate teacher education program</td>
<td>24</td>
</tr>
<tr>
<td>2004</td>
<td>Fourth year Bachelor of Education students</td>
<td>20</td>
</tr>
<tr>
<td>2005</td>
<td>First year student enrolled in alternate teacher education program</td>
<td>24</td>
</tr>
<tr>
<td>2005</td>
<td>First year Bachelor of Teaching students</td>
<td>187</td>
</tr>
<tr>
<td>2005</td>
<td>Third year Bachelor of Teaching students</td>
<td>40</td>
</tr>
<tr>
<td>2006</td>
<td>First year Bachelor of Teaching students</td>
<td>180</td>
</tr>
<tr>
<td>2006</td>
<td>Third year Bachelor of Teaching students</td>
<td>180</td>
</tr>
<tr>
<td>2007</td>
<td>First year Bachelor of Teaching students</td>
<td>185</td>
</tr>
</tbody>
</table>

Table 1: Overview of pre-service teacher use of ClassSim

*Design Element 1: Provision of authentic contexts that reflect the way that knowledge is used in real life*

The virtual classroom within the online simulation is representative of a ‘typical’ Kindergarten classroom. Drawing upon considerable classroom-based ethnographic data, coupled with recent Kindergarten teaching experience, the researchers began to consider what a two-hour block of time, focused on literacy teaching, may ‘look’ like in the classroom.

Teachers were invited to construct narratives, drawing upon the stories from research and personal professional experiences, to reveal the intricacies and complexities
within Kindergarten learning environments. These narratives captured the depth of learning theory, philosophy and rationale to reveal a framework to showcase and explore the reality of Kindergarten classrooms. Barth (1990) writes, “…with written words come the innermost secrets of schools” (p. 66). Representing these within the simulation environment would enable pre-service teachers to be both exposed to and able to interact with the richness of these experiences.

To do this, the narratives were dissected to identify key events within Kindergarten classrooms, decisive decision making points and opportunities to explore the story in connection with theory. This then became the framework for the flow of the series of events to be revealed within the virtual Kindergarten classroom simulation. This is represented in Figure 1.

Pre-service teacher education is frequently criticised for its presentation of ‘abstract’ knowledge, often removed from the reality of the classroom. Focusing the virtual environment on the teaching of literacy was responsive to the reported difficulties many pre-service teachers experience with the classroom application of abstract and compartmentalised knowledge (Hoban, 2005, p.8.). When in the real classroom environment, teachers need to be able to integrate and apply theoretical knowledge and understandings with what they do in the classroom. Therefore, it seems appropriate for the virtual environment to encourage users to make decisions similar to those ‘real’ teachers make every day. Using the basic flow identified from the teacher narratives, connections were able to be made within the simulation between the story and the theory as we made explicit connections between what was happening in the virtual classroom and references to text books, department policies and additional readings.

To further strengthen the connections between the ‘real’ and ‘virtual’ learning environments, classroom artefacts were incorporated within the simulation to add further authenticity. Digital photographs portraying images of Kindergarten classrooms were identified as a powerful medium to do this.

Figure 1: Basic flow of the simulation
After a number of trials with the software had been conducted, the second and third named researchers visited different Kindergarten classrooms and had ‘real’ children engage with the range of different teaching and learning experiences that were incorporated within the software. This provided opportunity to further refine and develop these components of the simulation in view of the feedback received from the children and their teachers. But, more importantly, these experiences also provided samples of student work product that were representative of each of the episodes. These were incorporated within subsequent versions of the software to further increase authenticity for the pre-service teachers.

Design Element 2: Authentic activities; access to expert performance or advice

As described in the discussion of the first design element, teaching and learning experiences incorporated within the simulation were collected from real classroom examples. In the introduction of new teaching and learning experiences within the
virtual environment, the user is able to access ‘teacher thoughts’ pertaining specifically to that episode. Such commentary was developed to provide pre-service teachers with access to expertise from someone in the field.

![Figure 4: 'Teacher thoughts’ within the simulated environment](image)

The need for the user to respond to student issues is a constant theme throughout the software. As way of making sense of how individual students, and the class as a whole, are responding to classroom events at specific times, the Quality Teaching Framework (DET, 2003) guides these sections. The framework is used to describe in detail what is happening at that time, given previous decisions, according to the three dimensions of pedagogy: intellectual quality, quality learning environment and significance.

![Figure 5: Student update organised according to the NSW Quality Teaching Framework](image)

At each of these points the user is able to access commentary provided by an expert for that child at that particular point in the simulation for each of the dimensions.
Also, the user is able to see a rating of where on the continuum that particular child may be, along with a visual image representing what that child may look like at that time. Time was spent developing more than forty facial expressions for each individual child within the virtual classroom. This stemmed from awareness that often the first indication teachers get as to how engaged a student is, is from looking at their face. With that in mind, the development of a visual representation seemed appropriate to accompany the descriptive written commentary.

Design Element 3: Expert performances and modelling of process

The simulated Kindergarten teacher provides a model of teaching practice representative of a wide data pool and range of professional experiences that emerged from the development of narratives. The opportunity for the users to interact with these expert stories and examples of teaching process provides for a rich data base for commentary, analysis and reflection. In trials of the software, many users have engaged in specific analysis of the virtual teacher. This, when coupled with other classroom examples and theoretical understandings, provides a solid platform of understanding for our pre-service teachers as they consider the work of a teacher.

The interwoven nature of the teacher stories within the one environment enables the user to explore different options at key points within the simulation. Teachers have a unique style and way of interacting with their class. The ability for the decisions made by the user to impact upon not only the teaching and learning experiences offered, but also the interaction of the teacher with students in the virtual class, provides example of the different pathways teachers take to support student learning. This is a difficult concept for pre-service teachers to understand. Having them work within a virtual environment, where their tutors intimately know the different pathways, provides a common context within which to unpack and explore this.

Design Element 4: Multiple roles and perspectives

Initial plans for the early versions of the software explored the idea of enabling the users to select and assume a role within the classroom (for example, as the teacher or an individual student). However as the targeted audience (pre-service teachers) became more refined, and the rationale for the development of the online simulation was considered further, it was considered more meaningful to develop the software where the user assumed the role of the teacher.

As the teacher within the virtual environment, the user is regularly asked to make decisions about issues around classroom organisation, management and teaching and learning experiences. The decisions the user makes guides their course throughout the simulation. Some decisions may appear fairly inconsequential, but may later impact upon what happens in the classroom. An example of such a decision involves the users decision as to whether they will remain in the classroom or walk through the playground prior to the formal school day beginning. If the user selects to remain within the classroom they are able to finish last minute preparations for the days lessons. If the user selects to walk through the playground they are able to detect a bullying situation between two children within the class and deal with this before the day begins. Teachers may argue support of either of these options. The different options within the simulation have been included not to show one as being right or
wrong, but to encourage the pre-service teachers to consider the various ways their decisions and actions can impact on what happens in the present and future within the classroom.

The role of a classroom teacher is more than just teaching. The simulation also includes a number of random events requiring the user to make management decisions. These decisions have been designed to illustrate the often unpredictable nature of classrooms and to further exemplify the impact that these can have upon the teacher, the students and the quality of experiences and subsequent student work product. The occurrence and frequency of these random events is unknown.

In addition to this, the software also has capabilities for the user to monitor and track individual students, who are reflective of the diverse nature of classrooms, as they engage with the classroom environment organised and facilitated by the user as the virtual teacher. There are also opportunities for the user to view a narrative summary of the class as a whole. This was a feature we built into later versions of the software as a result of feedback from pre-service teachers who expressed a need to have an overall picture of how things were going. Further discussions with actual teachers also revealed the importance of that overall perspective of the classroom.

![Figure 6: Narrative commentary on the whole class](image)

**Design Element 5: Support for the collaborative construction of knowledge**

Just-in-time support is offered throughout the virtual environment through the inclusion of summary sheets that feature links to core subject textbooks, mandatory departmental policies (NSW), classroom artefacts and relevant web references. These links take the user to organised information sheets about specific areas that relate to what is happening within the simulation at that time. As the software was developed for pre-service teachers, these pages feature links to sources relevant to their immediate professional situation.
Design Element 6: Reflection so that abstractions and generalisations can be formed

The need to be a reflective practitioner is consistently emphasized by ‘real’ teachers and a consistent theme within the literature (McLeod & Reynolds, 2007). The embedded thinking space within the virtual environment provides opportunities for the user to reflect on what has happened in the simulated classroom and plan, articulate and justify future decisions as they occur. This cognitive tool was developed to provide avenue for more formalised reflection. Pausing and reflecting is not a natural process for many pre-service teachers. Including a tool that was continually accessible, with prompting questions to think about, was one way to encourage articulation of thoughts, rationale for decisions and notes for future reference amongst the pre-service teachers that interacted with the virtual environment.
Design Element 7: Tools that enable tacit knowledge to be clearly articulated

The thinking space provides opportunity for the user to articulate their understandings at decisive points. Earlier trials of the prototype saw many users taking physical notes from the summary sheets. At this time we observed the thinking space did not allow the users to fully build upon their tacit knowledge. Subsequent versions of the software slightly changed the nature of the ‘thinking space’ into a more ‘notebook’ form, where the user was able to cut and paste from summary sheets into a notebook facility which they can later print for their records, in addition to their own notes recording thoughts, rationale for decisions and questions to follow up.

Our data has revealed that notes generated within this space have been used to support the development of assignments and to also stimulate reflective comments while on actual practicum experiences.

Design Element 8: Scaffoldings and coaching by the teacher at critical times

Information about what the teacher is thinking is available to the user throughout the running time of the simulation. These screens were designed and included in each version of the software to allow the user to enter into the ‘mind’ of a teacher to begin to see why they make the decisions they make (Figure 4 provided example of this). This coupled with the support materials and opportunity to formally reflect on what is happening within the thinking space, supports pre-service teachers at critical decision points.

The contained environment of ClassSim, where each of the options and possible outcomes of these are known to tutors, has enabled support for the pre-service teachers as they deconstruct the virtual environment to inform their understandings of the real classroom context. It is difficult for university tutors to deconstruct actual practicum experiences as typically they were not at the site and did not see or experience what the pre-service teacher describes. This unfamiliarity often makes it difficult to meaningfully scaffold the pre-service teacher as they make sense of the

Figure 8: The ‘Thinking Space’
experience. The virtual environment, however, provides a common experience that allows for scaffolding and coaching at critical times.

*Design Element 9: Authentic assessment of learning within the tasks*

The software has been included as a key learning experience within core subjects focused on curriculum and pedagogy in the first and final years of the degree structure. The focus that is taken for each of these levels is remarkably different. In the first year subject, the software is used as a way to prepare pre-service teachers for their first real school based visits. Our experience with first year students has shown that the very nature of classrooms often makes them an overwhelming environment for pre-service teachers at the beginning of their studies. Having the opportunity to ‘play’ and ‘explore’ the virtual environment gives them scope to understand the complexity of the environment, and gives us time to begin to deconstruct key elements with them. We have found this then gives them a lens through which they can view their actual classroom based experience. Alternatively, final year students have used the software as a way to articulate what they know about the nature of classrooms and the role of a teacher, and a mechanism to identify areas for future professional learning. They have demonstrated ability to make significant connections between what they have experienced across their school-based experience (including the simulation), the role of a teacher, and where their ‘gaps’ in knowledge and understanding are. In both these instances, pre-service teachers are provided with continued access to the software through a URL and data shows that many of them continue to revisit the simulation after these structured subject experiences.

*Critiquing ClassSim as an ‘authentic learning environment’: ‘real’ teachers examine the ‘virtual’ environment*

Throughout the process of developing the ClassSim software different teacher experiences, their classrooms and their students, were examined to provide the framework for and the detail within the virtual classroom. The interaction of the pre-service teachers with the software and their feedback further informed the software development as data collected from trials were analysed and fed into iterative designs. It became evident to the researchers, that it was timely for the software to be viewed and critiqued by ‘real’ teachers to further inform the study, particularly in relation to the authenticity of the presented learning environment.

To facilitate this process, six ‘real’ teachers were invited to interact with ClassSim as they explored parallels between the virtual environment and that of their experiences within actual Kindergarten classroom environments. These teachers were invited to participate in the research during a professional learning experience facilitated by a literacy professional association, run external to their school contexts. An overview of each teacher who participated in this research is presented in Table 1.

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Qualifications</th>
<th>Years of Experience</th>
<th>Grade/s taught</th>
<th>Current grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samantha</td>
<td>Bachelor of Education (Honours)</td>
<td>3 years</td>
<td>K &amp; 1</td>
<td>K-1</td>
</tr>
</tbody>
</table>
Jennifer
Masters in
Education (by
research)
16 years
All grades from
K-6
Not currently
teaching

Kate
Bachelor of
Education
(Honours)
2 years
K & 5
5

Georgia
Masters in
Education
(Special
Education)
3 years
1 & 3
1

Rachel
Bachelor of
Education
(Honours)
1 year
K-6 (casual
basis)
Casual Teaching
K-6

Susanah
Masters in
Education
25 years
K-6
2

The experiences, comments and process of interaction for each teacher were captured through individual case studies. Each teacher was interviewed individually to identify specific demographical information. Time was then scheduled for the teachers to interact with the software at mutually convenient times. Originally it was anticipated that these sessions would occur with groups of teachers. However, only two teachers scheduled times together to work with the software and the researcher. The other teachers all scheduled an individual time. As the teachers interacted with the software, they were encouraged to use the software’s embedded tool, the ‘thinking space’, to capture their personal beliefs and reactions throughout the running time of ClassSim. During these times the first named researcher observed each teacher. Observation notes and ‘thinking space’ entries were analysed by the researchers to identify specific questions for subsequent semi-structured interviews.

Observations as the teachers engaged with the software

Each of the participants appeared to access and begin to interact with ClassSim in similar ways. They all took time to read and gain in-depth knowledge of the three introductory features of the simulation; the general classroom situation, information particular to the teacher and the targeted students through accessing the students’ profiles. All participants appeared to see the importance of these features as they spent extended periods of time reading and comprehending each of them, especially in relation to the five targeted students’ profiles. After these initial pages within the software, each of the six participants revealed varied approaches to exploring the rest of the ClassSim software.

Some common trends appeared as the participants utilised ClassSim and engaged in decision making processes. When the participants were faced with a decision, prior to them answering it, they were observed to revisit the information available to them through the summary sheets as well as access and write in their thinking space. The participants were observed to be clicking ‘back and forth’ several times (from the additional information, to the decision and to the thinking space) before any decision was made. There was a single random event which all six participants were faced with and needed to respond to. In this situation the participants did not access any additional information, nor did they hesitate or wait before they responded to this decision. This decision was in regards to letting Gavin go to the toilet. Not one
participant denied his access to the toilet. At this time, one participant asked, “does he wet his pants if you don’t let him go?” I hope so because that’s a very likely case in a kindergarten classroom situation like this.”

The selection of episodes among the participants, to guide the teaching and learning experiences within in the literacy block, were quite diverse. Each participant demonstrated their understandings of teaching literacy and preference towards a diverse range of literary experiences. As such, they ordered their own selected literacy learning experiences (episodes) in completely different ways. However, there was a single distinctive comment in which was made at different intervals throughout the literacy experience. This comment based on the notion that the ‘usual’ learning experiences in which they (the participants) would generally incorporate into a daily literacy block were not present or offered for them to select and undertake. It was through the interview process in which this notion could be further explored to reveal exactly what learning experiences were absent.

Although each of the six participants demonstrated an individual and unique method to ‘tackling’ the simulation, there were comparable trends which appeared throughout each participation’s interaction with ClassSim. Every participant regularly accessed the ‘student updates’, particularly to inform a decision they were required to make. Accessing this information appeared to support each participant to gain insights into the student’s reactions to the decision (and its subsequent consequences) made. The participants also accessed the additional support information, such as the summaries. However, the extent to which each of the participants appeared to utilise these summaries varied greatly; some participants read them carefully, others were observed to skim them. Another aspect of ClassSim, which was used by all participants, was the opportunities to listen to the teacher’s voice over. This tool served as an additional way for the participants to gain further insights into how the teacher is conducting both the class and its associated learning experiences, through verbal communication.

**Analysis of ‘thinking space’ entries**

The ways which each participant accessed and utilized the embedded tool, the ‘thinking space’, proved to be of greater differentiation. Some participants wrote less than 250 words, while others wrote in excess of this. Analysis of each of the six participants’ thinking spaces provided insights into a variety of different critical aspects of teaching, which proved to be quite contrasting with each other.

All six participants raised issues in relation to the teacher’s aide. Participants questioned how a teacher’s aide was present for such a long period of time (20 hours per week) as well as what the teacher’s aide was doing during the running time of the ClassSim software. One participant stated, “20 hours for a teacher’s aid! That’s like having two teachers in the one classroom almost all the time!” During ClassSim the user is presented with an image where the students are seated on the floor and the teacher’s aide is sitting with them listening to the teacher. At this time, one participant declared, “the teacher’s aide should not be sitting on the floor with the students listening to me talk, but should be active and doing something more productive…I’m not always sure what the teacher’s aide is doing.”
Several participants questioned what time of the academic year it was in the virtual Kindergarten classroom. One participant acknowledged, “my decisions would be a lot different, depending on the time of the year it is.” The participants described that having this information would determine their decisions in relation to behaviour management, the general running of the classroom, and decisions they were faced with during the episode selection phases. At a decision point in the software, a participant was observed to stop and comment to the researcher, “this decision is tricky. I mean if it was the beginning of the year, I would definitely undertake handwriting using the worksheets, while if it was late term 3/term 4 I would be modeling handwriting and asking students to use their handwriting books…”

The inclusion of parent helpers within the virtual classroom was something that all participants commented upon. Issues focused on at these times included the difficulties and/or complications of parent helpers within the classroom as well as general comments in terms of their relationship with parents. One participant described, “this (parent helpers) is a mixed bag…“if they are good they can come but if they are dodgy and their mobile phones ring then no, I don’t want them to come.” Another participant wrote in their ‘thinking space’,

“My frustration about parent help stems to the motivation of the parent… their purpose becomes evident very quickly once they are in the room. Parent helping is not a social activity for parents to catch up on the local gossip, nor is it the place to make plans for trips to the park etc. Similarly, it is not the place for the parent to spend some quality time with their child (although I am very happy for the parent to help their own child within the context of the same help being provided to others). It is also not appropriate for parents to ‘supervise’ the teacher and the goings on of the classroom. I guess you can say I am a bit of a skeptic about parent help – it sounds quite negative, however, I always had parent helpers in as a classroom teacher and will continue to do so…”

Other statements aimed to justify their (the participants’) decisions in relation to using/not using parent helpers during specific times of the literacy block, with a participant explaining that, “Parent helpers would not be invited in during modelled writing as they would be in the classroom for reading time…”. Another described, “in my first year of teaching, I found it extremely difficult to initially make the parents happy. Although I was a targeted graduate, they didn’t care. All as they were concerned about was the fact that I hadn’t done this before….they would come see me at 9am after the bell went and while all the students were in the classroom expecting to discuss things then and there.” This appeared to be an issue that the participants responded to with clear connections to their own varied professional experiences.

*Comments made by the teachers in semi-structured interviews*

All participants acknowledged that the ClassSim was representational of the actual kindergarten classroom environment. One participant articulated, “the decisions that the teacher makes (during the ClassSim) impact on different students differently.” The analysis of collected data from the six participants revealed that they appeared to find limited discrepancies in the ClassSim that they felt were inappropriate or not representational of the daily running of an actual kindergarten classroom environment. A participant described, “all the decisions in which they (as a teacher) were faced with and were required to answer, were continually evident in an everyday kindergarten classroom.” However, one participant acknowledged, “it could not entirely represent the classroom reality because every classroom is different, but more
importantly, each teacher has the opportunity to develop rapport and relationships with the students, something that a simulated environment would not allow…These relationships are what allow the teacher to make certain decisions and to design certain experiences.” Another participant explained, “it’s the little things in the ClassSim that make a difference…such as the blunt pencils and the lack of scissors.” She further explains, “these are all decisions that teachers are faced with every day in a classroom and without knowledge, exposure and previous experiences with these decisions, the consequences of these decisions could result in the making or the breaking of the lesson/learning experience….They are critical and are things that are not taught in lectures at university but are continuously evident throughout the ClassSim.”

The different professional experiences of the participants seemed to indicate some conflicting evidence particularly with the timing of the actual literacy episodes. Two of the six participants strongly argued that the timing of the episodes were not reflective of actual kindergarten literacy learning experiences. They both exposed similar arguments with one of them stating, “There is just no way that one could possibly complete a handwriting episode in the time given. From my experiences, a kindergarten class would take close to double that time to successfully complete it.”

The participants each identified further learning experiences that could be included in the available options within the literacy block episode selection. A common trend amongst these suggestions was the inclusion of a specific ‘phonics’ focus. One participant described, “phonics is undertaken in my classroom every morning for 10-15 minutes,” another acknowledged, “our school has implemented the Jolly Phonics program, so we practically teach a new sound every day.” The inclusion of phonological awareness within daily learning experiences in a Kindergarten classroom appeared paramount in daily literacy experiences for these teachers.

Each of the six participants clarified that they, from their teaching experiences, could put a child’s name to each of the five targeted students.’ One participant described, “I remember everything about each of the five children. I don’t remember much else that I was asked to do throughout the simulation, but I clearly remember the students and explicit details relating to each of them. I think this because…actually I know this is because I could relate to them so closely that I could put at least five names to every one of these targeted students.” When further questioned, the participant acknowledged, “oh and I could put students’ names of all ages to these targeted students, not just students at a kindergarten level, but students of all ages.” It became evident that the targeted students were representative of the range of children within these teachers’ experiences of current classrooms.

Concluding comments: How representative is the virtual environment of classroom reality?

This paper aimed to share our insights into two questions:
1. How realistic does a simulation have to be in order for it to be regarded as authentic?
2. What features of the simulation engage users to think deeply about the complexities of their classroom experiences?
To respond to these, we have described the creation of the virtual environment in consultation with Herrington, Oliver and Reeves’ (2003) design elements for authentic learning environments, the lessons we have learned from pre-service teacher interaction with iterative versions of the software and reflections from current practitioners who have engaged with the virtual classroom.

Our research has revealed that ClassSim is an effective learning experience to showcase the complexity of the classroom environment. The identification of a target audience for the software has supported its development as we are acutely aware of the localised issues that face our teachers, the mandated curriculum and policy documents they are expected to use and use this knowledge to provide an experience that is meaningful, appropriate and authentic to their needs. In addition, the opportunity to work through classroom experiences that peers have also experienced provides opportunity for learning to occur within a community of practice. The ability to schedule its use within core subjects has enabled us to promote the resource and support users as they engage with the scenarios it presents. The practitioners who engaged with the software acknowledged the detail and appropriateness of the scenario and were able to identify specific design features that they felt captured the intricacies in the work of a teacher.

Resources housed within the simulation software were consistently identified by the pre-service teachers and classroom practitioners to be appropriate. Data indicates that users are able to vicariously experience both the teacher and student’s experiences while engaged in typical classroom experiences within the virtual classroom. As the scenarios are bound within authentic stories, supported by necessary resources and classroom artefacts, we have observed that pre-service teachers not only use them during scheduled periods, but revisit and reflect upon these after formalised interaction with the software. The preference of the classroom practitioners to engage with the visual images and audio files of the classroom environment support the rationale for the development of these features to contribute to the authentic learning environment.

Our data has consistently shown that interaction with the software supports the preparation of our pre-service teachers for classroom reality. We have frequently heard participants acknowledge the complexity of the role of the teacher and the need to consider so many things within the simulated environment they had not previously considered. Further, our data shows that students enter actual classroom environments after using the simulation with greater awareness of the many facets that make up the multifaceted classroom situation. The teachers further reinforced this finding with their observations of the authentic nature of ClassSim given their professional experiences. However, we also acknowledge that within this environment there is significant opportunity to increase authenticity with more options, resources and consideration of fine details the teachers alerted us to.

We are justified in claiming that the success of this simulation software is due the fact that the pre-service users can see that ClassSim is relevant to their current and future working lives. Therefore is has a relevant purpose. As a result the majority of the pre-service teachers who have used ClassSim have demonstrated motivation to engage with it for sustained and frequent periods of time and to make extensive use of the resources offered within the software program. Indeed, the teachers too, felt it
was a worthwhile experience for them to engage with as they explored the intricacies of the profession and the experiences that have helped to shape their own professional identities.
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School University Partnerships: The Case Study of Uralla Central School and the University of New England

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Abstract

Uralla Central School is working together with the University of New England within the Australian Government Quality Teacher Programme (AGQTP) during 2006 and 2007 undertaking the implementation of the Middle Schooling Program initiative that has been developing in its inception from 2004. During 2005 extensive consultation throughout the school’s teaching and executive staff led to the opportunity to create new school organisational and structural changes necessary for the middle schooling program to commence in operation in 2006. The program initiative is framed by the school’s high expectation for quality teaching and learning in the central school setting and teacher professional learning anchored on the notions of pedagogical practices has been supported through engagement with the Quality Teaching in NSW public schools (DET 2003). The middle schooling program initiative supports a ‘K-12 Advantage’ that is central to the school’s ethos of quality teaching and learning outcomes for students. The findings show that whilst student outcomes improved, the vital role of all of the stakeholders, including academic partners, is paramount in order to build a culture of professional learning by providing teachers with high quality opportunities to expand their pedagogical practices

Introduction

An Australian Government Quality Teacher Programme (AGQTP) funded grant to Uralla Central School Middle School for the successful submission proposal of the Middle Schooling English/literacy and Enrichment Program has enabled teachers to be supported through teacher relief time to further develop and enhance the program’s effectiveness during 2006 and 2007. The Program in English/literacy was awarded the significant educational 2006 Director-General’s Award for School Achievement and also the NSW Department of Education and Training’s New England Region Excellence in Teaching and Learning Award that attests to the sound educational planning and ongoing implementation of the program initiative.

The role of the academic partner included the provision of professional reading material that augmented the focus on boys’ education and the inclusion of Information Communication Technology (ICT) central to the development of the initiative. The engagement of teachers in an action research learning team environment provided a forum for the sharing of rich expertise of existing teacher skill and in the case of secondary, subject specialisation in English and literature.

Background of Project
Uralla Central School is a NSW Department of Education and Training (NSW DET) coeducational public school that serves students from Kindergarten through to Year 12 in a rural community, twenty five kilometres south of Armidale in the New England Region. The school is comprised of a diverse rural community including a strong historical and creative emphasis and in which the local Aboriginal community participates in the life of the school. Also student mobility and a transient family population are part of the overall school setting.

The middle schooling education initiative was established to further enhance student achievement of syllabus outcomes throughout the Stage 3 and Stage 4 (Years 5 and 6, Years 7 and 8) curriculum in English / literacy. Planning for this change in curriculum delivery has been developing over the past four years and has involved research, teacher professional learning at local, regional and state level together with the implementation of the *NSW Quality Teaching in NSW Public Schools Discussion Paper* (2003) and related resources.

Evidence of marked improvement in external test results data has provided the school with the very good opportunity to build on student success in the area of learning continuity through this transition approach. An increasing awareness of the importance of addressing the needs of students in the middle years has been augmented through the team approach to the critical nature of the issues attendant to the engagement of students at this point in their schooling. Much of the research in the middle years has been conducted as case studies in particular schools and not across whole school systems according to the document *Excellence and Innovation A consultation with the community of New South Wales on public education and training* (NSW DET 2004: 15). Leadership within the school has provided for the continuing implementation of the middle years program through creating partnerships with AGQTP and the University of New England that have broadened the scope of possibilities for new approaches and mechanisms for reflection and assistance.

**Exemplary practices**

The school currently has received two prestigious education awards and in addition was nominated in the New England Region (NSW DET) ‘Excellence in Innovation’ category. The Australian Government Quality Teacher Programme (AGQTP) project initiative award for 2006-2007 quality teaching and learning in literacy, Information Communication Technology (ICT), and boys’ education has provided additional support to the school’s innovative Middle Schooling English/literacy and Extension Program.

The regional award in May, 2006 of the NSW DET 2006 Excellence in Education for Teaching and Learning exemplifies the school’s professional commitment to a continuous cycle of improvement that progress towards the implementation of The National Literacy and Numeracy Plan which supports attainment of the national literacy and numeracy goals. The school was awarded *Highly Commended* in the National Literacy and Numeracy Week 2005 Awards for Schools for the comprehensive process of developing Whole School Assessment Schedules that underpinned the school culture of professional learning, high expectations and stage outcomes access and achievement for all students.

The School Management Plan and school targets for 2006-2008 continue to provide a strong framework of the high expectations for literacy learning achievement, particularly with regard to transition to the secondary school setting. Intensive planning during 2005 provided a sound starting point for the commencement of the 2006 Middle Schooling program which operates three days a week and incorporates students from Years 5 – 8. Flexible groupings have allowed for student placement to be easily reviewed and can change as the year progresses. Groupings include a consolidation group (Years 5 and 6), achievement groupings (Years 5, 6 and 7), an extension stream including Years 6, 7 and 8) and enrichment strand.

In 2006 and 2007, exemplary programming, outstanding teaching and learning support the middle school organisation, and assessment work portfolio tasks used to support student
responsibility for learning achievement. Key Learning Area (KLA) programming has involved the production of twenty one high quality units of work for English (Stages 3 and 4) that are taught in six classes catering for individual student needs and including an ‘extension’ strand for the Year 6,7 and 8 grouping. Early indications of success are already evident in student assessment tasks associated with the program. Student work portfolios showcase the units of work and provide high quality reporting information for parents/carers.

School personnel and the academic partner worked further together in the development of teaching learning units of study particular to the project and common across the six classes of the Stage 3 /Stage 4 curriculum, including all students from Year 5 through to Year 8. Understandings of the well documented research into the middle years of schooling offer many, and often conflicting solutions to the issues about education for adolescent students including raising the profile of middle years teachers. The Report of the Consultation on future Directions for Public Education and Training: One size doesn’t fit all (2004:65) noted that middle years teachers were the unsung heroes of the profession, and as one parent noted, good teachers in these years provide the foundation of a good education system.

**Action Learning/action research**

A statement from the First Progress Report in May 2006, “Middle Schooling English/literacy and Enrichment Program”, shows that those involved in the project were known as The Action Research Learning Team. The title of the team members is interesting because in a study entitled, Teachers as Learners Australian Government Quality Teacher Programme Action Learning for School Teams Project Evaluation Report (Ewing, Smith, Anderson, Gibson & Manuel, 2004), there is a difference between action research and action learning. The authors first of all cite the work of Revans (1982) to state that action learning is about implementing a project or solving a problem. It is focused on workplace learning and it is about people working with each other to explore new solutions. The cyclical nature of action learning, that is, reflecting, planning, doing, and reflecting, is very similar to action research but as Ewing et al (2004) point out, there are some important differences.

While action research can be used to solve workplace problems and improve practice, and has been used in schools, it is not limited to the workplace. Second, action research focuses on improving practice and not on confronting new ‘new’ problems (McNiff, Lomax & Whitehead, 1999). Third, as noted earlier, action learning is about teamwork and the learning that each team member brings to the team, while action research can be done individually or in teams. Finally, action learning begins with a desire to understand the problem/issue in which there may be no existing practice, while the starting point for action research is the examination of current practices to identify weaknesses for improvement.

The First Progress Report (2006) from The Action Research Learning Team indicates that both action learning and action research were applied to the Middle Schooling English/literacy and Enrichment program. The impetus for the program’s implementation was firmly established through the responsibility to achieve higher standards of academic achievement in the continuity of learning in ‘the middle years of schooling’ that encompasses stage 3 and stage 4 learning. Evidence that documents the particular needs of adolescent students at this vital transition point indicate that content, organisational structure, and social grouping all play a part in the engagement of students with curriculum achievement.

Teachers have been involved in collegial classroom visits within the program as part of their professional development in accordance with the school’s supervision schedule and written feedback is produced by both the hosting and visiting teacher and supervisor follow-up meeting where applicable. These processes have proved to be very successful
and requested by the full range of teachers across the whole K-6 staff. The change in
teacher practice has occurred with a focus on enhanced assessment practices that
demonstrate the close links to what the students need to learn next and this aspect of the
learning cycle has placed value on assessment as an integral part of learning.
Both action research and action learning have been used in schools and teachers’ work, the
focus of which is on the teacher as learner. As Ewing et al (2004) point out, teachers are
valuable “sources of knowledge and users of knowledge to generate new knowledge”
(p.15) in an environment that is evolving so rapidly that problems never before encountered
are arriving more quickly and previous solutions are no longer applicable. Therefore, the
idea that academics are the holders of expert knowledge who can solve problems faced by
teachers at school is unrealistic.

If external ‘experts’ are to be useful in this context they work WITH
teachers, recognising the teachers’ knowledge and helping them to build
new ideas and possibilities from research and learning processes (p.15)

The program continues to be supported by an academic partner from the
University of New England through a Memorandum of Understanding that defines
professional responsibility between the tertiary and school settings.

Collaboration
The justification for school/university partnerships
The argument for school/university partnerships is that there will be improved learning
opportunities for both teachers and academics when they work together. Apart from the
relevance for educational research through university/school partnerships, there is the
potential to break down the isolation between universities and schools and positively
change the climate of schools and universities (Sachs, 1997). Schools provide universities
with some of their future students and universities provide teacher education for future
teachers - both are concerned with their intellectual development. Even though there may
not be a deliberate attempt to encourage collaboration, there is still a relationship and a high
degree of interdependence between schools and universities. In short, schools provide
students to universities to stay in business, and universities train future teachers. “Hence,
even if motivated by purely self interest, school and universities have a vested interest in
the execution of their respective missions” (Noguera, 1998).
A study by Carpenter and Russell (2002) of the B.Ed Primary (Graduate Entry) School
University Partnership Program indicate that there is potential for productive collaboration
between schools and universities. The partnership model was developed after several
meetings of academics, school personnel and a representative from the Board of Teacher
Registration. Although, their paper does not specifically record the responses of academics
involved in the program, the overall feedback from school principals and school
coordinators was positive.
Collaboration then is a process whereby people work together, or as Soliman (2001) puts it,
“co-labouring, for a common purpose, which they are not likely to achieve if they work
independently” (p.220). As Soliman notes, collaboration may benefit from differences in
expertise, whereas similarities could create unnecessary competition amongst team
members. Differences may be complementary in which collaboration provides a common
platform for individuals who as a result of interaction reach a shared understanding that
may not have been possible on their own. University researchers, for example, can ask
questions to those teachers who are engaged in the day-to-day activities may not have time
to ask. Soliman cites the research of Oakes, Hare and Sirotnik (1986) to show that
collaborative research between schools and universities removes the centralised approach
to educational change because teachers are central to the process and the culture of the school is the context of collaborative work. Hargreaves (1996) states that, the interpersonal and institutional relationships between schools and universities provide the best opportunities for promoting the professional knowledge of all educators.

Challenges to school/university partnerships

University researchers bring with them a certain degree of detachment. Because they are not at the school site on a daily basis and because they are not engaged in finding solutions to immediate problems, university researchers do not understand the realities that schools seek to address, and therefore, the answers they have devised may be wrong (Noguera, 1998). In a broad sense university educators and school teachers come from different cultures where the roles and expectations in each cultural realm are different (Soliman 2001).

Researchers such as Patterson, Shaver-Wetzel and Wright (1998) state that these differences in perspectives between the university people and school teachers are manifested in a political struggle and will remain unresolved as long as teachers’ viewpoints are dismissed or downgraded by university researchers and excluded from the professional literature of teaching. The authors cite the study of Rakow and Robinson (1997) who regard this dichotomous relationship as one between the ivory tower of the university and the trenches of the public school.

However, findings by Soliman (2001) in her study of university/school partnerships indicate that there are also issues that school teachers need to deal with. The relationship during a practicum program showed that, from the school teachers’ point of view at least, school based knowledge of teacher education was significant if not paramount. As Soliman noted, the school teachers in this partnership program assumed that the university participants were out of touch with the realities of the classroom and felt that collaboration provided an opportunity for university people to look at the whole process of teaching, so they could be brought up to speed about what actually happens in schools. Thus, what was considered important was the contextual and practical knowledge that school teachers possessed which university partners did not have. Teachers see themselves as the representatives of the ‘real world’ and the university landscape as being theory driven (Carpenter & Russell, 2002). In the case of Soliman’s study, they did not regard the complimentary role university participants who expressed the importance of critical, reflective skills and knowledge as important in the development of successful professional partnerships.

Most academic partnerships in Ewing’s et al (2004) study of the Action Learning for School Teams Project said that their roles were valued at school; they were able to build a strong rapport with their school partners, and were given positive feedback on their contributions. The authors noted the critical importance of having an established relationship with one or more team members, knowing the context of the school, and worked on the project at the initial stages, because they also reported that there were problems concerning the role of academics in schools. A lack of clear expectation on the role of the academic resulted in confusion and tensions; teachers were unsure of academics’ role because they had not been a part of the original planning process, and a majority of academics said that their roles were not made explicit enough early in the project or during the project. A further compounding problem was the confusion amongst many academics about what constituted action research and action learning. In fact, only one academic was able to articulate the academic’s role in the learning model, that is, “to emphasise and make explicit the process of professional learning and its dynamics” (Ewing et al 2002, p.76). Peters (2002) identifies the following key challenges to university/school partnerships:

- developing equitable ownership within each organization and the partnerships;
- managing affective dimensions of research, development and partnership;
- reconceptualizing and reconstructing educators work;
• reconciling disparate constructions of learning, teaching, research and reform; and,
• facilitating reciprocal learning for teachers and educators (p.2).

Successful partnerships come about as a result of careful consideration and thoughtful research (Carpenter & Russell, 2002), which is based on frank discussions between the university and the school, supporting teachers as they try to implement project ideas, and developing a relationship based on mutual trust.

Results
Student learning outcomes
Student learning outcomes have improved in literacy from 2003 as evidenced in result data from the Basic Skills Test (BST) and the English Language Literacy Assessment (ELLA). Individual and cohort results have shown strong aspects of progression throughout the primary to high school transition assessment tracking period. Student achievement in the University of New South Wales tests results also reflect increasing improvement in participation and award levels. Ongoing improvement in external test results for 2004-2006 reflects better student learning outcomes that are also evident from in-school assessment information. Early indications of achievement from the middle school groupings are shown through the students’ willingness to cooperate in the new learning environment and also in the high quality of student assessment tasks completed during Term 1 and Term 3 2006 and Term 1, 2007.

The whole school is currently undertaking extensive professional learning centred on the Phase 3 Assessment of the Quality Teaching model and various assessment practices and resources will be addressed in terms of quality. Teacher feedback evaluation is included in the processes of professional learning and the evaluation and is informing the planning of future sessions. During Term 1, 2006 teachers K-12 have worked together with the Quality Teaching Assessment support materials and in Term 2 three groups operated in collegial groups K-4 teachers, 5-8 teachers and 9-12 teachers. In 2007, continued professional learning is focused on student writing and quality writing outcomes in English and across the other Key Learning Areas as students progress to the achievement of Stage 4 syllabus outcomes.

Currently, very positive evaluative comments and high quality professional dialogue has been generated from the first five whole school professional learning sessions with the Quality Teaching framework. Theoretical and practical aspects of the framework have been examined by using the model’s assessment examples and individual teachers’ assessment schedules. Again, teachers engaged willingly in the activities which highlight their commitment to interact with the notion of enhancing pedagogical practices.

A Learning Support Team (LST) provides intensive support for those students who require additional support in literacy learning. Individual students are monitored and their achievement tracked to ensure the very best outcomes possible.

Evidence extrapolated from results data for the Basic Skills Test (BST) for Year 5 and from the English Language Literacy Assessment (ELLA) for Years 7 and 8 confirms steady progress being made throughout the Stage 3 and Stage 4 literacy learning continuum. In 2004, Year 5 students performed better than the previous Year 5 equivalent groups between 1996 and 2003 in BST literacy and the performance for the whole group of Year 5 BST students was above state average. This aspect has been noted as baseline data that provides the school with opportunities to really engage the full range of student abilities throughout the middle years curriculum. In 2004 only one student did not achieve the National Benchmark. Students in Year 7 and Year 8 made gains in the ELLA Language, Reading and Writing components in 2005 and again this educational opportunity to fully extend student achievement of syllabus outcomes became central to the planning for the middle schooling program.
Tracking and monitoring of the middle years student cohort is an integral part of the program together with class-based assessment and school-based testing procedures and processes. Common assessment tasks for the middle schooling students is providing rich achievement data that is examined by the six teachers of the program, including primary and secondary executive and the principal. Qualitative and quantitative data is generated that will address student and affective domain needs through survey, student and peer assessment, and three way Parent, teacher, student interviewing. The following graphical data demonstrates part of the information that forms a basis for ongoing decision-making in terms of program direction and informing teaching practice, planning and programming for exemplary teaching and learning.

The role of the academic partner
The role of the academic partner in the collaborative process was one of assisting classroom teachers to reflect (Bettison & Bradburn, 2006) as they developed their teaching and learning units across the six classes in Stages 3/Stage 4 English and literature. The units writing was already at an advanced stage, so the academic partner was able to ask questions that related to key features such as the links between content, outcomes, and assessment, and where for example, was there evidence in units that catered for boys’
literature. In this regard the collaborative process has been a success; both teachers and academic partner were engaging in a discussion about the merits of the units, and importantly, reflecting critically on teaching and learning. The key to this success was in part the effort made by the academic partner, to allude to Ewing’s et al (2004) statement, to work with teachers and, to a large degree on the acceptance of the academic partner’s presence as part of the project team.

The academic partner arrived late on the scene, in the sense that he was unable to attend a conference in May 2006 with other academic partners and key stakeholders from schools that had been organised by the AGQTP in Sydney. Hence, the academic partner lacked the broad understandings of the background of the AGQTP, its philosophy, and role of the academic partner in schools. In other words, some initial collegiality with academic partners, school teachers, and program managers would have been of great benefit in providing a knowledge base about the program requirements. The academic partner may have been able to glean, for example, the differences between action research and action learning (Ewing et al 2004). The academic partner has a background in action research having convened an action research course at another university, but knowledge of action learning would have helped the academic partner in providing a more focus in the project team’s reflective sessions.

The academic partner’s absence from the May 2006 conference was critical because it meant that was no initial relationship established with teachers at school apart from brief telephone conversations with the school administration, so there was no shared understanding when the academic partner attended the first collaborative meeting. Hence, there was no shared expectation of the academic partner’s role; program organisers at Sydney informed the academic partner that helping teachers reflect on their unit writing would be a good start.

Despite the observations of Noguera (1998) that academic partners do not understand the realities of school, the academic partner in the UNE/Uralla partnership had almost two decades of school teaching and therefore had a background understanding of school teachers as valuable “sources of knowledge and users of knowledge to generate new knowledge” (Ewing et al 2004). Although the academic partner certainly did not perceive, the relationship as one between the ivory tower of the university and the trenches of public school (Rakow & Robinson, 1997), there was an understanding that the academic partner and the school teachers come from different educational cultures (Soliman, 2001).

Additionally, the lack of shared understanding and knowledge base about the project were initial constraining factors in the academic partner’s participation in project. Having said that, the academic partner was able to build up a rapport with teachers in the project and feedback from the project manager has been positive.

**Suggestions for improvement**

Schools are busy places that operate in complex ways and often within the constraints of organisational structures that may be well embedded in the school culture over time. A key feature of the middle school program initiative success was the thorough organisational planning for the changes in timetabling, room allocation, streamlining of the primary and secondary daily break times to accommodate the enrichment strand of the program.

More time together for the Action Learning Team is essential to the development of the concept and working relationship in order to forge strong links between the university and school settings. Within the broad framework of the AGQTP initiative, the need for preparatory meetings became evident very quickly and the nature of ongoing communication involving all team members also became paramount to the ownership and leadership of the program.

It is very important to note that while the responsibility remains with school executive personnel, that teachers are critical team members who have perhaps the most to gain in terms of professional development. A ‘top heavy’ approach needs to be carefully
considered and time was needed for everyone to settle into a position of support where professional trust and a stronger sense of collegiality prevailed. The connections between the university and the school had not previously been forged in this way, as school contact had been through the student practicum program and therefore a different roles being undertaken by the teaching staff and university personnel.

**Conclusion**

School / university partnerships are vital to the improvement of school-based educational initiatives that are centred on making a difference to the notion of ‘whole school change’ where the school would benefit from the ideas of an academic partner. *Quality Teaching Action Learning Project Handbook 2006* (2006: 10) states as a facilitator of learning, the academic partner supports and enhances participants’ learning opportunities by contributing to the creation of a positive learning environment in which the team operates.

The importance of an academic partner as a collegial mentor represents and contributes to the democratic right for students to a high quality comprehensive education within a learning community that is wider than the local context.

The research literature indicates that the role of the ‘external’ advisor, academic partner or critical friend in a teacher-led professional development project is not unproblematic (Ewing 2004:74) and the recognition of the value to be gained from a productive relationship with educational colleagues needs to be fostered at every level to afford students access to exemplary teaching practices that are confirmed in the wider education community.
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The behaviour management strategies of one beginning teacher: A study of conceptual change.

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Abstract

This paper reports on a longitudinal study of a preservice teacher called “Peace” as she moved from her 4th (and final year) year of studies to her first year of teaching. The study investigates her understanding of behaviour management over a twelve-month period. Peace already had a Bachelor of Behavioural Science, majoring clinical psychology, and has a strong background of working with young people. Shulman (1987) outlined the categories of the knowledge teachers should possess in order to promote understanding among students. Among them is general pedagogical content knowledge “…with special reference to those broad principles and strategies of classroom management…”. (p.8) Implicit in this category is that whilst teachers need to draw on all categories during classroom teaching, a knowledge of behaviour management strategies is crucial to their effectiveness. This paper uses concept mapping and accompanying think aloud protocol to show how Peace used behaviour management strategies that moved beyond behaviour modification to incorporate a classroom climate that supports all aspects of learning.

Introduction

The Sunday Telegraph, in Sydney recently trumpeted the headlines, “Classroom jungle: Students attack teachers” (Markson, 2007). Teachers who seek to discipline students, according to the newspaper item, are not only attacked by them but also have their cars vandalised. In total, there were 1500 reported assaults in New South Wales (NSW) public schools in 2006, and teachers were often the targets (Markson, 2007). The paper reports that more teachers are expected to take legal action against the NSW Department of Education and Training after being assaulted at school. Newspaper reports of this nature do not make pleasant reading, especially for those who are considering a teaching career.

The fact is that student behaviour management issues are a regular source of tension in teachers’ work, and this is most pronounced among early career teachers (Mastirilli & Sardo-Brown, 2002; Hui & Chan, 1996; Arieli, 1995; Veenman, 1984). Veenman (1984), found in his review of 91 research papers on teachers and behaviour management problems, that 77 papers identified discipline issues as most important in teachers’ work. Indeed, challenging student behaviour has also been cited as the central reason for teaching leaving the teaching profession Gal (2006).

Literature Review

Cothan, Kulina and Garrah (2003) found that students generally preferred to work with those teachers who set early, consistent standards, and strove to develop positive relationships with them. Other researchers identified three dimensions to behaviour
management: space, energy, and managing the self. The results of Fenwick’s (1998) study, for example, showed that teachers tried to create a safe place for learning in a disciplined environment, which paradoxically promoted independent learning. Teachers worked to “…sublimate student energy towards socially approved purposes…” (Fenwick, 1998:630), while at the same time maintaining a flow of energy. In terms of managing self, teachers had to balance a sense of caring with self as the authority. The author noted that teachers were comfortable with contingency, that is, their ability to embrace surprise by continually adjusting to the needs of individual students in a thoughtful and rational way.

Other researchers such as Van Tartwijk, Brekelmans and Wubbels (1998) argue that teacher educators also need to instruct preservice teachers in strategies that “bring on the image of an experienced teacher when they address the class as a group” (p.615) because they usually have problems in showing behaviour management techniques. The authors conducted a study of student perceptions of teacher interpersonal style, and they found students responded best to those teachers who were out in the front of the classroom, engaging in the types of behavioural strategies within a structure that allows for clear directions and organised procedures (Kounin, 1970). No differences were found between preservice and experienced teachers when they were interacting with individual students, in a non-frontal orientation towards the rest of the class. Behaviour management practices should also move beyond behaviour modification to incorporate a climate that supports all aspects of learning (Cole & Chan, 1987). That is to say, teachers should be proactive when dealing with students. Groundwater-Smith et al. (2001) identify three broad approaches to behaviour management: the person-centred; interactive; and, the interventionist approach. Although each can be placed along a continuum, many of the approaches would overlap during classroom practice. These approaches are reflected in the range of different discipline models Edwards (1997) reviews; each have their strengths and limitations, and the teacher who is wanting to create his/her own personal theory of discipline, would need to consider a variety of models.

Studies by Brophy (1997), Edwards (1997) and Groundwater-Smith, Ewing & Le Cornu (2003) show that there is a correlation between student achievement and teacher behaviour, that is, students learn best when the focus is on learning; when the teacher maintains consistent pace and momentum of instruction; and, when the teacher is actively engaged in teaching. This last point refers to the teacher interacting with students, representing knowledge in the form of analogies, metaphors, explanations, and illustrations, rather than having lights off and copying down information from the overhead projector. In other words, the actively engaged teacher is one who engages the students to explore and reflect (Onore, 1992) – the key to all school learning and teaching.

This study investigates the behaviour management ideas of one early career teacher, “Peace”, in three stages; May 2002, October 2002, and May 2003 to show how she successfully used various strategies to promote student learning. The investigation of Peace’s behaviour management strategies is a slice of what was part of a larger, longitudinal study of ten beginning teachers that investigated their understanding of effective Social Science teaching as they moved from preservice to inservice teaching (Reitano, 2004). One appropriate strategy to elicit the thoughts of the teacher’s behaviour management strategies would be to use concept mapping and accompanying think aloud protocols. This study sought to answer the following question:
1. What apparent changes occurred in Peace’s behaviour management strategies over a twelve month period?

**Concept maps**

The concept map is a schematic device that provides an external representation of structural knowledge (Novak & Gowin, 1984). In other words

- Concept maps allow people to make explicit their views about how different concepts are related and why certain links are more or less valid. (Prawat, 1989:11)

A number of studies have shown that concept mapping is an effective method for assessing conceptual change (Novak & Masonda, 1991; Morine-Dershimer, et al., 1992; Markham, Mintzes, & Jones, 1994; Jones & Vesilind, 1995; Markow & Lonning, 1998). It is regarded as particularly useful for those researchers who seek an insight into how teachers construct their concepts (Trowbridge & Wandersee, 1994; Winitzky & Kauchak, 1995; Zanting, Verloop & Vermunt, 2001). By comparing successive concept maps as the teacher develops mastery of the domain, “the researcher can see how knowledge is structured in the course of the acquisition” (Cary, 1986:1126). Morine-Dershimer (1989) suggested that concept maps could provide teacher education students with valuable feedback on their knowledge, and could show both the extent and organization of students’ knowledge (Lawless, Smee & O'Shea, 1998).

Student teachers have found concept mapping activities useful because (a) the instrument was able to elicit thoughts behind their mentor teachers’ teaching; (b) student teachers found the concept mapping exercise useful for teachers to reflect about their teaching; and, (c) they found that they were able to make useful comparisons between their mentors’ and their own maps (Meijer, Zanting & Verloop, 2002).

Concept map diagrams constructed by Peace identified what she knew about effective teaching and learning. The *Think Aloud Protocols (TAPs)* (Ericsson & Smith, 1996) that were used in conjunction with each concept map diagram provided further elaborations and facilitated the externalisation of Peace’s understanding and reasons for her selection of concepts (Rye & Rubba, 1998).

**Administration of concept maps**

Prior to the construction of her concept map, Peace was instructed for only an hour on how to construct a concept map because she said that she used concepts maps in some courses during her Bachelor of Education program. She was also shown a series of concept maps, ranging from simple ones to those of greater complexity. At an agreed later date, time and place, Peace was then given an A3 sheet of paper, a block of ‘Post-it’ page markers, pencils, erasers, and then instructed to draw a map based on her understanding of ‘effective Social Science teaching’. After Peace had written down as many concepts she could think of on the page markers, she were asked to rearrange the concepts into a hierarchy, adding more concepts if she wanted. At this stage the researcher turned on the audio player, and reminded Peace that she was being audio-taped as she ‘thought aloud’ their reasons for using such concepts and the
reasons for their location within the map. Not all concepts were the focus of Peace’s Think Aloud Protocols (TAPs) because she either chose not to, or because she was unable to articulate what she knew (Shuell, 1985). Whenever Peace paused for longer than a minute during the construction of her map, the researcher used prompts such as “Can you explain the relationship…” or “Can you give reasons for …”. Peace was required to “think aloud” during the three occasions they constructed their maps. Once Peace was satisfied with the location of her concepts, she glued them onto the A3 paper. Peace then added arrowheads with linking words to show the relationship between concepts. At the completion of each concept mapping exercise, the researcher and Peace briefly reviewed the completed activity.

Analysis of concept maps

Several ways exist to analyse and interpret concept maps, depending on the purpose of the exercise. Quantitative evaluation procedures involve assessing the number of concepts used, the number of main categories, and the number of levels in a hierarchy. Lawless et al. (1998) argued that a quantitative scoring system can conceal the uniqueness of the concept map, believing that more meaningful results were likely to result when concept maps are presented as an essentially qualitative instrument. A qualitative approach can observe changes in perceptions over time (Beyerbach & Smith, 1990) and allow for the comparison of structures before after instruction (Champagne et al., 1981). This study used a qualitative approach that sought to establish relationships between general concepts, subordinate concepts, relationships, branches, hierarchy levels, cross-links, and outcomes concepts.

The following case study of Peace from the study attest to the value of using concept mapping to explicate knowledge as well as the accompanying think aloud protocol to facilitate elaborations of the beginning teachers’ knowledge bases.

A case study of Peace

Peace’s initial constructs of social science teaching in May 2002

Peace’s knowledge bases on her first concept map indicates that she had broad understanding of teaching and learning processes, the focus of which was on behaviour management, educational ends, goals, purposes and values, and content knowledge (see Figure 1). The linking words, ‘teaching in classroom begins with’ that links ‘behaviour management’ with the key concept indicates the vital role of behaviour management in Peace’s concept map. However, the success of behaviour management is dependent upon skills of communication, which encourage debate and objectivity in the classroom, and a capacity of the teacher to be flexible. Peace reported a level of confidence in her behaviour management practices that contrasted her limited classroom experience as a preservice teacher. As she explained in her TAP,

...I must admit...I don’t have a problem with behaviour management...that’s because I have a presence...in my room ...as a teacher...and ...so therefore...kids who are going to play up are really only the naughty ones... and the really naughty kids...are...have a way of either... umm...embarrassing or ignoring really...Like... for example...we had a kid yesterday...who just calls out all the time...he’s really just a bit of a show off... and we were doing mapping skills...I had to explain what a
‘legend’ was ...So I said... "Lukey...he thinks he’s a legend doesn’t he?"...And all the kids in the class laugh...and he
laughs too...because it's almost in a way ...flattering to be embarrassed ...by the teacher like that... but he was very
quiet for the next ten minutes...

Peace used a common sense approach when dealing with isolated incidents like the
one above,

I don’t see the point in stopping the whole class for one or
two students ...for one or two students that might be causing
me an inconvenience...unless that behaviour really gets to the
point where its impossible...to allow the other students to
engage in any content work...That’s the only time I’ll stop the
class...and then I’ll address it as a whole class... and talk about
the rights of other students to be involved in education...
Figure 1: Peace’s Initial Constructs

**EFFECTIVE SOCIAL SCIENCE TEACHING**

- Teachers should have their own
- Content knowledge
  - Syllabus knowledge
  - Knowledge of students
  - Both essential
- Knowledge & understanding of process
- Use these in developing own

1. **Teaching in classroom begins with**
   - Behaviour management
     - Ability to communicate & inspire students
       - Is supported by
       - Variety in instructional methods
         - Plus
       - Flexibility in delivery
         - Plus
   - Openness to debate
     - Can be undermined unless teacher has
       - Leads to
       - Recognition of bias
         - Leads to
         - Positive classroom experience
           - 1. Complex thinkers
             - 2. Knowledgeable of process
               - 1. Articulate & literate
                 - 2. Confidence in decision-making

2. Involves effective planning
   - Makes students have good
   - Awareness of resources
     - Help immensely while
     - Flexibility in planning
       - Make it interesting
         - Creativity & imagination in developing learning

3. Leads to
   - Objectivity
   - Effective planning
     - Makes students have good

4. Leads to
   - Networking with profession & community groups
     - Leading to
     - Personal knowledge
Importantly, Peace does not consider herself as above rules in the classroom, as she explains, “…and I follow them too…the kids all see…that I don’t talk when somebody else is talking…”.

Peace used proactive behaviour management strategies such as humour in the case of the attention-seeking student, commonsense when dealing with isolated behavioural incidents, and non-negotiable rules that are brief and understandable to students. Peace used pedagogical content knowledge to give students a broader understanding of the rules, such as the rules of theatre. In terms of dealing with students with behavioural problems, Peace rejects the ‘logical consequences’ approach to discipline.

Peace’s statement about the Glaser model seems to be at odds with her following comments that reflect the ‘reality therapy/choice theory’. For example, Peace said that by

...saying to them... “You having a bad day...mate? ... What was it that upset you ... before you came into the classroom? ...Because I know it wasn’t me...” That might...well I hope ... that sort of...umm...openness to...just tell me your story... “What’s your problem?”...and then saying to them afterwards... “Okay ...so everybody has had a bad day ...but that doesn’t really give you the right to come in here and give me a bad day...does it?...You want to have a good lesson with me...we’ll have a good lesson with me... you want to have a bad lesson with me...you are on detention...”.

There’s no point ...for me...And I don’t think there is any point in fellow students ...going through...”What did you do?...What should you have done? ...because they just go... ”I did this... I should have done that ...Yes...Miss...” ...and walk away... They know the questions...they know the answers...they are not interested... I’ve seen it happen...and that’s why I wont use it...So...I think my behaviour management...comes from the fact that I talk to kids ...like they are people... not like they are children...

Her behaviour management is closely linked with her desire to communicate and inspire those students, not only in an affective sense but also in the cognitive domain because,

...it too easily becomes a transfer of knowledge ...instead of shared building... of knowledge...If they don’t feel ...that they can talk back to you...you don’t feel you can talk to them...with some degree of honesty...then I think it ...it’s not effective teaching ...It’s just ...putting facts out there...
Behaviour management was the only component of general pedagogical knowledge that featured in the two data sets. The powerful linking words, ‘teaching in classroom begins with’ to link ‘behaviour management’ to the key concept, indicates the pivotal role of behaviour management in Peace’s teaching. An equally powerful linking word, ‘is’, that links ‘behaviour management’ with ‘ability to communicate and inspire students’ shows the importance of the latter in promoting and maintaining effective behaviour management practices. Other subordinate concepts in the hierarchy that relate to the variety and flexibility of teaching and open classroom discussions, play a strong supportive role in both maintaining effective behaviour management, and providing ‘positive classroom experiences’.

As Peace stated in her TAP, effective behaviour management practices must also connect learners in a cognitive sense as well. In other words, both teachers and students should engage in shared knowledge building, teachers should encourage students to debate and test their own understandings, and teachers should model their expectations. Peace’s commentaries also indicated a common sense approach in her behaviour management practices.
As Cole and Chan (1994) pointed out, effective classroom management “depends on a teacher’s attitudes and practical intelligence” (p.318). Peace also said that classroom rules are negotiable up to a point, and that decisions which affect the general welfare of the class and require accountability to the school community, are decisions for the teacher.

Peace’s maturing constructs of social science teaching in October 2002

The six month time lapse led to a refinement in aspects of Peace’s map construction, and as a consequence, identification of fewer knowledge bases (See Figure 2). A cross-link on the map indicates that Peace has given some consideration to integrating knowledge bases across the hierarchies. The identification of ‘classroom management’ as a general concept indicates the continuing importance of behaviour management in her concept map, based on a variety of teaching strategies that take into account the learning styles of students, including the additional constructs of ‘curriculum’ that offers both academic and vocational subjects, and ‘school ethos’.

As Peace pointed out, both behaviour management and curriculum knowledge, “…need to complement each other …”, or as she later stated, they “…sit together”. Peace explained that

...your curriculum should really be influenced by behaviour management which is why I’ve put it underneath behaviour management because behaviour management is both preventive and corrective…and the preventive stuff means incorporating into your curriculum interesting things for kids to do. Umm…and I guess so is the variety and multiple perspective stuff is really preventive kind of behaviour management. Umm...the corrective behaviour management is how you set up your dynamics in your classroom and how you manage their behaviour as it happens rather than trying to prevent boredom and a lack of motivation that causes misbehaviour.
Figure 3: Constructs at independent practice

- **School/staff**
  - Based on: Policies, Attitudes
  - Is determined by:
- **Teachers**
  - Sharing ideas for:
- **Administrators**
  - Who have expectations for:

- **Planning**
  - Requires:
  - Should include both:
    - Who determines the:
      - In terms of:
        - Class
        - Individuals
    - Needs to cater for:

- **Students**

- **Content Processes**
  - Based on:
  - That is determined by:
    - Variety
      - Is one way of developing:
        - Learning styles
          - scaffolding for visual, auditory, movement
    - Teaching strategies
      - In order to develop
      - And

- **Units**
  - Including:
  - Resources: handouts, videos, notes

- **Daily**
  - In order to develop:
  - And

- **Class discussion**

- **Critical thinkers**
  - Including ideas of:

- **Empathy**
  - Relationships
    - And
In summary, Peace’s maturing constructs of social science teaching indicated a strong focus on behaviour management. The linking words, ‘involves good politics and good pedagogy’ that link ‘classroom management’ to the key concept on her concept map indicated her perceptiveness of the politico-contextual environment of the school setting – the way schools are governed and how they are in turn, held accountable by bureaucrats and by the wider community, including politicians. The ‘good pedagogy’ aspect of the linking words, showed Peace’s high regard for instruction in classroom management. Her TAP commentaries state the importance of establishing the dynamics of the classroom first, before proceeding with instruction. She divided up behaviour management into two parts; the corrective side that involves managing behaviour as it happens, while the preventative aspect provides “…interesting things kids…do…” that prevents boredom “…and a lack of motivation that causes misbehaviour”.

**Peace’s constructs of social science teaching on realization of independent practice in May 2003.**

Peace’s concept map diagram after six months of inservice teaching indicated a hierarchy of concepts beginning with the nomination of ‘school/staff’, ‘planning’, and, ‘students’, that ultimately led to ‘content’, ‘critical thinkers’, ‘relationships’, and ‘empathy’ (See Figure 3). The four cross-links that link ‘students’ with ‘content’ and ‘processes’, ‘variety’ with ‘behaviour and expectations’, ‘teachers’ with ‘units’, and ‘teachers’ with ‘resources: handouts, videos, notes’, indicated an integration of knowledge domains across the three hierarchies – more so than her previous concept constructions.

Peace said in her TAP that her position as a first year teacher often rendered her powerless in terms of making decisions for her students. She explained that

I don’t feel... that I am free to...set up the rules in my classroom or to ...give students the best that I can ...in terms of adaptability...or flexibility in their lives... And so my planning... my experience of being able to ...what I consider...has been highly impacted by those things...for example...at the beginning of the semester...a teacher has to set all of the assignment dates ...but as a first year teacher...I just have not got the time...to be able to hand out the assignments... in time...to be due by the due date...but I don’t have the independence to change that...So...on occasions my kids have suffered...because I’m learning the ropes...

Peace stated that the school’s behaviour management policy is an instance where she has little opportunity to develop her own model in the classroom. She questioned the philosophy behind the Responsible Thinking Process (RTP) because

...they are trying to set up with kids...that kids are responsible...for their own behaviour...in that they make choices about their own education...So the school concept is that if the child is misbehaving in the classroom... it's because they have made a conscious decision ...to not be involved in their education...I disagree...there is no way that a fourteen year old is capable of making a conscious decision ...about whether or not they want to be involved with their education ...They can say...”I’m bored with this...” they can give a teacher a hard time...but at no point does a student...ever...does a
fourteen year old make a conscious decision...about their education...they are here because they have to be...

She does, however, acknowledge the benefits of the RTP process, especially in terms of providing consistent expectations to students throughout the school “…whether you are in maths…or science …or drama…or history … - so that is good thing …”. Peace points out that the “The best thing about it… is that it provides support for weak teachers and supply teachers …”, especially for supply teachers who teach…what they are given… and its not within their control to make resources interesting…and to cater for different learning styles…They can’t do that…but they still have this backstop…to control their classroom…the kids all know that if you have a supply teacher…you don’t go to the ‘responsible thinking room’…you immediately go to the administration …So …it is a big stick…

Despite the overwhelming presence of the school’s behaviour management policy, she has tried to develop her own behaviour management that relies on the class dynamics by letting…kids manage their own behaviour …In the first couple of weeks of the semester of the year …we talked about expectations …we talk about common sense …we talk about what responsibility means… I try to remove the conflict of authority from the classroom…I try to get the kids to work in partnership with me…even though …in reality I am the boss…

Peace’s concept map identified the nature of students such as their skills in ‘relationships’ and ‘empathy’ as pivotal in determining the type behaviour management strategies in class. But the level of effective behaviour management in class was also dependent on the ‘variety’ of ‘processes’ and ‘content’ in the lesson planning. Commentaries from her TAP indicated her desire to develop her own behaviour management policies, despite the overwhelming presence of the school based ‘responsible thinking process’.

Discussion

Behaviour management was consistent in Peace’s conceptual structure of teaching in the three data collection phases. Data elicited from her initial experience as a social science teacher indicated a strong focus on the teacher establishing the guidelines in behaviour management, of a common sense approach in dealing with students, of integrating behaviour management within the learning process, and the use of team leaders as a means of reinforcing group behaviour. Data elicited from her developing thoughts on social science teaching indicated the importance of having both corrective and preventative strategies in behaviour management, and of establishing the right dynamics in class before instruction can begin. At the stage of independent teaching Peace shows that effective behaviour management depended upon planning and preparation based on variety, content, and processes, and discipline measures were the last resort in behaviour management. She also spoke of the challenges of establishing her behaviour management policy when she was also obliged to implement the school’s “responsible thinking process” in class. The study indicates that Peace is consistently strong in her desire to incorporate her own behaviour management strategies in her class teaching, but seems to have a better understanding of choice
theory and its value in the classroom in her first year of teaching, rather than rejecting it out of hand as she did during her first TAP.

The case study of Peace shows the value of concept mapping as an effective method for assessing conceptual change in research. Concept maps can also provide teacher education students with valuable feedback on the extent and organization of their knowledge. The accompanying think aloud protocol add another dimension to the elicitation of participant’s knowledge both for the researcher and participant in a study.

**Conclusion**

This case study of Peace shows that she a desire to incorporate behaviour management strategies with other knowledge bases of teaching to promote effective teaching and learning. But Peace’s lack of understanding of the finer aspects behaviour management theories like the Glaser model and its application to classroom practice could be interpreted as an urgent desire by her to establish her own model in behaviour management before truly reflecting on the models of behaviour management in the literature. Her struggle to establish her own behaviour management strategies are again reflected in her first year of teaching when faced with conforming to the school’s own behaviour management policy. So, it can be said that Peace’s behaviour management strategies were at least proactive and not reactive, and it was not her ignorance but misinterpretation of some established behaviour management models because she already possessed an undergraduate degree in behavioural science, and was certainly cognisant of the fact that behaviour management strategies are part of effective teaching and learning, and strategies that utilise punitive measures are bound to fail. The interrelated network of concepts in Peace’s three concept map diagrams and her think aloud protocol clearly indicates that behaviour management is an integral part of and not separate to effective teaching. There is a need for further research with groups of beginning teachers, using a longitudinal study approach that utilises concept maps to determine their level of understanding of behaviour management models and the development of their own models in the early years of their teaching.
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The Sunday Telegraph


“I don’t need IT because I’m going to be a teacher” and other popular beliefs: High school students’ explanations for the under representation of girls in information technology subjects

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Abstract
This paper examines the implications for teacher educators of the dominant beliefs currently circulating within diverse Australian high schools about the (lack of) relationship between girls’ interests, girls’ careers, girls’ futures and the broad field of information technology. It identifies students’ attitudes towards the content, relevance and general appeal of IT subjects to highlight the challenges for both teachers and teacher educators who may be seeking to address the issues associated with girls’ under representation in IT courses and also contribute to an ongoing project of gender based educational reform. Emphasis throughout the paper is on the persistence of discourses that continue to position girls and IT in opposition to each other and on the challenges of subverting these discourses through the introduction of new figurations (cf Rosi Braidotti, 1994) or transformative understandings of what it now means to be a female student, a female teacher, or a female IT user. The paper concludes by reflecting on the implications of these themes for teachers and teacher educators: particularly those with an on-going commitment to the broad field of educational justice.

Introduction
Between 2005 and 2007 I have been one of a group of researchers working on an ARC Linkage project titled: From high school to higher education: Gendered pathways in information, communication and computer technology education (hereafter referred to as the GaIT project). The project has involved a range of schools in New South Wales, Victoria and South Australia. It has three aims:

 ecstasy To identify the educational pathways and career outcomes for males and females in information, communication and computing technology (ICCT)\textsuperscript{1} fields;

 ecstasy To ascertain why the proportion of girls who enter education pathways leading to ICCT careers is so small; and,

 ecstasy To identify strategies that might lead to increased numbers of girls to qualify for, choose, and enter ICCT courses at the higher education level. (Vickers, et al., 2005)

Over the past twelve months, the research team has been working on a range of papers related to this project, and also on the production of reports to the schools involved in the project relating, particularly, to the third aim: identifying strategies that might lead to increased numbers of girls in the study of ICCT programs at university level. As analysis of the data has progressed, so has the identification of these strategies become increasingly difficult. The more the data is analysed, the more complex the

\textsuperscript{1} Throughout the paper I will generally use the term ICCTs but will also make use of the shorter term, IT: in both cases I am referring to diverse technologies and professional areas associated with computing and communication technologies.
task of identifying what ‘the problems’ actually are and, by extension, what solutions
might be.

The catalyst for this particular paper was provided by comments made by a group of
girls during a focus group discussion involving 6 girls at a rural high school in
Victoria. The students made the following points:

I  So do you have any ideas why girls might not want to study IT?
G1  well, I guess it’s just not that interesting
G2  Boring…
G3  and it’s also, like, well we don’t really need it.
G1  yeah it’s boring so you’d only do it if you really had to
I  And why would anyone have to?
G1  Maybe you were going to work in it, and you like full on needed to know everything.
But for most of us, we don’t need that.
I  So it’s tied up to careers?
G2  Yeah
I  And what do you think you might do when you finish?
G1  Teaching.
G2  Yeah. Or kindergarten.
I  And what about you?
G3  Dunno, maybe the same.
I  Gee you’ll be able to run this school between yourselves….(Otter, Focus Group 1)²

At the time of this exchange I had two fairly immediate reactions. The first was to
reflect on the implications for teacher education of students’ apparent belief that there
is little or no significant relationship between the study of IT (or even the use of IT)
and the teaching profession. This was not the first time this issue had emerged.
Indeed, of the 240 students surveyed for the Victorian dimension of the project, 32
identified teaching as a preferred or most likely job, ten years into the future. Of these
32 students, only 5 indicated that they would be likely to select any ICCT subjects in
their post-compulsory years of schooling. The majority of the students not linking IT
to teaching were girls. This, it seemed to me, was yet another way in which the long
standing opposition between girls and IT was illustrated through this project.

My initial plan for this paper was to focus exclusively on the challenge of ‘making’
teachers out of these female students: students who begin their teacher training with
little interest, or experience, in the broad area of information technology. As I
continued to reflect on this exchange, however, I began to wonder what response the
students might have had if they felt that their rejection of technology was being linked
to their gender, rather than their career. Counter arguments came readily to mind: it
could be, for instance, that girls planning a teaching career believe themselves to be
sufficiently technologically competent as a result of their early education (and life)
experiences to not need any formal training. Alternatively, they may believe that the
IT competencies they will require as graduate teachers will be taught to them during
their pre-service training. And, of course, it is also possible that students do recognize
the link between IT and teaching, but nevertheless still choose not to study IT:
perhaps because they find the curriculum and pedagogy rather boring, or because they
select subjects that they believe will maximize their tertiary entrance score and reject,
as a result, VCE units in IT which are routinely scaled down when ENTER scores are
calculated.

² All school and student names are pseudonyms.
Indeed, throughout the project the students (and indeed the teachers) put forward a
great many explanations for why girls (and boys) made their subject choices and very
few of these explanations focused on issues of gender. It is the tension between the
project’s ‘interest’ in identifying links between subject selection and gender, and the
students’ and teachers’ equal commitment to denying this link that structures this
paper. I proceed from the position that making sense of out data such as that collected
from this project is always more than just an objective or academic exercise. The
meanings we choose to ascribe to the texts we construct play a role, not only in
‘capturing’ or attempting to represent the world view and (multiple) realities of the
research participants, but also in actually constructing, and defining that world. As
Gayatri Spivak (1990) wrote so evocatively:

> the possibility of explanation carries the presupposition of an explainable (even if not
> fully) universe and an explaining (even if imperfectly) subject. These presuppositions
> assure our being. Explaining, we exclude the possibility of the radically
> heterogeneous. (p. 380)

Spivak’s words have relevance not only to the political implications of analyzing
data—and the role that research plays in constructing the ‘reality’ of a particular
subject— but also to the whole issue of identifying the question—or the validity of a
question—that any set of data is intended to address. Thus, while I began this paper
with the intention of simply mapping yet one more set of gender related challenges
facing people working within teacher education—ie taking disinterested female
teacher education students and equipping them technically and ideologically to make
meaningful use of IT for their own and their future students’ learning—I soon came to
be interested in the particular ways in which the explanations that were routinely and
consistently put forward by the participants to account for the under representation of
girls in IT, whilst diverse and far reaching, were held together by one common thread:
the belief that the under-representation of girls in IT, whilst a statistical reality, was
not, in any other sense, an actual ‘problem’ for the students in the schools. That is to
say: whilst students (and the teachers) often accepted the researchers’ claim that
industry was seeking more IT graduates, and that universities, as a result, were keen
to recruit more IT students, this was seen by most of the students as a kind of abstract
problem for the industry, not as a situation with any particular consequences for the
students, and the girls, themselves.

In this way, the data reported demonstrates not only the on-going nature of girls’
disengagement with IT in schools, but also the relationship between this persistence
and the continued power of traditional explanations circulating in schools about the
‘natural’ differences between boys and girls. As an opening move it is necessary to
acknowledge that girls’ relationship with IT has been the subject of considerable
research for many years and that this literature articulates with a related scholarship
focused on the construction of gender in diverse school settings. This paper therefore
contributes to research in both these areas, not only by identifying the persistence of
certain explanations for girls’ rejection of IT over a long period of time, but also by
linking this persistence to the challenge of sustaining school and social interest in
girls’ education, at a time when popular attention to issues of gender in schooling
have generally shifted towards the educational needs of boys (for a discussion of this
see Rowan, 2007). I begin the next section of this paper, therefore, with a brief
review of the contemporary literature relating to girls and IT and the relationship of this literature to the broad field of gender based educational reform.

The research background to this project
As mentioned above, the percentage of girls studying information technology (IT) subjects in the final years of schooling has remained persistently low (under 25%) despite years of gender based reform in schools (James, et al., 2004). Analysis of this phenomenon has often focused on such factors as the impact this under representation has upon the numbers of girls' studying IT or similar courses at university; the looming personnel shortages in information technology professions (Wentling, 2004) the possibility that by opting out of IT as an area of study, girls' are limiting their future career paths, reducing their chances of employment within lucrative and “in demand” industries, and, indeed, curtailing their ability to contribute to the construction of the kinds of technologically mediated futures that impact upon their lives into the short and long term future (Wajcman, 2005).

Projects focusing on the factors that influence girls’ decisions to study (or not) information technology in the post-compulsory years of their education routinely draw attention to the impact that early education experiences have on subject selection. For this reason, attention is often focused on the school as a site of ‘early intervention’ and there is a long history of research in this general field (AAUW, 2000) designed to better explain and thus respond to girls’ rejection of the area. These projects tend to follow two main pathways. The first pursues a generally essentialist line of thought albeit in two different ways. On the one hand, differences between the behaviours of boys and girls are used as a basis for arguing that girls are biologically, intellectually or temperamentally unsuited to the study of information technology (lacking the inherent capacities, skills or interest to succeed in this area). On the other hand, some feminists have argued that these inherent, natural differences between boys and girls, whilst real and possibly attributable to biology, need to be used as a basis, not necessarily for keeping girls’ out of IT (although the argument has been made that girls’ would be better off away from this ‘masculine’ field), but perhaps for re-shaping the ways that technology is understood or enacted in diverse settings. In this framework, essentialist arguments are used, not to justify girls’ ongoing exclusion from areas related to IT, but, rather, to argue for a re-definition of what IT is, and how it is performed, to make it more ‘girl friendly.’

A second strands of research generally begins by rejecting either pro-feminist or anti-feminist essentialist explanations to argue, instead, that any observable difference in abilities, behaviours and so on is the result either of socialisation processes, or wide spread narratives about gender which produce certain kinds of gendered performances as natural for certain bodies, and other performances, as unnatural for those same bodies. This research argues that they key task for feminist theory is to broaden the construction of terms such as ‘femininity’ or ‘technology’ so that multiple ways of performing the role of ‘girl’ ‘girl student’ or ‘IT worker’ are able to be accommodated. One example of this kind of theorising is provided by Rosi Braidotti who argues that the key task for feminist work through the late 1990s was to continue to construct, circulate and validate diverse, multiple and contradictory images—figurations—of female identity, so that these figurations—in their contradictions and diversity—could work to open up possibilities for girls—women—to pursue multiple futures. Braidotti (1994) writes:
Figurations are not pretty metaphors: They are politically informed maps, which play a crucial role at this point in the cartography of feminist corporeal materialism in that they aim at redesigning female subjectivity...In this respect, the more figurations that are disclosed in this phase of feminist practice, the better. (p. 181)

While there have been significant shifts in the range of ways that issues associated with gender equity and gender based educational reform are spoken about in theoretical contexts, this can be read as a situation that has brought about an increase in the variety of responses, rather than any firm change to the nature of the response. In other words, gender reform has not developed in a linear kind of way such that explanation Z replaces explanation Y which in turn is replaced explanation X. That is to say, the emergence of post-structural approaches to the analysis of gender identity, for instance, has not usurped either socialisation or biological determinist arguments concerning the same phenomenon. Rather, all of these explanations continue to vie for the attention of various people concerned with broad questions of gender: and in the data reported through this paper, the traditional, essentialist, views prevail.

In the next section of the paper I will identify common explanations put forward by the participants in GaIT research project to explain the girls’ rejection of IT study and highlight the ways in which these explanations reinscribe long standing patterns used to explain differences in the interests, abilities and career paths of girls and boys.

Persistent explanations for gender based educational experiences
As outlined in the introduction, this research is based upon an ARC Linkage project titled From high school to higher education: Gendered pathways in information, communication and computer technology education. This project is led by Professor Margaret Vickers, and has been conducted between 2005 and 2007 with a team of researchers from University of Western Sydney, Deakin University and Charles Sturt University. The research has focused on schools and students in New South Wales, Victoria and South Australia and has involved over 1300 participants. Data discussed in this paper is generally drawn from a range of schools in Victoria. A brief outline of the schools follows:

- Crocodile: Rural, low SES, low diversity, mid female participation
- Otter: Rural, low SES, low diversity, mid female participation
- Bandicoot: Regional, high SES, low diversity, low female participation
- Dragon: Metro, low SES, high diversity, mid female participation
- Angelfish: Metro, low SES, high diversity, low female participation
- Sheepdog: Rural, low SES, low diversity, low female participation
- Fairy Wren: Rural (NSW), high SES, low female participation

Drawing on a range of post-structural feminist perspectives and the work of Pierre Bourdieu (1977, 1984), the project proceeded from the recognition that each individual’s life (and educational) choices are influenced and, indeed, constrained by the internalised dispositions (or habitus) they develop as a result of the environment (or field) in which they are socialised. The project sought to draw attention to these influences by identifying students’ understandings of IT, and their relationship to IT, in both the short and longer term future.

To this end, the project employed a mixed methodology. It involved several stages:
firstly, interviews with teachers about their understandings of why girls do/do not choose to study ICCT; secondly, surveys of students in years 10 and 11 designed to identify the diversity of the student group, and the factors that influence subject choice; and thirdly, focus groups with students (boys and girls) who expressed either a high or low interest in IT subjects, designed to explore in more detail the diverse factors that shape subject selection generally, and the more specific reasons why IT subjects do, or do not, appeal to boys and to girls. Through these focus group interviews students were initially asked general questions concerning previous experiences with IT; the characteristics of a good IT teacher; the skills that a person would need to be good at IT; the uses they make of IT in and out of school. Only towards the end of the session were the students explicitly asked to comment on, and attempt to account for the under representation of girls in the subjects.

The researchers in the Victorian team conducted more than 20 focus groups with students in a diverse range of schools throughout 2006 and 2007. These schools were a mix of regional, rural and metropolitan, from a range of socio-economic backgrounds, and characterized by differing degrees of cultural diversity within the student and community population. Despite the diversity of the students involved in the focus groups, the similarities across groups regarding the explanations put forward to explain girls’ under representation in ICCT subjects was remarkable. It is to this data that we now turn.

Theme 1: there’s just no jobs in IT
A first theme concerned the lack of employment opportunities relating to IT. There are two distinct, but related, sub-sections to this discussion. The first is that in the dedicated IT professions, there is currently little work to be had.

Boy 1: In year 10 I did like certificate 2 and I was going to continue on with IT but then a lot of people are saying that there would be actually a shortage of positions in IT because its so popular so then I just had a different career change and I just decided to do something else (Male student, Angelfish, Focus Group)

Girl A: a lot of our parents and that say’ oh there’s no jobs out in the IT word cause there’s a big boom last time’ and yeah that’s what they tell us so we just don’t need to do it. I just find the boys are more better at it than the girls cause they’re more creative in that way and their brains work differently. (Female student, Crocodile, Focus Group)

Some teachers expressed a similar sentiment:

Teacher M There is no jobs anymore. All the jobs, they are overseas. Or overseas people come here. The industry is dead. Why work in it. (Male Teacher, Dragon, Interview)

As an opening move, therefore, students generally constructed information technology as a poor career choice, and thus as an area unlikely to draw them into study. Once the issue of the relationship between subject choice and future careers was opened up, students went a further step to argue that generally speaking there is little substantial relationship between IT and diverse careers.
**Theme 2: There’s no IT needed in the jobs we want**

A comment made by one girl was indicative of this trend:

**Girl C:** Well I like computers but I wouldn’t really need them in the career that I’m going to be choosing.

**Interviewer:** What would that be?

**Girl C:** Either a makeup artist or a poet. The only time I would actually need it was to type up a résumé or a actually poem to submit it and I already know how to do that. (Anglefish, Focus Group)

Similar sentiments were expressed by students interested in law (Female Student, Bandicoot, Focus Group 5), farming (Male student, Crocodile, Focus Group, 2) and the air force (Male student, Bandicoot, Focus Group 6).

As indicated at the start of this paper, the perceived mismatch between most career paths and the study of IT was most consistently identified by students who indicated an interest in studying teaching:

**Girl 1:** I wouldn’t have minded doing IT, it’s just that it wouldn’t have fitted in with my time table and my pre-req’s for what I want to do.

**Interviewer:** So what things do you guys plan on doing?

**Girl 1:** At the moment I’m looking at primary teaching. Maybe PE teaching or something within the police force. (Angelfish, Focus Group)

The consistency with which students argued that IT had no connection to their future—except in the sense that their early experiences with technology provided them with the basic operational literacy skills which might be required for word processing or similar tasks—raises issues about the actual and the perceived content of IT.

**Theme 3: What is IT anyway?**

It is commonly argued that students do not really know what occurs within IT subjects, in either the VCE, VET or VCAL programs.

This point also became clear in this project. There was a general lack of understanding about what IT—or ICCT as it is often referred to in schools: Information, Communication, Computer Technology—actually meant. Indeed when asked this question at the start of their focus groups students would routinely make the following kinds of remarks:

**Interviewer:** If I said to you then ICCT, does that mean anything to you?

**Boy 1:** No.

**Boy 2:** Never heard it before. (Bandicoot, Focus Group)

Early themes emerging from the project, therefore, drew attention to the belief that there were few jobs available. This perception was accompanied by only a vague understanding of the range of jobs associated with ICCT, the links between ICCT and non-IT professions, and the actual content covered in school based IT units.

Addressing all of these factors, therefore, emerges as a logical recommendation for this project. However, this task is made more complicated by other themes, including
the recurring argument that even if there were jobs in the field, or even if IT was shown to be connected to diverse career paths, that no one is particularly interested in the subject anyway. I will turn now to look at these themes in more detail.

**Theme 4: Even if we needed it, IT’s just not interesting: curriculum, assessment and pedagogical issues**

Objections to the content and curriculum of IT as it is presented in schools abounded through the study. The subject was routinely described as boring:

*Interviewer:* So in those first years, 7 to 9, when you did it, did you enjoy IT at all?
*All:* No.
*Girl 1:* I don’t think I did, I can’t remember.
*Interviewer:* Any particular things, why you say you didn’t like it?
*Girl 2:* It’s pretty boring. (Bandicoot, Focus Group)

The reasons put forward to account for IT’s boring character were also consistent, and generally related to too much theory, too much structured computer work, not enough opportunity for creativity, and too little variety in the kinds of tasks employed. For example, students the inner city school, Dragon, complained:

*Boy 2:* 
...[all we do is read stuff]...and answering questions.
*Boy 3:* That’s the only thing we do.
*Boy 2:* Its true, answering questions all the time.
*Boy 3:* Just one semester, just answering questions. That’s it. Not opening the computer. Do nothing. Just answering. (Dragon, Focus Group)

In addition to this, students routinely commented on the lack of engagement produced by dominant pedagogical models.

*Interviewer:* So do you think an IT teacher needs particular qualities? They need to have certain things to make them good?
*Girl 2:* I think it would be better if an IT teacher was more funner[sic]. Cause they...not generalising but like IT for me its not the funniest, staring at a computer, clicking on things, is not my idea of...so if I enjoy it and so maybe the teachers a bit more vibrant. (Bandicoot, FG 5)

They also expressed concern at the assessment practices:

*Boy 2:* …the ...[exam]...is going to have written stuff. We got told that.
*Interviewer:* How do you feel about that?
*Boy 4:* Not happy. I picked up the book, the text book once.
*Boy 3:* I don’t even have a text book.
*Interviewer:* So the exam could be a bit of a shock to some of you then? If it’s written and you’re use to doing prac. (Bandicoot, Focus Group 6)
And expressed a clear preference for more options and flexibility within their assessment including the opportunity to undertake some group projects.

Finally, some students argued that timetables played a big role in final subject selection:

Girl H: Each year it changes. We change all our own subjects. Last year we had a choice of 4.

Girl V: This year we chose them and then if there was…like sometimes you were blocked out of some subjects. Just depended.

Interviewer: So do you think if there was no time table constraints would you still be doing IT?

Girl H: Yeah.

All: Yeah. (Otter, Focus Group)

Theme 5: We might do it, if it’s easy...
In this context, the reasons why students DID choose IT fell into two main categories: first there were a (very) few students who believed they would need IT for their future careers, generally careers that were in IT or related areas. Second, IT was identified as a subject that was ‘easy’ and thus appealing to some boys who felt it was a legitimate area for them to enter and to bludge. For example, some students, when asked “why did you choose IT” responded in the following way:

….Sounds easy.

….Cause I was dropping one subject so I had to pick up another. This is the easiest.

Interviewer: Why does everyone say that. [that] it was a bludge and its easy.

….Because it is kind of a bludge and it is easy. (Bandicoot, Focus Group 1)

Throughout all of data focused on the themes identified above, the question of gender is remarkable for its absence. In the majority of the focus group sessions conducted in Victoria, it was not until the researchers themselves raised the question of gender as having an impact upon subject selection that the issue was addressed. When the specific question of girls’ under representation was raised, two specific responses were consistently made.

Theme 6: The gender issue: essentialist perspectives
First, students and teachers were often generally emphatic that gender was not an influence. Instead they attributed decisions to the broad phenomenon of ‘interest’:

Boy B: I don’t think it’s the sex of the person. I think it’s based on the interest and what they like doing.

Girl C: And their intellectual abilities. (Students, Angelfish, Focus Group)

A similar sentiment is expressed by a teacher at Fairy Wren who argues that:

I guess it probably or maybe gets down to interests. Like we try to encourage the kids to take the courses that they’re interested in. I guess, I don’t know, it probably comes down to the girls probably aren’t interested in it, I guess, the programming as well as computing. (Teacher, Fairy Wren, Interview)
Students in the majority of the schools also made the claim that no one cared any more about what subjects students’ chose, and that there was no reason why anyone would hassle or view negatively a girl who undertook the study of IT.

However, within the same schools, there was also strong evidence to suggest that the kinds of biological determinist arguments which were the target of much of the earliest work of educational based gender reform were still very much in popular circulation. Significantly, these arguments are made just as commonly by teachers as by students:

**Girl E:** I think guys…it’s probably the way guys brains work more than anything. Cause you know how they do physics well a larger portion, maybe that’s how they…[think]… (Female student, Otter, Focus Group)

**Girl V:** I think It’s more the way…it’s just what guys get into. Like guys won’t get into hair and makeup as much as girls do so it’s just the same computers and…(Female student, Otter, Focus Group)

**Girl 2:** I just think boys tend to play the games and things on the computer. Do you know what I mean. Kind of like a PlayStation, they’ll go on and play the games together. Like PlayStation stuff aren’t really…its kind of like you’ve got girl and boy things. (Female Student: Focus Group, Bandicoot)

Similar sentiments were expressed by several teachers. For example:

**Teacher J:** …I found most of the girls has [sic: passim] problem [sic] n logic, in mathematics, they just can’t understand the procedure. They can not…I don’t know why. They have to follow teacher’s instruction step by step. I can’t skipped some steps. It’s quite hard for them. But in Microsoft Excel its very hard for girls because they need to know how to create a formula. I mean that’s very hard for them. (Male Teacher J, Dragon, Interview)

**Teacher G:** Probably one of the difficult areas I have, certainly even in 12, is that the boys tend to look at the hardware and revolved around you know what sort of CPU have you got in the machine. Whereas the girls tend to not have that perspective. They’ve had no interest in hardware, and that’s why I really don’t want see us trying teach the systems which really revolves around the hardware. So the boys have more interest in that technical side, the girls don’t. (Male Teacher G, Sheepdog, Interview)

Interestingly, whilst these comments worked to try and naturalise the opposition between girls and technology and to effectively deny the impact of environment on subject selection, some of the interviews revealed quite powerfully sexist attitudes. For example, when reflecting on who the computer users in their own houses were, one group of boys made the following comments:

**Boy 2:** My mum doesn’t use the computer.

**Boy 3:** My mum doesn’t touch…

**Boy 2:** My mums like computer phobic.
Interviewer: Doesn’t like to turn it on or anything.

Boy 2: Lots of mums are. Like all my mates mums hate computers. They’re just like oh, just trying to hit the on button and then they finally get to grips. Then they see a light on and it sounds like…

Boy 3: …oh my god, the lights. (Bandicoot, Focus Group, 6)

A similarly deterministic logic was found in the extent to which students were able to suggest any ways to make IT more appealing to more students. By far the most common answer to this question offered by girls, was “not much” or “nothing really”. This resignation or acceptance of an apparently uncontroversial ‘reality’ was reflected not only in the general comments of girls and boys who gestured to improvements in curriculum and pedagogy, but also in other comments which suggested fairly ridiculous solutions all based upon stereotypical understandings of what girls were ‘really’ interested in, and what they were ‘really’ motivated by:

Interviewer: Is there anything that could be done to make the IT industry more appealing to girls or students?

Boy 1: Paint the computers pink.

Boy 5: That’s what I said. (Bandicoot, Focus Group 6)

Boy 1: Oh put bachelor of the year next to the computer, that might get them involved. Like hey, lets just say his name is Geoff, like Geoff Williams does IT. Hot. In his speedos.

Interviewer: Do you reckon that will help?

Boy 2: Yep. (Bandicoot, Focus Group 6)

And also:

Boy 2: I was thinking subliminal messages in their pop songs. Do IT when you play it backwards.

Boy 1: Get some hip hop going. (Bandicoot, Focus Group 6)

The data collected through this project corresponds closely with data conducted from other studies nationally and internationally (eg AAUW, 2000; Millard, 1997; Acker, 1989) which emphasise the ways in which schools and their discursive practices, routinely construct girls in oppositional relationships to technology. As outlined in the introduction, however, the significance of this research is to be found, not so much in the collection of more evidence to endorse the findings of earlier projects, but rather, in the fact that despite years of gender based educational reforms, and regardless of any other shifts that may have taken place concerning the ways in which gender equity is conceptualised and enacted in schools, in politics and in society more generally, schools remain locations which circulate and legitimate traditional and oppositional understandings of information technology and femininity. There are numerous implications of this for schools and for teacher education and I will address these briefly in the concluding section of the paper.
Conclusion
As outlined above, one of the key objectives for the GaIT project was the identification of strategies to address the under representation of girls in the study of information technology. The initial thinking was that these would relate primarily to factors such as the content of ICCT programs, the pedagogy and assessment practices of ICCT teachers, the status of ICCT units within the school curriculum and in tertiary entrance score calculations and the overall image of the profession within society more broadly. Certainly there was significant data collected throughout the project to suggest the need for changes focused on each of these issues. In this context, teacher educators face the challenge of ensuring that graduate teachers are provided with robust understandings of technology that go beyond stereotypical images of the lone technician slaving away in a darkened room.

In addition to this, there is a need to ensure that graduate teachers are provided with substantial opportunities to work with technologies in their own and in their future students’ classrooms, in creative and engaging ways. Each of these challenges is worthy of a paper in its own right, and further publications on these topics will be forthcoming over the next twelve months.

For the purposes of this paper, however, the key implication for teacher education is that students who enter teacher training programs may come, not only with traditional understandings of what IT ‘is’ and what it allows them to do, but with similarly narrow and limiting understandings regarding the role of education in the contestation or naturalization of traditional gender norms. This, it seems to me, is a crucial point. The persistence and the power of traditional narratives relating to gender raise key challenges for teacher educators, who have the opportunity or responsibility of providing graduate teachers with the resources necessary to make sense of their own students’ perceptions and attitudes about the impact of gender on factors such as enjoyment, pleasure, subject choice and desired futures.

This work rests upon an acknowledgement that the process of contesting traditional understandings of gender, and circulating and legitimating the multiple alternative figurations of ‘woman,’ ‘girl’ and ‘female IT student’ as advocated by Braidotti (1994) is a process, above all else, of repetition. In 1990, Trinh Minh-ha made the powerful point, that displacement of mainstream practices occurs largely through a process of repetition:

By questioning over and over again what is taken for granted as self-evident, by reminding oneself and the others of the unchangeability of change itself. Disturbing thereby ones own thinking habits, dissipating what has become familiar and clichéd, and participating in the changing of received values—the transformation (without master) of other selves through one’s self. (p. 332).

Trinh’s points were originally made 15 years ago, where the covert nature of routine phallocentric practices were perhaps the target of most analysis. Today it may be that the “received values” which have become familiar and clichéd are those that inform the explanations still routinely used to explain away and dismiss girls’ and boys’ differing interests and abilities. The data collected throughout this project demonstrated clearly the ability of students from diverse backgrounds and across diverse schools, to come up with multiple but similar explanations to account for the differences in boys’ and girls’ relationship with technology: explanations which worked, in one way or another, to naturalise the absence of girls, and, by extension, to
problematise ongoing attempts to interrupt or change this pattern. These explanations, I would suggest, are supported, rather than challenged, by schools’ and students’ previous exposure to gender based educational (and social) reforms: for if gender has been a topic of investigation and intervention for more than thirty years, and if girls’ continue to reject IT and technology despite all these interventions, then biological and other explanations for this persistence acquire more, rather than less status.

One of the biggest contemporary challenges for teacher education, therefore, is to find ways to ensure that our students are provided with opportunities to identify, not only the historical construction of gender norms but also the capacity of these traditional discourses to re-emerge, in modified guises, into and through this new century. Whilst we live in a world which regularly claims the achievements—and indeed the excesses—of feminist reforms, in the day to day lives of students in schools, gendered differences in behaviour, interest and subject selection are routinely regarded as natural and insignificant. This raises questions, in turn, about the capacity of contemporary feminist educators—and, indeed, all those working in broad fields of social justice—to reinvigorate interest in and commitment to, the diverse ways in which educational environments continue to circulate, legitimate and naturalise narrow and limited understandings of students based on factors such as their gender, their class and their cultural background.

References


Quality mentoring: The role of student teachers’ tasks in effective practicum interactions.

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Abstract
Much has been written about the role of the associate teacher (master teacher, cooperating teacher, supervising teacher) in the practicum setting. Underlying many of the expectations are several assumptions that are ill-founded. Recent literature has been critical of the level of mentoring offered during practicum and has highlighted the paucity of genuine, effective professional development for the teachers who mentor student teachers during practicum placements. A doctoral investigation into the professional development needs of associate teachers was launched in 2005. Its purpose was to uncover ways to support associate teachers in their role with student teachers, without adding to their already heavy workload.

This paper shares the initial findings related to one part of the study, that is, the role practicum tasks in general can have in honing the associates’ mentoring skills and explores the associate teachers’ response to these tasks. It suggests that carefully selected practicum tasks can provide much needed professional assistance.

Introduction
The practicum plays a pivotal role in pre-service Teacher Education programmes. Student teachers value the real life experience that being in a classroom brings. Many tertiary providers facilitate this experience by assigning set tasks for the student teachers to complete while in the associate’s classroom. These tasks focus on the student teachers' learning and growth, are largely the student teachers' responsibility, and can often be completed without the intervention of the associate teacher.

The associate teachers demonstrate their altruistic concern for their profession by making their classes available to these fledgling teachers. The associates provide a model of effective teaching, give the student teachers opportunities to teach, and hopefully offer the students constructive feedback. Teacher education lecturers, for their part, look to the practicum to provide the students with opportunities to link theory and practice. Ideally executed, the practicum is a time of professional growth for the student teacher.

The quality of mentoring offered to the student teacher is a crucial component of an effective practicum. Mentoring is structured personal support for learning (Day, 1999, p.206). Those researching mentoring find that much of the literature is descriptive or declarative. Few writers examine or analyse the intricacies of mentoring interactions (Hawkey, 1997, p.325). Inquirers are also greeted with what seems to be a plethora of definitions. For those concerned with teacher education, and in particular the place of practicum, it is a little disconcerting to realise that most of the research on mentoring is not specifically related to teaching. This can lead to a distorted picture of the expertise needed by the associate teacher (McIntyre & Hagger, 1993, p.88). There is broad agreement however, that mentoring is not an easy role. A good mentor faces the
daunting task of building capacity in another and, in the case of teaching, the challenge of setting up

..a dialectic for the student teacher which will result in productive reflection and lead to the refinement of skills, the modification or enlargement of existing knowledge and the creation of a personal model of teaching which will have general application.

(Booth & Kinloch, 1990, p.144)

Four erroneous assumptions evident in the practicum

Good teachers make good mentors

Underlying many of the expectations of associate teachers are four misleading assumptions. The first is that an excellent classroom teacher will automatically make an effective mentor of student teachers. Mentoring is not a passive act, nor is it merely an extension of the teaching act already engaged in by teachers with their students (children). As Edwards & Collison note, data suggests that mentoring is not an instinctive activity which can be carried out by good practitioners as another layer of their professional function as class teachers, (1996, p.9).

Demonstrating good classroom teaching skills does not guarantee a teacher will be an effective mentor. In fact, the literature provides much evidence to support the view that many associates are unable to fulfil this role. Mentoring is a distinct intervention and requires specific preparation (Bernard & Goodyear, 2004) even for experienced teachers (Gratch, 1998, p.61), because there are discrete skills to be practised and mastered (Bubb, 2000; Crow & Matthews, 1998; Field & Field, 1994), and a knowledge base into which associate teachers need to be inducted.

Most writing in this area has explored what should happen between the mentoring pair, without offering empirical evidence of what does actually happen in the relationship between student and associate teacher (Sanders, 1999). However, recent research demonstrates there is often little correlation between what is thought to happen and what the student teachers’ actually experience (Sanders, Dowson, & Sinclair, 2005).

Relationship building is automatic

The second flawed assumption is that associate teachers will automatically establish a sound working relationship with their student teachers. It is well established in the literature that the interpersonal relationship between associate and student teacher is important (Cameron & Wilson, 1993; Elliott & Calderhead, 1993, p.179). The goal is to encourage a genuine working relationship rather than merely fostering pleasant relationships (Smedley, 1996). This involves getting to know each other as people and as professionals, and establishing a safe, trusting environment where individual ideas, thoughts and views can be offered and explored in challenging ways without causing offence. Such mutuality results in assistance without resistance (Burke, 1987, p.236).

The literature recognises the issue of time involved in building such a relationship and the need for associates to work out this tension and find the balance between mentoring and class teaching (Gore, 1995, p.20). It has articulated the desirability of a frame of deliberate relationship (Tom, 1997, p.3), but again only tentative suggestions of how to achieve this have been offered. Are genuine working relationships seen as a given, when in fact it cannot be assumed that two professionals
who have not had any interaction beforehand will automatically establish a relationship that allows genuine dialogue and honest appraisal? For a professional relationship to exist both need to desire to enter the relationship, and both need to make a commitment to common goals (Gehrke & Kay, 1984). Mutuality in the relationship is desired (Reiman & Thies-Sprinthall, 1998), with the goal of building sufficient trust to allow vigorous discussion and critique. Anecdotal communications with student teachers suggest that the establishment of relationship is not automatic, and indeed in many instances is totally missing. How can relationship be improved or enhanced? Is it possible to be more intentional in the approach to practicum relationships? If a deliberate relationship is desired, if it is not to be left to chance, maybe providing tasks designed to build a base for partnership could assist (Rudney & Guillaume, 2003).

**Professional knowledge is readily shared**

The third ill-founded assumption is that associates competently and confidently share their professional knowledge with the student teacher during practicum. Because dialogue facilitates student teachers' knowledge building, associates need the ability to articulate the skills they are using, the practical knowledge they are drawing from, and the formal knowledge that underpins their decision making (Chung, 2002; Feiman-Nemser & Parker, 1990; Field & Field, 1994; Furlong, 2000; McIntyre & Hagger, 1993). They need to jointly explore with the student teacher puzzles in practice (Edwards & Collison, 1996, p.8). Just relying on the knowledge base built up by individual student teachers would mean they missed out on the richness of past experience, the accumulated understanding, the heritage of past pedagogical inquiry. Student teachers need to build on what has already gone, to stand on the shoulders of their predecessors. To do this they need conversations about subject knowledge, pedagogical knowledge, craft knowledge, context, students, and so on. With such a broad range of knowledge growth desired, conversation is imperative and must be built into the practicum process.

But to date the evidence points to student teachers' difficulties in gaining access to the professional knowledge of their associate teachers (Zanting, Verloop, & Vermont, 2003). Dialogue is restricted to practical issues of classroom management and curriculum delivery, which limits the scope of student teachers' learning and the development of thinking about approaches to take in the classroom (Davies, 1997). One reason cited is lack of time, which is well documented (Gore, 1995; Ramsey, 2000; Smedley, 1996). The other main reason is the apparent inability of teachers to articulate their pedagogical beliefs.

*Teachers can be persuaded to talk at great length about their schools, about resources, about curricula and especially about their pupils; it is much more difficult to get them to talk about their own teaching.*

McIntyre and Hagger, 1993, p.25

Stanulis (1994) suggests that while experienced teachers have much wisdom, expertise, theories and knowledge, if they are to help student teachers teach thoughtfully they need to find new ways to make their knowledge accessible to student teachers. Zanting (2003) notes that students seldom ask questions of the associate teacher, possibly because of a perceived power base difference. Added to this, is the difficulty associate teachers' often have transferring knowledge from
themselves as expert, to the student teacher as novice, since novices remember different information than experts when viewing a problem, and experts sometimes have difficulty reducing the complexity of the knowledge they possess to the level of the novice (Crave, 2002). The question remains as to how such an exchange of professional knowledge can be encouraged during practicum experiences. If experienced teachers are to help the student teachers effectively, they need to find ways to make their knowledge accessible. Increased opportunities for training may assist this change in thinking (Davies, 1997). Maybe a more intentional approach in assisting associate teachers to engage in pedagogical discourse is needed, and perhaps the set tasks can assist with this.

Support for the role is not needed

The fourth problematic assumption is that mentors, since they are expert teachers, need little or no support in their mentoring role. The previous discussion surrounding assumptions held by those involved in teacher education illustrates the fallacy of this premise. It could be argued that teacher education providers are acting unethically when they fail to provide professional development opportunities for those teachers working with student teachers (Bernard & Goodyear, 1998 in Baker, Exum, & Tyler, 2002, p.15). Without such support, many associates remain unclear about their role and responsibilities and do not have the necessary skills to help student teachers or supervise them adequately (Booth & Kinloch, 1990; Calderhead & Shorrock, 1997; Gaffey, 1993; Ramsey, 2000; Sanders, 1999). Associate teachers need to learn new models of mentoring to avoid becoming rigid in their approaches to student teachers (Reiman & Thies-Sprinthall, 1998). They may appear competent in their role when required to model good practice, and to offer support as the student teacher ventures into their own teaching sessions. However many restrict themselves to a limited range of roles that do not require confrontation or challenge (Sanders, 1999; Sanders et al., 2005). Modelling is important, as is providing support to fledgling teachers, but it is not enough, especially with the growing emphasis on reflective practice.

Paucity of provision

If we accept that practicum is a valid, important component of teacher education, and that mentoring is a complex task, the paucity of professional development provisions for associate teachers is surprising (Cameron & Wilson, 1993; Edwards & Collison, 1996; Gore, 1995; Ramsey, 2000; Ross, 2002; Sanders, 1999; Thiel, 1999; Thies-Sprinthall, 1984; Zeichner, 1990). Relatively few associate teachers have participated in formal programmes. Rather, their development is piecemeal, snippets of information gleaned here and there over the years. On the rare occasions that professional development is available for associate teachers, the main impediment to their attending these sessions is time (Ganser, 2000; Gore, 1995). In the busyness of their role as teachers and mentors, associates are unable or unwilling to attend 'out-of-class' events. Associate professional development is just another extra meeting at the end of an already complex, unpredictable, taxing day.

Therefore, it was decided to trial a range of practicum tasks that might help the associates develop their mentoring skills, while at the same time facilitating educative experiences for the student teachers, in the hope that this might provide in-situ professional development. The strategies were collated from reading, personal experience and reflection. The strategies also reflect current knowledge about the stages of development that student teachers progress through. If Glickman and Bey
(1990, p.518) are correct, a preparation and support programme for associate teachers would result in more interactions, better feedback, more active listening, an eagerness to accept students and confidence in the role of associate.

**The current study**
A doctoral investigation into the professional development needs of associate teachers was launched in 2005. Its purpose was to uncover ways to support associate teachers in their role with student teachers, without adding to their already heavy workload. The research project was designed to explore the possibility of utilising carefully selected student teacher tasks during practicum to not only develop the student teacher but also professionally grow the associate teacher. It was hoped these two-edged tasks would build the associates' knowledge about the mentoring role, helping them to become more confident and competent as they interacted with the student teachers. In essence, the plan was to provide in-situ professional development, to provide ‘situated activities’ whereby the associates would receive professional development without requiring them to attend out-of-school training sessions, since time is an impediment to such ventures. The intention was to test whether such a strategy could enhance the associates' practice in general, but more specifically, their ability to build relationship and to share their professional knowledge with the student teachers.

**Methodology**
The methodology adopted was that of experimental action research, the 'controlled study of relative effectiveness of various techniques in nearly identical situations (Verma & Mallick, 1999, p.92). There was an earnest desire for a pragmatic outcome, one which would benefit all those involved in practicum.

A longitudinal design was selected for the study, which was conducted over a period of eighteen months. This approach allowed for the gathering of data to support or negate the effectiveness of the research interventions in professionally developing the associate teachers. The research period was divided into five phases, each centred around a practicum component of the teacher education programme. In each practicum specifically chosen collaborative tasks were introduced and then assessed for their effectiveness in both growing the student teacher and developing the associate teacher in their mentoring role.

Three male and nine female associate teachers consented to be part of the study. They represented both rural and urban schools, low to high socio-economic settings and a range of experience as associates. In gaining this consent the full intent of the research was disclosed, but the term "professional development" was not used, in the belief that some associate teachers may react negatively to the term. The associates knew that tasks were being trialed, with the view to developing their ability to give student teachers access their own knowledge. They also knew that the research was designed to see if these same tasks influenced the associate teachers' confidence and competence in their role. Whether or not the associate teachers equated this influence with professional development would be explored later.

Thirty-four student teachers were involved. Twenty of these were placed with a participant only once during the research period, nine students were placed twice and five students were involved in the study three times. This resulted in a total of 53 mentor pairs contributing to the data collated and analysed in the study.
A mixed method approach was adopted. The associates completed a questionnaire at the commencement of the study and again at the conclusion. They were invited to participate in a focus group after each practicum and all were interviewed at the end of the research period. The student teachers completed a repertory grid of desirable mentoring behaviours and a questionnaire at the end of each practicum, and were invited to join the focus group when their associate was also present. Thus the data drew on the idiosyncratic thoughts, feelings, reactions and evaluations of the participants. These data were then analysed using both qualitative and quantitative methods.

A limitation of the study is that the participating associates were likely to already be interested in improving their mentoring skills, hence their willingness to be involved.

Findings
This paper shares the initial findings related to one part of the study, that is, the role practicum tasks can play in honing the associates' mentoring skills, especially if those tasks have been specifically chosen to not only develop the student teachers' practice, but also to enhance the associate teachers' practice. The tasks were selected with the view to building relationship (for example, concept mapping, attitude/belief inventory, question starter envelope, metaphor making) and to facilitating the sharing of professional knowledge (split dialogue journal, photo interpretation, observation templates, research article discussion, critical incidents, negotiated feedback). They were tasks that required the participation of both the student teacher and the associate. It is not within the scope of this paper to outline or analyse these tasks in detail. Rather the purpose of this paper is to convey findings about the feasibility of using student teacher tasks to also develop the associate teacher. The following discussion explores the associates' perspective on these questions and draws on the qualitative data gained from the final interviews.

Acceptance of set tasks
Associates were generally supportive of the new set tasks during practicum. One associate talked of some appearing a little fabricated...that I wouldn't do, but it might suit someone else. Several participants mentioned having their own repertoire of learning experiences to employ with the student teachers. However, during the interviews the associates identified 58 discrete benefits of the set practicum tasks. These were collated and analysed to generate six main themes or areas of benefit. In the busyness of the daily classroom programme, the associates appreciated the tasks' ability to bring formality, structure and clarity to the role and the practicum process. They acknowledged to a lesser extent the tasks' role in developing their own skills as mentors.

Gives structure.
Seventeen of the responses referred to the structure gained by utilising the tasks. They were seen to provide focus, and a framework that gave both direction and balance. The tasks alerted the associates to topics that could be discussed and thinking to be encouraged, and brought intentionality to the mentoring provided by the associates. The expectations inherent in the tasks were not seen as restrictive. Rather they were viewed as guidance, with flexibility possible. The tasks contributed to a shared
understanding of desired outcomes for the practicum and thus allowed negotiation of relevant, developmentally appropriate goals.

Formalises the process
There was a sense in which the tasks brought accountability to the mentoring role. By formalising the expectations, the associates were mandated, even obliged to help the student teacher meet each task's requirements. The tasks provided motivation in a hectic day to give quality time to the student teacher. They helped the mentors avoid old habits and ensured a sharing of expertise even when there was not a natural rapport. One associate spoke of the tasks' role in ensuring each student teacher was responded to in relation to their performance, not their personality.

Clarifies role
The tasks set for the student teacher by the tertiary provider can give the associate teachers another perspective, another source of mentoring ideas and resources. Indeed the tasks can also act as inspiration, with associates using the tasks to piggyback their own innovative interactions with the student teachers. Associates spoke of the tasks' role in reminding (them) of important mentoring practices, and helping them to understand what actually needs to be achieved during the practicum, especially when the associate is new to the role, or reticent in the role. The tasks offered assurance that the associates were fulfilling the expectations of both the student teachers and the tertiary provider.

Acts as a prompt
Even the experienced associate teachers appreciated the way the set tasks acted as a prompt, attributing to the tasks such terms as reminder, refresher and mind-jogger. The tasks get out into the open possible topics for discussion and help get dialogue underway. Thus the tasks help (the associates) fulfil (their) role.

Builds mentoring skills
Only fourteen per cent of the responses related to increased skills as a mentor, although it might be argued that several of the other themes could well be grouped here. Associates acknowledged that the tasks encouraged and improved discussion, and helped them ensure those discussions involved higher order thinking, talking and ultimately doing. They spoke of the tasks' role in making their interactions with the student teacher more specific, especially those comments related to feedback on observed lessons. One associate spoke of the tasks, especially the dialogue tasks, being useful as a

\[\ldots\text{diagnostic tool to help gauge the level of dialogue possible and to identify gaps in the student teacher's knowledge so the associate can help fill in those gaps.}\]

Builds relationship
In the interviews only two of the 58 responses specifically mentioned the tasks as an aid to building relationship. This was in connection with the tasks being something that can be focused on together.
Discussion
The strength of the affirmation of the role the set tasks play in the outworking of the practicum was surprising. There had been concern on the part of the researcher that the associates might view the mandatory nature of their involvement in the tasks as being disrespectful of their expertise and professional judgement. Therefore the associates were specifically asked whether the tasks impinged on their role as mentor and whether they felt the tertiary provider was dictating their role to them. All replied that the tasks were helpful, and gave guidance without restricting their professional agency.

The acceptance of the set tasks appears to highlight two factors already discussed in this report. Firstly with the busy life of teachers today, the extra responsibility of a student teacher in the classroom could be overwhelming, or at least 'the final straw'. The tasks present to the associate teachers a manageable interactive plan. They can draw on the activities represented within the tasks rather than having to invent and implement mentoring strategies of their own. Secondly, it is not incongruous to suppose that associates (mentors) need, and indeed welcome, scaffolded support in their role. Just as student teachers expect support and guidance from their mentors, so too the mentors are likely to expect assistance in their role from the tertiary provider.

Another unexpected outcome from this current analysis was the low incidence of references to the beneficial role of tasks in building relationship. This was especially surprising given the fact that some of the tasks were specifically chosen to enhance relationships. It will be interesting to see if data from other sources supports or negates this.

Changes in mentoring behaviours
Although they identified many benefits accruing from utilising the set tasks, and although there appeared to be changes in the ways they conducted their conversations with the student teachers, the associates did not appear to explicitly attribute any role to the tasks in terms of their own growth as a mentor. Therefore, it was decided to mine the interview data for implicit references to growth as a mentor. These could then be aligned with the stated purposes of the tasks in relation to the associate, that is, to aid relationship and accessing the associates' professional knowledge through both observation and dialogue.

In seeking implicit references to growth as a mentor, the initial impression was that there was no commonality among the 23 behaviours identified. This highlights the uniqueness of each context, and each mentoring relationship. Although all associates and student teachers were asked to complete the same tasks their experience of them is disparate, resulting in different effects, learning and outcomes. However, when the associates named new mentoring behaviours introduced to their practice since commencing the study, it was possible to link them with the two desired outcomes mentioned earlier.

Building relationship
References were made to improvements in mentoring practices that encouraged stronger professional relationships. Associates were more confident to 'be themselves'. They reported 'making more effort to build relationship', mainly by 'communicating more frequently and with a clearer focus'. They were more likely to include
conversations about 'personal teaching philosophies, beliefs and expectations'. One associate stated that the biggest change in this area 'was not taking things (knowledge, skills, etc) for granted'.

A key outcome of improved relationships was the associates' increased ability to 'encourage student teachers to take risks in their teaching' in the classroom, to move out of their comfort zone and to not be afraid of a failed lesson. Although the associates did not directly attribute their growth in building relationships to the practicum tasks, elements of the tasks can be seen in these aspects identified and the goal of improving relationships appears to have been achieved.

Sharing professional knowledge
The associates identified ten new behaviours that facilitate the sharing of professional knowledge. 'Giving feedback' rated the most responses, with associates referring to the way their feedback had become 'more specific, more honest', less concerned about coddling the students and more concerned with professional growth. The increased feedback was partly attributed to encouraging the student teachers to do more actual teaching, and partly due to increased awareness of the need to give informed feedback. The associates acknowledged becoming more willing to ask questions, but also more willing to 'respond to questions' from the student teachers. Several associates spoke of the increased role that 'professional reading' played in their conversations. These behaviours contribute positively to the goal of making access to professional knowledge consistently available.

Do the associates link the tasks with their own professional development?
From the initial analysis of the interview data, it appeared the teachers did not associate the actual tasks themselves with their own mentoring growth, an interesting phenomenon that was pursued further by requesting the completion of an additional unscheduled questionnaire. When questioned directly the associates did attribute a personal growth role to the tasks.

Engaging in activities with the student teacher that are new to us both, allowed us to grow together because we were both vulnerable and we were also the ones who could make the choice to work together this way or be a one-man band. Connie

They saw the process of working through the tasks as a catalyst to grow their mentoring abilities. They recognised the tasks' role in encouraging them to think carefully about conversations and to be more deliberate and focused.

One associate gave very careful consideration to the observation that the associates did not seem to link the tasks with their own maturing as mentors.

This is indeed an interesting outcome to discover. I believe that I had not made the conscious connection between the mentoring tasks and that these tasks provided professional development for me as an associate teacher. As I reflect on my personal definition of professional development it would seem that it is something one gains by attending seminars, lectures and workshops. It is
easy to overlook professional development as something gained from readings and even conversations with other people. Thus one would be constantly exposed to PD without a mental awareness. Hence the oversight of making connections between the practicum mentoring tasks and my personal growth and development and expressing it as such.

Kay

This associate went on to consider the nature of professional development and professional growth.

'PD is something that happens as an input into your knowledge bank and professional growth is what happens when you apply that knowledge. Thus PD is a pre-requisite of PG but PG is not necessarily a result of PD. PD is always conscious eg attending a lecture, while PG may be unconscious, for example you notice and use some new teaching techniques that the lecturer used, even though you may not have been consciously aware of noticing these.

These comments contribute a possible explanation for the phenomenon being discussed here. The associates acknowledged growth in their own personal mentoring skills. They also appreciated the role the set tasks played in supporting their mentoring of the student teachers. However they did not appear to link their increased competence and confidence with the tasks themselves, even though these tasks had been specifically chosen with growth in mind. Because the decision had been made to not tell the participants that they were engaging in professional development, the associates were not actively looking for ways the tasks could grow their mentoring abilities. There was not a sense of intentionality, no explicit awareness of the intent of the tertiary provider. The professional development was not announced – therefore although professional growth occurred, this was often tacitly acquired and therefore not specifically attributed to the tasks.

Conclusion
The initial analysis of the data suggests that associate teachers can benefit from intentional, scaffolded support in their role, just as their student teachers do. Carefully selected practicum tasks can provide much needed professional assistance in a way which does not impinge on the associates' time. The goal to professionally develop associates as they help student teachers to complete each task, to alert them to the possibilities of their role, and to arm them with strategies and tools that would especially give access to their professional knowledge seems to have been achieved.

'...I think my mentoring has become more defined... doing it better and actually knowing that I am doing it. With intention, that's right. Rather than just doing it without even realising you're doing it. So yes, more intentional.' Holly

Further analysis of the rich data gained through this study will reveal exactly which tasks were most effective in developing the associates' mentoring skills and whether the students' perceptions of associates' growth match those of the associates themselves.
References


Development of a community of practice through engaged participation in a school university partnership

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Abstract
The challenge to create genuine university-school partnerships around teacher education work is critical to provide opportunities for prospective teachers to learn in the context of practice where all stakeholders work with shared purpose, mutuality of engagement, a negotiated repertoire and common goals. Fundamental to the development of Partnerships at Edith Cowan University (ECU) Joondalup, is the belief that teaching is a collegial process and that teachers, teacher educators and pre-service teachers learn in the context of relationships that matter. Colleagues and community are central to this process. An essential feature of the ECU Joondalup partnerships is the active engagement of all stakeholders in the work of teacher education.

In developing partnerships there has been a focus on mutual engagement, negotiability of identities and meanings and a greater sense of accountability by all stakeholders for quality teacher education. Notions of collegiality, engaged participation and community and in which, enhanced outcomes for children are the focus are central to this process. This paper outlines the principles and processes on which partnerships have been developed at ECU Joondalup and how these principles have been enacted within a community of practice.

A Framework for Partnerships: Relationships that matter

‘Partnerships’ is a concept that is gaining increasing interest and importance in many teacher education institutions in Australia. This importance is reflected in the recent Commonwealth of Australia (2007) Top of the Class Report, which included as one of its key recommendations that a National Teacher Education Partnership Fund be established to support collaborative approaches to practicum, research, induction and professional development. Ramsey (2000) suggested a shift was needed from the idea of a practicum to a concept of professional experience, integrated with academic preparation and educational studies.

At Edith Cowan University (ECU) ‘Partnerships’ are underpinned by principles such as: collaboration; capacity building; collegiality; efficiency; effectiveness; and quality. Working in ‘Partnerships’ requires energy, mutuality of engagement, accountability to the enterprise, negotiation of the repertoire and common goals (Wenger, 1998). Developing accountability toward quality outcomes of teacher education for university teacher educators and mentor teachers is, as Carroll (2006) suggests, a socio-cultural learning process rather than a training process or an outcome of partnership development.

Fundamental to the development of ‘Partnerships’ at ECU Joondalup, is the belief that teaching is a collegial process and that teachers, teacher educators and pre-service teachers learn in the context of relationships that matter. Colleagues and community are central to this process. In the pursuit of ‘relationships that matter’, it is important to continually draw on the principles on which the development of the teacher education courses at ECU Joondalup and the partnership program with schools were built. These focused on enhanced outcomes for children, teachers and the school communities through:

- Enhanced learning for children as the focus of the school-university relationship
Reflective inquiry that connects practice and theory
Student teachers, mentor teachers and teacher educators working together as ‘learning partners’ in the authentic context of schools, to better understand and enhance teaching and learning
Teaching in all aspects of the course constructed so student teachers become researchers of their own practice
Opportunities made available for schools mentor teachers and pre-service teachers to pursue collaborative curriculum inquiry, curriculum development and teaching practice investigations.

It is also reflected in the aims of partnerships which are:

- the engagement of ECU students in productive professional activities in partner schools that lead to better teaching and learning;
- the professional development of teachers and teacher educators;
- collaborative research to support teaching and learning;
- the enhancement of the professional status of teaching.

In operationalising these principles, the focus has been on collaboration between university staff, associate university staff, school staff and pre-service teachers. In this process there has been a shift or negotiation of identities of stakeholders. It is important to note that central to the development of new identities within this model are the principles of mutual trust, shared goals, communication and collaborative practice, in essence a community of practice.

This collaborative process draws on Wenger’s (1998) conception of learning in the context of communities of practice by a process of negotiating meaning through engaged participation. He asserts that as individuals are engaged together in negotiating the meaning of experience and thus in the formation of a community of practice, they are also engaged in a parallel process of negotiating their identities with respect to that collective practice. "Practice entails the negotiation of ways of being a person in that context" Competent membership includes three dimensions around which practice and identity interact (Wenger, 1998):

1. Mutual engagement- involves engagement with other members and response in kind to their actions, therefore establishing relationships in which this mutuality is the basis for an identity of participation. Partnerships at Edith Cowan University focused initially on the development of relationships between faculty members, pre-service teachers and school staff. This involved real conversations around the shared context of children’s learning through the practicum, coursework and School University Reference Group (SURG) seminars. School staff working within the academic program, have also helped reduce the traditional divisions between theory and practice. The bringing together of teachers’ expert knowledge of teaching and learning, with current educational thinking, enhanced understandings for the whole partnership community. Thus the knowledge, competence, and the unique contributions of all stakeholders are part of this identity of participation.

2. Negotiation of joint enterprise--the ability to understand the enterprise of a community of practice deeply enough to be accountable for it and contribute to its pursuit and to its ongoing negotiation by the community. Identity and accountability was part of the change as new partnerships practicum arrangements were implemented. The appointment of a university colleague to schools over time, flexibility of professional practice arrangements in terms of meeting both school and university needs and mentor teachers assuming the responsibility for assessment of pre-service teachers were part of the shared accountability processes and have led to a shift in power and identity.

3. Negotiability of the repertoire--the ability to make use of the repertoire of the practice to engage in it. This requires enough participation (personal or vicarious) in the history of the practice to recognize it in the elements of its repertoire. Then it requires the ability--both the capacity and the legitimacy--to make this history newly meaningful (Wenger, 1998). Involvement of school staff, ECU and district education...
staff and associate staff in all aspects of the development of both course structures and partnership arrangements has been integral in partnership development.

Communities of practice in action

Mullen, (2000) gives support to the idea of school and university practitioners finding innovative and meaningful ways to develop professionally as colleagues. Collegiality is described as that which involves ongoing professional interaction from a position of trust, where each colleague is respected for his or her own unique contribution to the whole. Two essential elements for the development of this collegiality is the building of strong relationships and the validation of colleagues as equal. (Marlow and Nass-fukai, 2000). Another critical aspect in the development of a community of practice at ECU is that of engaged participation and development of shared understandings.

Engaged participation, as part of the Joondalup ECU /West Coast District partnership program is evidenced through the School University Reference Group (SURG) seminars, University colleague briefings, board of management meetings and fourth year seminars. The sharing process, accountability and development of negotiated meanings are particularly apparent in the SURG seminar topics: Once again it is a learning, rather than a training process, one of negotiating shared meanings.

The discourse used in SURG seminars topics demonstrates these principles of mutual engagement, joint enterprise and negotiability of the repertoire. Ball & Cohen (1999) suggest that engagement in communities of practice requires professional discourse or continuing thoughtful discussion among learners and teachers as a vehicle for analysis, criticism and communication of ideas, practices and values. This discourse they suggest should help build collegiality within the profession and create a set of relations rooted in shared intentions and challenges. Participation in this discourse has included school, associate university, district education and faculty staff and students. Discourse focusing on deliberation about standards for practice, improvement of teaching and learning and negotiation of shared meanings are demonstrated in the language of the SURG seminar topics, over the past five years and include:

- Assessing Assistant Teachers: Can it be a process for developing a better understanding of children’s learning? Working with other Mentor Teachers to make judgements about teaching.

- What planning looks like in a social constructivist/outcome based classroom? Using ECU, second year K-7 and MYS Grad Dip student’s planning documents to make judgements and develop skills in giving constructive feedback

- A forum for Mentor Teachers, School Coordinators and Principals to share best practise: School initiated projects using ECU Assistant Teachers

- Finding Out About Teaching and Learning: Collaborative research: Does your school or classroom have questions you would like investigated about children’s learning? How might our 4th Year ECU Pre-Service Teachers work with you?

- Presentations by Compact Partnership Principals, Coordinators, Mentor Teachers and ECU Students. Sharing of ideas, programs, processes and ways of working with ECU Assistant Teachers that have mutually beneficial outcomes for children, schools and ECU students.

- Planning in an Outcomes Framework: Exploring School, District and ECU understandings about Planning across curriculum areas and for all learners. Interdisciplinary/Integrated planning: What’s the difference?
Incorporation of compact partnerships into school planning for 2004. This session continues the conversation about the connection between ‘Planning’ and ‘Learning’. What does short term planning look like in an Outcomes Based Framework? What is the Mentor Teacher’s role in supporting Assistant Teachers with planning?

An invitation to Early Childhood partnership teachers to act as a reference group for critiquing the ECU K through Primary planning processes for the early childhood classroom.

Partnership seminar: Invitation to partner schools to advise, give feedback and input into the 4th year ATP assessment tool. Feedback to schools on the assessment tool. What is mentoring?

This discourse, rooted in negotiation of shared meanings, shared intentions and the challenge to improve teaching and learning are not confined to interactions between university and school staff. Pre-service teachers are a central part of this community of learners. Pre-service teachers are constructed in both their practicum settings and university coursework as competent and contributing members of the learning community. In many partnership schools, practicum periods are a deliberate part of school planning where pre-service teacher input is valued and relied upon.

Partnerships between the university and the West Coast District have also opened up opportunities for these pre-service teachers to encounter the realisation that knowledge is being continually constructed, and that they are part of that process. In respect to research conducted by universities, Wain (2000) describes a situation where educators tend to be increasingly alienated from the communities they seek to engage. Partnerships have opened up new ways of doing educational research between the university and schools, where collaboration for mutual benefit is a feature of the research developed.

The ideal of knowledge being constructed in a joint process of negotiation, inquiry and problem solving, within the authentic context of schools, is evidenced by the participation of our 2005-6 fourth year students undertaking a “Dilemmas of Practice” research unit. ECU academic staff, West Coast District Education Office and partnership school representatives on our Board of Management were aware of the opportunity this unit provided for the pursuit of collaborative inquiry into practice.

The Fourth Year, ECU (K through Primary) Education students became research assistants for Principals undertaking funded action research projects in their schools. The student research, a credited part of a research unit, had outcomes that would, in true partnership spirit, directly contribute to outcomes in schools while contributing to joint understanding of significant problems and issues around teaching and learning.

The projects focused on a number of research topics nominated by the West Coast District Education Office, Joondalup. These topics, generated by staff and Principals in West Coast District schools, provided students with the opportunity to work as ‘learning partners’ with members of a school staff to:

- Collaboratively develop a research question
- Conduct a small Literature Review
- Develop two tools, in conjunction with school staff and university colleagues, working with partnership schools to use to gather data
- Analyse the data
- Provide feedback to the school through the Case Study Symposium and the Case Study Report.

Students are encouraged to match their own interests and questions with the school based areas of inquiry. Some examples of research topics that students collaborated on with schools included:
- Measuring teacher effectiveness.
- Inclusivity, from a student’s perspective.
- Speaking and Viewing; Boys in education.
- Teacher thoughts on inclusion.
• School based assessment package linking outcomes to levels.
• Where do teachers source curriculum knowledge for mathematics and science and activities to achieve outcomes?
• Outcome levels and assessment and reporting.
• Classroom teachers’ perceptions of inclusivity and what constitutes reasonable adjustment in class.
• A school image audit.
• Evaluation of the Teaching and Learning Co-ordinator Strategy

Students wishing to participate in these projects needed to meet criteria that reflected the principles of joint collaboration and the formation of a ‘community of learners’ rather than participating in imposed research, ‘being done to schools’. These criteria included:
• Flexibility in their negotiation of times with schools
• Interest and involvement in the topics and a desire to find out why certain things are the way they are and how we can initiate change.
• Desire to work within and contribute to outcomes for the chosen school.

These research projects indicate the real possibilities created through partnerships when the resources of the university are connected with current issues in schools. Critical to the success of these projects is the principle that the knowledge created and shared should benefit all. The pre-service teachers not only expanded their own knowledge they were also trusted with the responsibility to contribute to ‘collective’ new knowledge. The partnership framework provided the context for reducing the barriers that often divide university research from the school communities they serve.

Changing identities in a community of practice

Pre-Service Teachers

In partnerships pre-service teachers, teachers, mentor teachers and teacher educators work together as 'learning partners' in the authentic context of schools, to better understand and enhance teaching and learning. As outlined above pre-service teachers are constructed as partners in the learning process with a great deal to offer the learning community. Partnerships promote the pre-service teacher as a competent, contributing and active member of their university and school community. Schools are actively encouraged to value and use this team of people to contribute to wider school initiatives and priorities. The opportunities made available in partnerships for schools and pre-service teachers to pursue collaborative curriculum inquiry, curriculum development and teaching practice investigations is evidence of their role in this community of practice.

Mentor Teachers:

Teaching and learning practices in K through Primary program have been impacted through the process of mentoring being treated as a substantive reflective practice. Carroll (2006) suggests that past efforts of conducting training sessions around supervision or mentoring strategies or developing professional development has led to little scholarly attention paid to engaging mentor teachers in teacher education work as a matter of professional learning.

Four essential principles of effective professional development cited by Putnam and Borko (1997) in a review of professional development include:
• Teachers should be treated as active learners who construct their own understanding.
• Teachers should be empowered and treated as professionals.
• Teacher education must be situated in classroom practice.
• Teacher educators should treat teachers as they expect teachers to treat students.
Recognition of these principles and focus on developing mentor identity in the context of communities of practice is evident in school staff participation in the regular SURG seminars, in the changing roles/identities of school personnel and in the operational features of the school university partnerships. In particular collaboration, inquiry and sharing knowledge of effective teaching and learning has expanded within the course through mentor teachers from partnership schools working alongside university staff in academic units, both as sessional tutors on a weekly basis and as guest speakers. Bringing teacher expert knowledge of teaching and learning together with current educational research enhances understandings for the whole partnership community.

The traditional supervisory model has been enhanced to allow for University and school staff to work collaboratively in establishing roles and responsibilities within the partnership, particularly through the ongoing seminars, but also through the development of strong and enduring relationships. Teachers are regarded as ‘mentors’ and university staff regarded as ‘colleagues’ rather than supervisors. The responsibility of bridging the theory-practice gap that has been sited by Bullough et al (1999) as creating a division of cultures due to lack of shared vision and agreement of larger issues in education, is shared. Through regular discourse around teacher education that focuses on outcomes for children, partnerships has sought to bridge this divide.

Mentors within this model are trusted colleagues with prime responsibility for the assessment of the pre-service teachers competency in the classroom. This responsibility, with support, is part of the changing identity of the mentor teacher in partnerships and exemplifies the principle of trust and equality that partnerships espouse.

University Colleagues (Faculty Staff)

‘University Colleagues’ are linked directly to the courses being delivered and become directly involved with schools in the creation of partnerships. Marlow & Nass-fukai (2000) describe the two elements essential for the development of collegiality – strong relationships and the validation of colleagues as equal. Beck & Kosnick (2000) stress the importance of the involvement and commitment of university teaching faculty in the practicum for strengthening school university partnerships and the enhancement of both the practicum and campus program experience for students.

The nominally given title for this role is that of ‘University Colleague Coordinator’ as the University Colleague (Faculty Staff) is designated to liaise with several University Colleagues (Associate Staff) directly regarding the schools in which they are involved. University Colleagues (Faculty Staff) communicate with their portfolio of schools regularly offering meaningful and personal support for schools, school staff and the University Colleague (Associate Staff) where appropriate and giving critical input to maintain these collaborative ‘relationships that matter’. Again colleagues and community are central to this process.
University Colleagues (Associate Staff)

University Colleagues were sought via recommendations from Principals in partnership schools. This has supported the collegiate interdependency of stakeholders as University Colleagues have experienced practice from alternative connected perspectives. It has also increased communicative participation from those involved in this capacity in the development and evolution of projects such as the ATP Assessment instrument. The result of recruiting in this manner is that in some instances University Colleagues have returned to the classroom from temporary sustained periods of absence having engaged in the role of University Colleague. The net result of this is that positive partnership experiences receive wider exposure in schools from experienced advocates. Some University Colleagues have engaged further in the on-campus programs becoming involved in tutorials and in long term sessional positions, further empowering colleagues through their contribution at all levels.

Professional development of University Colleagues has been through interactive processes focused primarily on negotiated needs rather than autocratic direction. Situations are discussed, meanings and identities negotiated with respect to collective practice and colleagues of varying experience give input in a collegial manner. Academic staff participate in these workshops sharing discussions with the groups and obtaining feedback for evaluation. Bridging the school university divide is a serious consideration as we strive to overcome what Cooper & Jasman (2002) refer to as the ‘fading face’ of universities.


Features of the program in relation to partnership principles

Teaching as a collegial process and teachers, teacher educators and pre-service teachers learning in the context of relationships that matter are also reflected in the key features of the K through Primary program. These were developed in relation to partnership principles and include:

- Collaboration with schools/centres in program delivery and design.
- School/University Reference Group workshops conducted throughout the year to collaboratively construct practicum processes.
- Associate tutors from partnership schools invited to teach into our programs.
- Full time staff whose responsibility is to ensure that links are made between different aspects of the program located at the university and in schools.
- Management of teaching practices by the program teams provide links between content, curriculum and teaching knowledge and the art of teaching.
- Focus on the development of knowledge-based and intellectually challenging teaching approaches that support the integration of curriculum where appropriate.
- Joint research interests and opportunities formed between Partnership schools and the university.
- The formation of a learning community made up of students, key staff and school personnel.
- Associated sessional staff appointed who are committed to the principles philosophy of the program, work as part of the teaching team and are actively involved with the ‘on campus’ and in-school components of the program.
- Focus on reflection, critical analysis, research and informed judgement.

Partnerships as a community of practice

Each of these features in the structure and process in the ECU Joondalup partnerships provide an important context for generating engagement of all stakeholders in the work of teacher education. The challenge to create genuine university-school partnerships around teacher education work is critical to provide opportunities for prospective teachers to learn in the context of practice where all stakeholders work with shared purpose, mutuality of engagement, a negotiated repertoire and common goals.

A natural outgrowth of developing partnerships has been the negotiated changes in identity and a greater sense of accountability for quality teacher education. Fundamentally the ECU partnership model is based on the premise that teaching is a collegial process and teachers, teacher educators and pre-service teachers all learn in the context of ‘relationships that matter’. Central to this process are the notions of collegiality, engaged participation and community in which enhanced outcomes for children are the central focus. Yardley and Lock (2004) in reviewing the partnership structure in the ECU/Swan partnership (based on the Joondalup model), reported schools signaling significant advantages of partnerships, including strong professional relationships, avenues for mutually beneficial research, recognition of teacher professionalism, opportunities for professional development and enhanced learning opportunities for pre-service teachers.

This paper outlined the principles and processes on which partnerships have been developed at ECU Joondalup and how these principles have been enacted within a community of practice. However, sustaining and maintaining the relationships and engaged participation of all stakeholders, central to the partnership process, provides significant future challenges. As both the number of partnership schools and academic workloads increase, the opportunities for the important interactions that sustain ‘relationships that matter’ are decreased. Continued involvement of partnership school staff, district, ECU and associate staff in all aspects of the development of course structures and partnership processes is integral to sustaining partnerships. The ECU partnership model is under constant review and future challenges are to continue the conversations with partners, instigate both quantitative and qualitative research to monitor the effectiveness of our partnership model and to ensure the essential principles of partnerships continue to be enacted.
References


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Developing a Professional Identity: First year preservice teachers inschool experience project

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Abstract
It has long been recognised that the process of ‘becoming a teacher’ is complex. The aim of any teacher education program therefore should be to provide ‘high quality learning’ (Killen 2005) that entails both theoretical and practical components. These components need to be clearly linked for as Cole and Knowles (2000) claim there is an unmistakable gap between what teachers are taught in pre-service teacher training and what they are expected to do at the ‘chalk-face’ in the beginning of their professional experience. In response to this obvious challenge current reviews of, and research into, teacher education, have paid particular attention to issues concerning the practical component, commonly known as ‘the practicum’ (Ramsey 2000, Perry and Allard 2003, Vick 2006). However the traditional ‘practicum’ where preservice students are ‘supervised’ by classroom teachers seems to be insufficient in responding to challenges raised. This paper explores how the Faculty of Education in the University of Wollongong attempted to change the traditional ‘practicum’ by setting up ‘inschool experiences’ for first year preservice teachers across their first session in their BEd program. These experiences activated the process of bridging the gap between theory and practice for the preservice teachers and most importantly led to the beginnings of preservice teachers developing a professional identity of what it means to ‘be a teacher’.

Introduction
It has long been recognised that the process of ‘becoming a teacher’ is complex. The aim of any teacher education program therefore should be to provide ‘high quality learning’ (Killen 2005) that entails both theoretical and practical components.

However, Cole and Knowles (2000:9) claim that there is an unmistakable gap between what teachers are taught in pre-service teacher training and what they are expected to do at the ‘chalk-face’ in the beginnings of their professional experience. Indeed Danielson (1996:2) goes as far as to question novice teachers’ ability to even manage ‘over 3000 nontrivial decisions daily’ as they begin their teaching career. Moreover Danielson (1996:5) argues that the move to a classroom teaching position for a beginning teacher is often a ‘jump into the unknown, a matter of survival amid the myriad questions and concerns it presents’. Such statements challenge teacher educators, be they at university or school level, to consider how such a gap can be reduced. Equally as important is the need to consider how stronger links can be made between pre-service training and beginning teachers’ professional practice.

We acknowledge that this is not a new area of research, however in recent years it has taken centre stage as governments and bureaucracies focus on ‘quality teaching’ and the professional knowledge teachers need in order to be ‘quality teachers’ (Danielson 1996; Darling-Hammond 1997; Fullan 2000; Benham Tye and O’Brien 2002; Nelson 2002; Stronge 2002; Invargson & Rowe 2007). The basic assumptions of the Australian Federal Government report, Australia’s Teachers: Australia’s Future (DEST 2003:149) indicate that ‘high quality teachers make a significant and lasting contribution to young people’s lives,’ and that ‘beginning teachers still have much to
learn about their craft and how to be effective in teaching’. The report is very comprehensive with a strong emphasis on the induction of beginning teachers and the need for ongoing professional learning for all teachers. It argues that for beginning teachers it is imperative that support is provided so that they can build on their pre-service foundational knowledge as ‘teaching is a dynamic and lively profession. Initial teacher education cannot be expected to suffice for a whole career or even extended periods’ (p154). However the question must be asked: what can be expected of initial teacher education?

When articulating what constitutes a ‘quality teacher’ therefore, we must also examine what constitutes quality pre-service training of ‘quality teachers’ (Stronge 2002). There is a certainly a growing expectation from employers, schools and beginning teachers themselves that pre-service primary teacher training will prepare graduates pedagogically; will ensure they have adequate content knowledge across the curriculum areas; and will provide them with a repertoire of teaching strategies (Ramsey 2000; Stronge 2002). More than ever preservice teachers themselves expect that as newly beginning teachers they must ‘hit the ground running’. They are aware that they need to have sound pedagogical, theoretical and subject specific knowledge that goes beyond survival.

For instance the NSW Model of Pedagogy proposed by the New South Wales Department of Education and Training, (2003:7) expects all its teachers to be able to understand and use pedagogy that has three dimensions: namely ‘intellectual quality’, ‘quality learning environment’ and ‘significance’.

Quality teachers, many argue, also need a sense of professionalism and strong professional identities (Sachs 1999; Fullan 2000; Darling Hammond 1997; Hooley 2005). ‘Teachers’ identities are deeply implicated in their teaching’ (Nieto 2003:16) and therefore need to be acknowledged and nurtured. Brott and Kajs (nd) claim that a person’s professional identity development involves individual maturation processes that begin during training for the profession. Furthermore they suggest, ‘these processes can be viewed as the experiences that help the practitioner wed theory with reality (np)’.

Sachs (1999) claims that ‘identity and practice mirror each other’ (n.p.). Sachs strengthens these views by citing Wenger (1998: 149) who argues ‘there is a profound connection between identity and practice.’

Preservice education, we argue, has the responsibility therefore to not only produce quality teachers but quality teachers who have strong professional identities. It seems logical therefore that such development begins as early as possible in the preservice program. The development of such identities will necessitate immersion in ‘reality’; namely schools and classrooms as early as possible.

Current reviews of, and research into, teacher education have for some time now paid a great deal of attention to issues concerning the practical component of teacher education, commonly known as ‘the practicum’ (Ramsey 2000; Perry and Allard 2003; Vick 2006). The common theme throughout this literature is the dissatisfaction with the outcomes of teacher education programs, and in particular, the practical component. There is a general argument that programs are ‘too theoretical’ (DEST
2002: 99), with insufficient emphasis on ‘real situations’ (Ministerial Advisory Council on the Quality of Teaching 1998, Section 2). However while the practicum has been a particular focus in current times, Vick (2006:182) points out the concerns expressed are not new. His research demonstrates that ‘between 1900 and 1950 teacher educators … sought to develop programs that balanced and integrated theory and practice’. Yet in spite of these ongoing requests Vick contends there have been few solutions and little has changed in today’s programs.

The Victorian Inquiry into Preservice Teacher Education (2005:139) concludes, Teaching practicum (or professional experience) is at “the heart” of pre-service teacher education. The craft and professional demands of teaching are so complex that it is impossible for pre-service teachers to fully appreciate the demands and the dimensions of the profession, unless they are immersed, throughout their professional studies.

A second critical factor in teacher education that has received a great deal of attention in recent years has been the transition experiences of first years into university life (Turbill 2002). Perry and Allard (2003) argue that for first year students to make a successful transition they need to build relationships with peers, with their lecturers and with the wider academic community. In the case of students within a teacher education program such relationship building must also be extended to the school community. First year students therefore must develop not only a personal identity of a ‘university student’ in their first year but a professional identity of ‘becoming a teacher’ (Turbill 2003).

Opportunities to provide a balance of theory and practice means that teacher education programs must therefore reach beyond the university setting and into the settings of schools. Providing practical experiences in the field where the student teacher is allocated to a supervising teacher for a block period to ‘practise teach’ is not enough. Students within a teacher education program also need to experience ‘real situations’ where they can build connections to the profession in which they are learning, where they can become part of the school’s community and develop professional relationship with teachers in non-threatening settings. It is in these settings that student teachers’ professional identities will begin to develop and mature.

In response to these challenges a group of academics working with the Primary and Early Childhood Education Program at the University of Wollongong collaborated to introduce a project that became known as the ‘First Year Inschool Experience’. This project and its outcomes are now discussed.

**The First Year Inschool Experience Project**

The project aimed to respond to the major issues discussed above as well as build stronger school/university partnerships by recognising and using the expertise of practicing teachers in the learning of first year students. Specifically it aimed to place First Year Primary and Early Childhood students in Primary Schools for 10 consecutive Wednesdays in Autumn session 2006. Students operating as ‘teaching assistants’, it was envisaged, would benefit greatly from gaining knowledge of ‘how schools do business’. Understanding the culture of schools, their purpose and how things are organised would provide the students with a solid foundation for their respective courses and begin the process of developing professional identities. Such

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1 This project was funded by a University of Wollongong Challenge Grant.
immersion it was believed would also provide students with greater opportunities to make connections between the theories and pedagogies of the Key Learning Areas they would be learning at University and the teaching practices they would see in the classrooms. It was also believed that student teachers would begin to learn first hand appropriate classroom organisation and behaviour management strategies. The project therefore acknowledged the important role that practicing teachers can (and must) play in the overall education of future teachers. Practicing teachers, it was envisaged, would act as role models and mentors of the profession for the student teachers.

Critical to the project was the allocation of an academic to each of the schools involved. The eleven ‘Academic Mentors’ were all involved in the teaching of the first year program, and so were cognisant of the theoretical information that students were learning in their University courses. Each Academic Mentor was responsible for a cluster of 5-6 school and approximately 25 student teachers. Visits to the schools were made as often as possible, weekly in the first period of the project. Academic Mentors also organised an after-school Cluster Meeting in the middle of the project in order to gain feedback from teachers and In School Coordinators regarding their views on the project.

The ten weekly school visits transitioned into a two week (10 days) supervised practicum block in June. During this period student teachers were allocated to a supervising teacher in their allocated school and fulfilled the usual requirements of a supervised practicum. Supervising teachers were paid the award rate during this component.

Students were allocated to schools in groups of 3-6 per school. The number was dependent on the size of the school and the request of the school’s Coordinator. Students were required to attend their allocated school each Wednesdays for the normal school day and to participate in the normal routine of the school. This day was viewed as a component of a subject called Curriculum and Pedagogy I. The first year timetable was organised to have Wednesday with no University commitments.

During the ‘school visits’ it was important that student teachers were provided with a range of experiences and opportunities. However student teachers were not to be viewed as a teacher’s aide in a school. It was agreed between the NSW Teachers’ Federation and the NSW Department of Education and the Wollongong Diocese Catholic Education that student teachers may support teachers in ways that the Principal or Coordinator believed were learning experiences for the student teacher yet also supportive of the class teachers. Tasks therefore included working one-on-one with a child, supervising small groups, reading to a group or the whole class, helping to prepare school plays, musical concerts, and other experiences such as excursions and school camps.
**Evaluation of the Project**

The Project was evaluated from the very beginning using qualitative methods of observations, interviews and a survey. An open-ended survey was given to all students in their final week of session. Data were collected from all stakeholders involved. These included:

- Academic Mentors’ informal conversations with student teachers, School Coordinators and class teachers during school visits
- Academic Mentors’ discussions with students in tutorials within the University setting
- Cluster Meeting Workshop with School Coordinators and class teachers
- Survey given to all students in the last tutorial of session
- Email survey from Academic Mentors

These data have been analysed using a constant comparative process (Strauss & Corbin 1990, Cresswell 2003). The students’ survey responses were coded and then tabulated so they could be reported in graph form.

**Results**

The project was evaluated highly by student teachers, schools and the Academic Mentors. The inschool experiences clearly fulfilled the aims of the project as Graph 1 demonstrates.

![Graph 1. Percentage distribution of the 407 responses from the 219 students to the question 'what worked for me'](image)

The findings clearly demonstrate that the opportunities for the student teachers to ‘soak up the school culture’ also led to them beginning to identify a ‘professional identity of becoming a teacher’ (Ramsey 2000; Turbill 2003). It is also apparent that these experiences provided the students with critical opportunities to make connections between the theories of learning and pedagogy and how these are enacted in the classrooms, providing ‘high quality learning’ (Killen 2005). Figure 1 is a visual representation of the interaction between the settings that operate to develop a ‘professional identity’ in student teachers.
For student teachers developing a professional identity of ‘becoming a teacher’ is not only critical but central to the whole complex process. The experiences provided in the school setting presents the student teacher with ‘real situations’ (Ministerial Advisory Council on the Quality of Teaching 1998, Section 2) so that their learning in the University setting is not ‘too theoretical’ (DEST 2002:99). These ‘real situations’ need to be ‘pressure free’ so that student teachers and class teachers can build relationships that are not based on assessment but on support, demonstration and mentoring. The within school visits clearly served this purpose.

This project demonstrated that in such a setting student teachers learn so much more than they can learn in the university setting alone. The partnership between the two settings therefore is vital if the theoretical aspects of what is presented in the university classes are to connect with the practical and pedagogical aspects of schools.

A vital link in this partnership is the role of the Academic Mentor. The Academic Mentor has the capacity to bring the ‘university’ into the ‘school’ and after visiting the school setting, the ‘school’ into the ‘university’. The professional dialogue between the Academic Mentor and the teachers strengthens communication, clarifies issues and misconceptions as well as shares professional pedagogical understandings. It is imperative therefore that the Academic Mentors visit the school settings regularly. It is also important that this person be someone who is genuinely interested in current pedagogical issues and changes within (in this case) the K-6 Primary curriculum and educational perspectives. Equally as important is that this role be acknowledged as an integral component of the academics’ workload.
Conclusions

If student teachers are to graduate having understood and be able to practise the complex professional demands of teaching the outcomes of this project clearly demonstrate that immersion in school settings as soon as possible in their preservice training is highly beneficial. If as Nieto (2003:16) argued, ‘teachers’ identities are deeply implicated in their teaching’ then supporting the development of professional identities of student teachers must become an integral part of any teacher preparation program. To this end there is a need for strong school/university partnerships that acknowledge the expertise and knowledge of the teaching profession in the professional learning of student teachers, and that go beyond the ‘supervised practicum’.
References


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The Development of Pre-service Teachers’ Conceptual Understanding of Scaffolding Numeracy

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Abstract

Becoming a quality teacher involves the acquisition of subject matter knowledge as well as the development of appropriate pedagogical teaching skills. The latter includes knowledge and understanding of scaffolding strategies based in an increasingly popular socio-cultural theory of Lev Vygotsky. Recent research in teaching mathematics identified a wide variety of scaffolding techniques that can be used in the classroom to improve primary school students’ numeracy. However, there is a highly diverse interpretation of scaffolding in the literature which creates difficulties for pre-service teachers when they attempt to make sense of this popular teaching technique and apply it to their teaching. It is the position of this paper that teaching scaffolding in close connection to its theoretical basics will allow pre-service teachers better anchor their repertoire of scaffolding numeracy techniques and will promote its proficient and flexible use in the classroom.

This paper describes a combined effort of lecturers in Educational Psychology and Mathematics in teaching scaffolding numeracy. Examples of theoretically grounded case based scaffolding teaching strategies for pre-service teachers are presented.

Introduction

The current government request for improving the quality of teaching (NSWIT, 2006) has brought into focus issues concerning the role of teacher educators to ensure that pre-service teachers receive appropriate training. Becoming a quality teacher involves the acquisition of subject matter knowledge and the development of pedagogically sound teaching techniques that make this knowledge available to children in the classroom. One such technique is captured by the metaphor of scaffolding and is widely used to provide support and guidance to children in a constructivist learning environment. It is based on an increasingly popular socio-cultural theory of teaching and learning that was originated by Lev Vygotsky (1978) and further developed by numerous contemporary theorists (Daniels, 2001).

Recent research in teaching mathematics has identified a wide variety of scaffolding techniques that can be used in the classroom to improve primary school students’ numeracy (DEST, 2004; Anghileri, 2006; Morrone et al., 2004; O’Toole & Plummer, 2004).

While the metaphor of scaffolding is being widely used and well recognised in current educational research there is a concern that it has become a generic umbrella term for any kind of teacher support (Jacobs, 2001) which is often no different to a traditional approach of direct instruction. There is also evidence that scaffolding can hinder rather than assist children’s learning if not used with care (Stone, 1998; Tudge, 1990, in Moll, 1990). Such an uncertain and sometimes exceedingly diverse interpretation of scaffolding creates difficulties for pre-service teachers when they try to make sense of this popular teaching technique and to apply it to their teaching.

The results of our study (Verenikina, 2004; Verenikina & Chinnappan, 2006) indicate that pre-service teachers see the scaffolding metaphor as a useful concept that allows them to move away from the direct instruction of a traditional classroom and provide a richer and more sophisticated educational tool for the learner. However, while there was evidence of understanding some basic (and peripheral) techniques of scaffolding such as breaking the tasks into smaller pieces, modelling and demonstration, the more important levels of scaffolding did not feature strongly in students’
responses (Verenikina & Chinnappan, 2006). As the concept of scaffolding is complex and diverse, it is anticipated that embedding their practice of scaffolding in its theoretical basics might allow pre-service teachers to anchor their repertoire of scaffolding numeracy techniques. This approach is expected to promote its proficient and flexible use in the classroom.

To successfully teach in an ever-changing school environment, teachers need to be able to adjust their knowledge and skill to a particular classroom situation and tailor to the needs of particular children. This means that teachers have to be able to reflect upon, and think about, their teaching practices in a critical and creative manner. A conceptual understanding of the theoretical framework that supports their pedagogical practices is essential for the development of such ability. It will enable them to better understand specific lesson goals and conditions in the use of scaffolding in particular situations (Sullivan et al., 2006).

Further research needs to explore students’ understanding of the use of specific techniques of scaffolding in authentic activities. Designing such activities requires expertise in both the theoretical perspective of teaching and learning, and the teaching of specific content such as mathematics. The effort of lecturers in Educational psychology and Mathematics courses has been combined in the teaching of scaffolding numeracy techniques in conjunction with its theoretical basis, the Zone of Proximal Development (Vygotsky, 1978). Explicit links and connections to the theoretical principles of scaffolding allow pre-service teachers to anchor their repertoire of scaffolding techniques provided by recent research.

The study

The aim of this study is to find a point of confluence between theory and practice that would assist teacher educators develop strategies to support pre-service teachers become competent in fostering the growth of high levels of numeracy among young children. The following questions were explored: What are the ways that pre-service teachers can form a critical and creative view of scaffolding? What is the role of theoretical conceptualisation in this process? How does the conceptual understanding of scaffolding inform teaching numeracy in the classroom? To answer these questions the research has been designed around the three consequent stages:

- Creating and refining teaching materials that allow pre-service teachers to master a range of scaffolding numeracy techniques in a systematic and conceptualised manner;
- Application of the developed materials to teaching scaffolding in general, and scaffolding numeracy in particular, in a third year foundation subject;
- Evaluation of the effects of such teaching on pre-service teachers’ understanding of scaffolding and its classroom use.

This paper reports on the first two stages of the research. In stage one the range of scaffolding numeracy techniques described in current literature were identified and analyzed in accord with the criteria of teaching in the Zone of Proximal Development. In addition, the cases of authentic situations of scaffolding numeracy in the classroom were collected. In stage two, the identified scaffolding techniques, the theoretical criteria and the authentic cases were put together to create teaching materials for university pre-service teacher education. These materials were then applied to teaching scaffolding as part of learning the utility of the theory of Lev Vygotsky in the third year educational psychology subject; scaffolding numeracy was presented to pre-service teachers to illustrate the educational implications of the theory and this move formed the basis for a scaffolding case study assignment in the subject.

Scaffolding techniques

Current educational literature provides a wide variety of studies that deal with scaffolding in the classroom. A range of scaffolding techniques presented in the literature were analyzed and
summarized for the purpose of this study. The scaffolding techniques were grouped to form a list of ten major scaffolding strategies consistent with the teaching in the Zone of Proximal Development. The list was presented to the students as a resource for their case study assignment. Table 1 presents a short version of this list.

Table 1. Scaffolding strategies and techniques.

<table>
<thead>
<tr>
<th>Scaffolding strategy</th>
<th>Descriptions of the specific techniques for the strategy</th>
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| 1. Encourage and promote self-regulation and metacognition | · Provide choices (Jacobs, 2001); let students take decisions about their own method of problem solving (Roehler & Cantlon, 1996)  
· Provide students with the opportunities to practice the skills in different contexts - this might help students to become less dependent on the teacher’s support (Hogan & Pressley, 1997, cited in Larkin, 2001)  
· Encourage the students using scaffolding structures till they become automatic, enabling independent activity completion (Michell & Sharpe, 2000)  
· Make the child aware of the process which led to the discovery (Coltman, Petyaeva & Anghileri, 2002); explain and reinforce problem solving processes (Nunokawa, 2005); suggest different strategies (Elliot, 1993)  
· Stress the importance of student talk in fostering metacognitive learning (Mariage et al., 2000); engage children in talking about their problem solving strategies (Elliot, 1993) |
| 2. Motivation, engagement and active involvement           | · Scaffolding can increase intrinsic motivation by reducing errors and maximising success (Beale, 2005)  
· Planned lessons need to be motivating and allow students to be actively involved (Madsen & Gudsmundsdottir, 2000)  
· Motivate students towards establishing a shared goal is to provide a delicate balance between allowing the student to lead and following the traditional path of teacher-directed instruction (cited in Larkin, 2001)  
· Take into account the unique interests, styles and motivations and capabilities of individuals (McLoughlin & Marshall, 2000) |
| 3. Provide constant constructive feedback                 | · Provide constant constructive feedback as part of learning processes. This might promote generality of learning by the introduction of more natural contexts for maintaining the learned behaviour (Beale, 2005)  
· Students need to be supported and challenged by regular prompts and constructive feedback. Regular quizzes and self tests allow students to check their own progress and predict difficulties and therefore become more independent in assessment (McLoughlin & Marshall, 2000) |
| 4. Building positive, friendly and trusting relationship with students | · Use different configurations of interactive possibilities (Dufficy, 2001)  
· Create an environment where teacher-student relationship are trusting (Rasmussen, 2001), open, friendly, socially based and not always related to classroom learning (Kong, 2002)  
· Teachers are not only responsible for helping to build understanding of the content, but also for establishing and nurturing social relationships (Mariage et al., 2000) and providing warmth and responsiveness (Seng, 1997)  
· Make students feeling comfortable in expressing their thoughts in an accepting environment (Roechler & Canton, 1996) |
| 5. Adjustment of support levels; structure tasks in step-by-step portions | • Concept of the ZPD, the level of difficulty posed by the task must be beyond the ability of the participants to accomplish independently, but not beyond the ability to accomplish with assistance (Michell & Sharpe, 2005)  
• Scaffolding can be adjusted to suit the needs of individual students through student’s initial reaction and completion of new tasks (Mariage et al., 2000)  
• Questions should be developed to address the different types of abilities in the classroom (Brown, 2000)  
• Breaking down a problem into smaller (more achievable) portions will enable proficient learners to improve their practice and will aid not so proficient learners in the initial stages of problem solving (Mousley, 2001) |
| --- | --- |
| 6. Usage of open-ended questioning and questions which encourage experimenting | • Adjust the level of support on a moment-to-moment basis through effective questioning (Mariage et al, 2000)  
• Open-ended questions may lead to a broad range of responses that allow joint exploration for an answer (Dufficy, 2001)  
• An easy way to scaffold student learning is to engage in conversations with them using questioning to further the conversation (Roehler & Cantlon, 1996)  
• Use questions which encourage experimenting (Wood, 2005) |
| 7. Group work guided by teacher | • Have small conversations with groups of students during activities, providing simple clues and making immediate positive feedback (Coltman et al, 2002)  
• Divide the class into small groups when introducing new information. Students will be working within their ZPD and will be able to scaffold each other’s learning (Cresswell, Underwood, Withers & Adams, 2002)  
• Provide opportunities for students to scaffold each other’s learning as part of a learning community. (Kong, 2002)  
• Collaborating, acting as an accomplice, co-learner/problemsolver, co-conspirator, negotiating (DEST, 2004)  
• Conferences orchestrated by the teacher can play a crucial role in supporting and challenging student’s thinking and provided a context for establishing common knowledge (O’Toole & Plummer, 2004, p. 40)  
• Joint problem solving involves engaging the child in an interesting and culturally meaningful, collaborative problem solving activity (Seng, 1997) |
| 8. Control student frustration through support/ altering activities | • Reduce frustration and decrease risk taking in problem solving, eg by modelling and demonstration (Elliot, 1993)  
• Create a safe environment in which students are free to try alternatives without being penalised (Larkin, 2001)  
• A complex problem may cause frustration. Provide open-ended tasks that ask students to explore an issue and/or form an opinion (Nir-Gal & Klein, 2004) |
| 9. Use student’s prior knowledge in teaching | • Ask questions which establish links with prior knowledge, eg Where have you seen this before? What does it sound like? (Brown, 2000)  
• Provide opportunities to reflect on what the students know and how this knowledge can be expanded (Nir-Gal & Klein, 2004)  
• Help students relate new information to prior knowledge (Kong, 2002)  
• Remind about the strategies that were successful before (Larkin, 2001)  
• Excavating, drawing out, digging, uncovering what is known, making it transparent (DEST, 2004) |
10. Help students reshape their responses

- The scaffolding procedure gradually changes the response requirement, from an easy (or more likely) responses, through intermediate steps, until the desired response is attained (Beale, 2005; DEST, 2004)
- Refine students’ broad responses through open-ended questioning, verbal cues and prompts (Mariage et al., 2000)
- Noticing, highlighting, drawing attention to, valuing, pointing to: teacher draws students attention to particular feature without telling students what to see/notice (ie, by careful questioning, rephrasing or gestures), encourages students to question their sensory experience (DEST, 2004)

**Theoretical underpinnings**

Vygotskian socio-cultural theory, and the concept of the Zone of Proximal Development (ZPD) in particular (Vygotsky, 1978), is commonly regarded as the theoretical underpinning of scaffolding practices (Berk, 2006; Daniels, 2001; Wells, 1999; Krause et al, 2005).

Vygotsky recognised that the distance between doing something independently and doing it with the help of another person, indicated stages of development, which do not necessarily coincide in all people. In this way he regarded an instructor’s "teaching of a student not just as a source of information to be assimilated but as a lever with which the student's thought, with its structural characteristics, is shifted from level to level". (Yaroshevsky, 1989, p.283). Viewing the child as an active participant in their own learning is at the heart of the notion of ZPD. "Within the ZPD the child is not a mere passive recipient of the adult teaching, nor is the adult simply a model of expert, successful behaviour. Instead, the adult-child dyad engages in joint problem-solving activity, where both share knowledge and responsibility for the task" (Wells, 1999, p.140).

Vygotsky (1978) stated that consciousness is constructed through a subject's interactions with the world. Development cannot be separated from its social and cultural context. This led to the idea that we can only understand mental processes if we understand the social interaction and tools and signs that mediate them. Vygotsky emphasised that social interactions are crucial for development from the very beginnings of a child’s life. He asserted that any higher mental function necessarily goes through an external social stage in its development before becoming an internal, truly mental function. Thus, the function is initially social and the process through which it becomes an internal function is known as internalisation.

The role of social mediation in human activity has been strongly emphasised by Vygotskian theorists. The child's activity becomes self-regulated when "external behaviours that were defined in part by the culture and internalised by the child can now function as mental tools for her (Dixon-Krauss, 1996, p. 10). In order to become self-regulated, self-motivated learners children have to develop interest and motivation to learn, which according to Hedegaard (2002) "emanates from the social part of the child's life. The intentional interaction with adults and their friends can thus be used as a spontaneous factor for creating motivation" (p.67). Central to the concept of mediation is intersubjectivity which is described by Wertsch (1998) as the establishment of shared understandings between the child and the adult. Intersubjectivity is an essential step in the process of internalisation as the adult gradually removes the assistance and transfers responsibility to the child.

According to Vygotsky, the most important part of children's psychological development is acquisition of the culture to which they belong. Acquisition of mental tools plays a crucial role in the development of children's minds. "The role of the teacher is to "arm children" with these tools...It involves enabling the child to use tools independently and creatively." (Bodrova & Leong, 1996, p.3). Children acquire cultural tools in social interactions with more experienced members of
the society. Moving from shared possession of tools (interpersonal) to individual possession (intrapersonal) is associated with gaining independence and a shift in the development of the child. Thus, teaching in the ZPD is characterised by such concepts as cultural and social mediation of learning, intersubjectivity, internalisation and the active position of the child. It also includes the means by which the educator meets the level of the child's understanding and leads the child to a higher, culturally mediated level of development. This connects to the tool mediation, that is, to a consideration of what mental tools have been provided for the child to use in their independent performance as well as the conditions that have been created for the tools to be internalised. In other words, what techniques have been used to ensure the transformation of assisted performance into independent performance.

The above core concepts are taught to pre-service teachers in educational psychoogy subjects in primary and early childhood teacher education programs (Vialle, Lysaght, & Verenikina, 2005). It is argued that understanding the theoretical underpinnings of the metaphor of scaffolding will assist pre-service teachers make sense of the variety of scaffolding techniques and taking appropriate decisions about their classroom application. To assist the students in doing so, explicit connections between the scaffolding techniques (presented in Table 1) and the principles of teaching in the ZPD have been made for the students and summarised in Table 2.

**Table 2. Scaffolding strategies and teaching in the Zone of Proximal Development**

<table>
<thead>
<tr>
<th>Scaffolding strategy</th>
<th>Principles of teaching in the ZPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Encourage and promote self-regulation and metacognition</td>
<td>Providing tools for transferring assisted performance into independent performance</td>
</tr>
<tr>
<td>2. Motivation, engagement and active involvement</td>
<td>Support student’s agency</td>
</tr>
<tr>
<td>3. Provide constant constructive feedback</td>
<td>Support student’s agency (motivating, engagement)</td>
</tr>
<tr>
<td>4. Building positive, friendly and trusting relationship with students</td>
<td>Get to the child’s level; create conditions for intersubjectivity</td>
</tr>
<tr>
<td>5. Adjustment of support levels; structure tasks in step-by-step portions</td>
<td>Keep the help minimal, to support the child’s agency (assisted performance)</td>
</tr>
<tr>
<td>6. Usage of open-ended questioning and questions which encourage experimenting</td>
<td>Provide indirect support to keep the child actively engaged; provide challenging tasks to move the child through the ZPD</td>
</tr>
<tr>
<td>7. Group work guided by teacher</td>
<td>Create the zone of proximal development</td>
</tr>
<tr>
<td>8. Control student frustration through support/altering activities</td>
<td>Not too difficult tasks</td>
</tr>
<tr>
<td>9. Use student’s prior knowledge in teaching</td>
<td>Start working at children’s level and lead them to higher level of performance and understanding</td>
</tr>
<tr>
<td>10. Help students reshape their responses</td>
<td>Start with children’s response and lead them to higher level of understanding</td>
</tr>
</tbody>
</table>

**Case study approach**

To create a constructivist environment for the pre-service teachers for developing their understanding of the scaffolding techniques and the ways that they can be used in the classroom, the method of case studies was utilized.

Case study approach has proved to be effective in teacher education in a variety of ways. The use of...
case studies is consistent with constructivist and Vygotskian views of learning as it supports students’ active engagement in mastering professional skills (Ewing, Smith & Horsley, 2003). It increases the participants’ knowledge about problems of practice and motivate them to think in greater depth about efficient teaching strategies (Manouchehri & Enderson, 2003). Carefully designed case studies bring classroom complexity to university classes (Floyd & Bodur, 2005) thus enabling authentic learning that reflects the way the knowledge will be used in real life (Herrington and Oliver, 1995). In addition, case-based teaching has been shown as an effective strategy for promoting connections between theoretical and applied knowledge especially when the students are encouraged “to think of multiple, conceptual explanations for problem situations depicted in each case” (Mayo, 2004, p.144). It provides participants “with a lens through which they could view classroom events and interpret them” (Manouchehri & Enderson, 2003, p. 127).

In order to provide prospective teachers with authentic learning tasks for studying scaffolding, a number of detailed cases of using the scaffolding techniques in teaching mathematics in a primary classroom were created. Most of the cases were designed on the basis of the authors’ practical classroom experiences and some cases were adapted from the literature (eg O’Toole & Plummer, 2004; DEST, 2004).

All the cases portrayed the characters of a teacher, a student teacher (a third year University primary program student, undertaking professional practicum in the school) and a school student or a group of school students, experiencing difficulties in mastering a particular mathematical content. Each case was provided with specific instructions asking the pre-service teachers to identify the scaffolding techniques (Table 1) and discuss their conceptual connections to the theory of Vygotsky (Table 2). An example of such case (based on the authors’ teaching experience) is presented in Table 3 below.

Table 3. A case study example

Case Study 3: David and Chris
David is a teacher in a primary classroom.
Chris is David’s current student teacher (3rd year Primary University student)
David has 25 years of teaching experience, but in this school he has been working for about 4 years and currently teaches a Year 6 class.

Chris has taught one lesson on area so far. On reflection of the first lesson Chris discovered that students had little knowledge about how to find the area of 2D shapes and rectangles in particular. There were some students in the class who are still confused between perimeter and area. This lesson Chris decided to take a different approach. He guided students through two examples on the board first and then followed that up with an activity. Chris informed students that those who needed further support could either do the activity if they understood the previous lesson, or participate in an extension of work from the previous lesson. About half of the class selected each option.

ST*: From our lesson yesterday, what can we remember about area?
S1: You do something with two sides of the numbers
ST: Ok, but what specifically do we do with those numbers?
S2: We plus them together
ST: Do we all agree with S2
Ss: No...no!
ST: S3, what do you think then?
S3: You times them?
ST: Do we all agree?
Ss: Yes!
ST: OK, let me draw this rectangle here and we’ll give the top and the bottom sides 17cm and the sides 8cm.
ST: Now tell me what to do first
S4: You add the two 17’s then the two 8’s
ST: What do we think about that?
S6: Sighs (This is too hard)
ST: Well, let us do this first and by then you might change your opinion
S5: I think we should times 17 by 8
ST: Why do you think that?
   (hands go up)
ST: S2 why?
S2: Isn’t area base times height
ST: You remembered!
ST: Great job. Let’s do it. First let me write up the algorithm: 17 over 8. Let’s go! 8 times 7
Ss: (56)
ST: I’ll put down the 5 and carry the six
S7: Wait a minute. You are doing it wrong
ST: Really! Tell me what I’m doing wrong then
S7: You put the 6 in the wrong place. The 6 goes under the 8
ST: Oh. That’s right.
ST: 8 times 1 plus 5
Ss: (13)
ST: S3 what is the answer
S3: 136cm
ST: You see how easy that was? Look at what we did together. Do you think you could do this on your own?
Ss: (Yes)
ST: Great. Now before we go back to our tables is there anything we are forgetting in this answer?
   (puzzled looks)
S2: Umm...
S5: I know! It’s squared. It’s 136cm squared.
ST: Great job!

*ST – student teacher, Chris; Ss, S1, S2 etc. – School students

Guidelines for the Case Study
- Identify two or three scaffolding strategies that Chris used in his work with the students
- Explain the student teacher’s use of these scaffolding strategies during this lesson.
- Discuss the theoretical underpinnings of the scaffolding strategies that you have identified.
- Evaluate the way that Chris provided the students with a choice during this lesson. Was it an effective strategy? Why?

To complete the assessment task, the students were asked to choose one case study and discuss using the guidelines and the scaffolding resources (as summarised in Tables 1 and 2).

Areas and perimeters of 2-D shapes are related but different aspects of conceptual understanding of space. There are a number of ways of finding areas and perimeters. While these approaches can be taught it is pedagogically much more useful if students can be scaffolded to discover these. The scaffolding approach takes on a crucial role if the aim of the lesson was for students to discover the relationship between area and perimeter. On the evidence presented in Table 3, it would seem that neither David nor Chris really showed an appreciation of the connections (content aspect of their knowledge). The limited understanding of relational understanding seemed to have hampered their use of an appropriate scaffolding strategy to assist the learner.

Future study
In order to evaluate the effect of the case based teaching on the pre-service teachers’ understanding of scaffolding and its classroom use, a variety of methods will be used. A survey will be conducted with all the students enrolled in the subject (approximately two hundred students). The students’ written work for their assignments will be analysed. Additionally, a small group of five to six students will be followed up in their classroom practicum to explore the ways that the understanding of scaffolding techniques can be better applied to planning and implementation of mathematics lessons in primary school. The research will be conducted in close collaborations with
the students. Discussions, semi-structured interviews and classroom observations will be used to collect the data.

**References**


Exploring authenticity in theory and in practice
in the teacher education context

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Abstract

Research into teacher education has been replete with competing perspectives. Authenticity has been incorporated in teacher education programmes to enhance student learning and programme outcomes. However, the term ‘authenticity’ has been used with a certain degree of ambiguity. Given this ambiguity, this paper attempts to explore the notion of authenticity in teacher education contexts. A central, and critical, issue that will be addressed is that the manner in which the content of a teacher education programme is presented and assessed, in addition to the content itself, should be coherent and meaningful to students. The programme, as a whole, should provide students with a complete picture of the teaching profession and help them think and act critically and reflectively in their professional world. The paper also reviews a professional development programme for university teachers in the School of Education, The University, of Queensland, which, in the author’s opinion, have achieved a high level of authenticity in the teacher education context.

Introduction

Research into teacher education has been replete with competing perspectives. One emergent perspective focuses on the nexus between authenticity (i.e., relating to activities that form part of professional practice) and student learning. Authenticity has been incorporated in teacher education programmes, most commonly in assessment practices (for example, see Aubusson (2005); Cochran-Smith (2004); Darling-Hammond & Snyder (2000)), to enhance student learning and programme outcomes.

However, the term ‘authenticity’ has been used with a certain degree of ambiguity. In several contexts, it has been equated to a performance approach (Ridley & Stern, 1998, Torrance, 1995). The common case in the literature is that authenticity is taken for granted (for example, see Hoban (2005)). In many teacher education contexts, authenticity has been incorporated via the use of various forms of practicum in schools or school-based learning, in which the focus has been shifted towards hand-on teaching experience between veteran and novice teachers.

Voices have been raised against this overly simplistic use of authentic teacher education, including those of Collins (2004) and Darling-Hammond and Snyder (2000). Especially, Collins (2004) criticised the current unhealthy heavy emphasis on repertoires-rehearsal school-based learning. She warned that ‘teacher professionalism will stagnate and perhaps die’ without ‘a sound, honest, challenging knowledge resource for reflective teaching practice’ (Collins, 2004, p. 239).
With regards to teacher education, school-based learning is vital preparation for the profession. As Collins (2004) pointed out, school-based learning should be a powerful resource where students learn to become reflective professionals, rather than just where they rehearse teaching techniques. In my opinion, weaving practicum into an ‘authentic’ curriculum in which theory informs practice and practice expands theory, with student teachers’ learning at the centre, could be the key.

Given that authenticity is a potentially useful concept despite its ambiguity, this paper attempts to explore authenticity in teacher education contexts in relation to student learning. In doing so, it draws on literature on authenticity across fields, including teacher education literature. To investigate how these ideas may be translated into practice, the paper then reviews a professional development programme for university teachers at the School of Education, The University of Queensland, which, in the author’s opinion, has achieved a high level of authenticity in the context of teacher education.

**Authenticity**

With the rise of post-modernism, authenticity was re-introduced into the schooling arena by Fred Newmann. He argued that schools should be restructured in a way that authentic achievement is the means and the drive of schooling. Authentic achievement, as defined by Wehlage, Newmann and Secada (1996), ‘stands for intellectual accomplishments that are worth-while, significant and meaningful’ (p. 23). On clarifying intellectual accomplishments, Wehlage, Newmann and Secada (1996) introduced three critical criteria, which are: (a) students’ active participation in the construction of knowledge; (b) in-depth discipline inquiry based on prior knowledge; and (c) value beyond schools.

Descriptively, authentic achievement by Wehlage, Newmann and Secada (1996) might suggest a focus on educational outcomes and use them to infuse authenticity into the curriculum. Despite imprecise and subjective benchmarks such as ‘worth-while’, ‘significant’ or ‘value beyond schools’, the three criteria point to critical features of an authentic meaningful curriculum, which could be broken down into: (a) students’ active engagement; (b) in-depth discipline inquiry; (c) connectedness of content knowledge; and (d) a strong link with the wider world of work.

Though I agree that the features are critical in specifying the purpose of the curriculum, enhancing its coherence, and promoting schooling as learning through meaningful engagement, I fear that a vital element is missing. In my opinion, the missing element might be authentic activities, which can form the basis for educational activities such as curriculum development, educational processes and educational outcomes. Given this focus of authentic activities, I would like to, first of all, explore the notion of authentic activities, and the way in which authentic activities shape the curriculum. Afterwards, I would like to discuss the educational processes in an authentic curriculum. Where relevant, Wehlage, Newmann and Secada’s critical criteria (1996) will be referred to in the discussion.

Commenting on authentic activities, Brown, Collins and Duguid (1989) stated:
The activities of a domain are framed by its culture. Their meaning and purpose are socially constructed through negotiations among present and past members. Authentic activities then, are most simply defined as the ordinary practices of the culture. (p. 34)

Given this understanding of authentic activities, authenticity should refer to real-life situations related to a domain in which participants construct their understanding of that domain through their own experiences. In this paper, the ‘domain’ being referred to is the teaching profession. Thus, in an authentic professional curriculum with its primary goal to prepare students for a profession, students are required to undertake authentic activities of the profession either independently or in collaboration with peers and teachers. In this sense, an authentic curriculum is, at the core, performance-based.

Despite the performance aspect of an authentic curriculum, performance-based and authentic curricula are distinguished. While a performance-based curriculum involves students demonstrating their competencies, an authentic curriculum moves beyond demonstration (Aubusson, 2005). It is more concerned with students’ understanding of how a profession functions in terms of its discipline and practices. Students are repeatedly required to demonstrate how their practice has been informed by their learning and to reflect upon their experiences (Ridley & Stern, 1998). Their learning can be described as a process of locating information, considering alternative approaches, evaluating strategies, critically reflecting and synthesising theory into their own approach to the profession.

In an authentic curriculum, the content is organised around authentic activities of the profession. In other words, authentic activities of the profession inform curriculum developers of central abilities and qualities that students should develop in order to participate effectively and actively in their future profession.

Organising the content around authentic activities has two potential benefits. Firstly, the whole programme is brought into coherence and makes sense to students. Secondly, the programme is likely to provide an overview of the profession, and thus, enhances students’ understanding of the culture of the profession. As a result, students are likely to develop distinctive perspectives required of the profession. Organising elements of the curriculum content towards the complete picture of the profession critically reflects Wehlage, Newmann and Secada’s criterion of connectedness of content knowledge (1996).

This trend of curriculum development is reflected in several teacher education contexts. Some teacher education programmes (see, for example, Collins (2004); LaBoskey (2005)) were designed in terms of themes. One worthy note about the themes is that they were derived from expected professional outcomes, or graduate attributes, which had been carefully formulated and publicised. Despite the subjective nature of the verbal description, they provided a framework for the development of other activities within and beyond the programme.

Another note is that the themes complement one another and build on prior interdisciplinary knowledge. In the case of Collins (2004), the last course in the teacher education programme covered all the themes and reflected the ordinary practices, and yet, gave insights to the culture of the teaching profession. This, in my opinion,
critically demonstrated the authenticity and integrity of the programme, eliminating some critics against authenticity in educational contexts as make-believe experiences.

Playing a vital part in the authentic content is students’ learning at schools via their participation in practicum. Practicum should be incorporated in a way that supports, consolidates, and expands university-based learning. During students’ practical experiences, they should be encouraged to, and assisted in, identifying issues, exploring alternative approaches to issues, evaluating strategies, reflecting upon their experiences and synthesising them for future development. All elements of this process strengthen and professionalise the link between university-based learning and school-based learning. Though this tight linkage demands more work and professionalism for all teachers, mentors and students, the potential benefits are anticipated to be high in terms of professional growth for all participants in the process.

Together with developing the curriculum around authentic activities, the professional link between theory and practice prepares students effectively for the profession. The programme is likely to be of relevance to what students are learning and are expected to be performing beyond graduation, which points to the ‘value beyond graduation’ criterion from Wehlage, Newmann and Secada (1996).

I have clarified the notion of authentic activities and have argued that an authentic curriculum shaped by authentic activities is likely to be beneficial to student learning and professional development. I now will move on to explore the educational processes, which in the scope of this paper are limited to teaching/learning activities, that are aligned with an authentic curriculum. The key words for these processes are cited from Wehlage, Newmann and Secada’s critical criteria (1996) as students’ active engagement and in-depth discipline inquiry.

Teaching/learning activities that are appropriate in an authentic curriculum are student-centred, as a result of which, the roles of teachers and students are likely to be transformed. The teacher becomes the facilitator whose responsibilities can be defined as: (a) providing a conceptual framework for students to work with together with discursive interaction with students; (b) creating a fear-free learning community; (c) being available to provide assistance and support to students; (d) handling constructive discussions among students and when possible between students and experts in the field; and (e) directing desired learning by aligning content, pedagogy and assessment practices, and by giving timely and quality feedback to feed forward (Vu & Dall’Alba, in press). The student becomes the constructor of his or her understanding whose responsibilities can be defined as: (a) working actively on the conceptual framework and expanding their learning; (b) actively seeking assistance from peers and the teacher; and (c) diversifying learning modes including learning from collaboration, negotiation and reflection.

It should be noted when teaching/learning activities are set that it is vital for students to learn from ‘learning to do’ as well as to learn from ‘being able to do’. In other word, learning from processes and products should be both rewarded. Students should be encouraged to reflect ‘in action’ and ‘upon action’, reflecting while they are doing as well as reflecting after their performance (Cowan, 2004) in order to improve their learning opportunities.
Relevant teaching/learning activities could be learning tasks that then could be used as assessment tasks. The literature has promoted several interesting learning tasks that could be relevant for both teaching/learning activities and assessment practices. They include performance tasks such as practicals, projects, case studies and self-directed learning tasks such as reflective journals and portfolios. These tasks have the potential for collaboration among peers, thus potentially resulting in more powerful learning opportunities for students from diverse strategies and perspectives (Gibbs, 1999; McDowell & Sambell, 1999).

In line with an authentic curriculum, assessment practices should aim at an accurate picture of the student learning with which student learning could be enhanced (Banta, Lund, Black & Oblander, 1996). The literature has proposed direct assessment as an effective form of assessment that can reflect the true picture of the student learning (for example see Banta, Lund, Black & Oblander (1996); Sutton (1992)). This supports the use of learning tasks as assessment tasks in an authentic assessment.

Setting learning tasks to be assessment tasks has a number of potential benefits. Firstly, it helps to control the workload for both teachers and students. Secondly, it allows for continuous assessment, which can provide feedback to plan the next move in the teaching/learning activities. Thirdly, as assessment has backwash effects on teaching/learning activities (Biggs, 2003; Brown, Bull & Pendlebury, 1997; Gibbs, 1999), learning tasks used as assessment tasks can capture students’ effort in accomplishing the tasks and focusing on their learning.

Especially, when the tasks are aligned with desired learning outcomes and aim at higher order thinking such as analysing, theorising, reflecting and generalising, students are likely to go ‘deep’ in their learning and become a reflective professionals (Biggs, 2003; Cowan, 2004). In other words, the spirit of in-depth inquiry into the profession is nurtured and promoted via the appropriate design of teaching/learning activities, as is specified to be authentic and meaningful by Wehlage, Newmann and Secada (1996).

So far, the case has been argued for features of authenticity and ‘visible’ elements of an authentic curriculum- namely curriculum content, teaching/learning activities and assessment practices. A teacher education curriculum is authentic when: (a) it focuses on students’ learning from meaningful engagement in activities that form the professional practice; (b) there is a critical alignment amongst content, teaching/learning activities and assessment practices which are derived from carefully articulated criteria reflecting the culture of the teaching profession; (c) school-based learning is incorporated in a way that expands and synthesises university-based learning; and (d) the design and construction of the curriculum promotes student learning, particularly allowing for learning via productive collaboration and critical reflection.

It is clear from this reasoning that student learning is emphasised and nurtured in the authentic curriculum. The next section will discuss the nexus between authenticity and student learning in more detail.
Authenticity in relation to student learning and development

The literature has identified a hierarchy of concepts of learning and learning outcomes (for example see Biggs (2003); Chalmers & Fuller (1996); Ramsden (1988)). The hierarchy starts from a quantitative phase, which is described as accumulation of facts and data via rote learning, and reproduction of isolated bits of knowledge via repetition and memorising. The hierarchy moves on to a qualitative phase, which is described as application of knowledge via acquiring facts, skills or procedures, and theorising and synthesising via making sense of knowledge in relation to prior experience.

The hierarchy peaks at the transformation of selves in which learners develop a distinctive way of seeing the world and approaching particular issues (Barnett, 1990; Brown, Collins & Duguid, 1989; Orpwood, 2001). As a result of learning, learners evolve as individuals (Chalmers & Fuller, 1996). Needless to say, learning that leads to personal development is highly desirable, and thus, should be the ultimate end of higher education (Barnett, 1990; Banta, Lund, Black & Oblander, 1996).

Individual transformation is aimed at in an authentic curriculum. It places students at the centre and respects them as individuals actively participating in the construction of meaning. Educational activities promote high-order thinking such as critically analysing, relating, applying, theorising, synthesising and reflecting and aim at enhancing students’ growth and development. As a result of their educational experiences, students will be empowered to critically approach the profession and construct meaning of the domain.

In summary, this perceived learning outcome of an authentic curriculum highlights the focus on supporting and developing student learning. The next section will explore the ways in which an authentic curriculum can support and develop student learning.

Firstly, the alignment amongst programme outcomes reflecting the culture of the profession, teaching/learning activities and assessment practices ensures coherence and consistency throughout the programme. This helps students make sense of their learning and directs their efforts into effective learning.

Secondly, the curriculum content derived from authentic activities of the profession together with the strengthened link between theory and practice embedded in the professional context could prepare students to operate within and beyond the world of work. Students are likely to find learning contextualised in the profession purposeful and meaningful, and thus, are likely to become active learners.

Thirdly, the focus of the curriculum has been shifted towards students in relation to the profession. It is no longer the scenario that teachers stand in front of the classroom, presenting a volume of professional knowledge and assigning students tasks. In such a classroom, there is insufficient care to explore how students may make sense of the knowledge and form a conceptual framework for the profession.

In an authentic classroom, provided with a conceptual framework, students are exposed to fresh activities that are essential of the profession and are assisted in
exploring possibilities and alternative approaches. They are able to learn from their own experiences and reflection. More importantly, the conceptual framework could assist students in learning beyond graduation, which is widely perceived as critical in developing professionalism at schools. It is the student focus that makes the difference in quality learning.

Last, but not least, the fact that teaching/learning activities are integrated with assessment practices increases learning opportunities for students. This use of learning tasks allows for continuous assessment while helping to avoid over-assessment. It has been argued in the literature that continuous assessment practices enable students to learn from multiple sources of discursive feedback, including from teachers and peers, and to learn from their reflection. As noted by Barnett (1990), Boud (2001), Brew (1999) and Bunning (2001), discursive feedback and reflection are a vigorous source of learning for students.

Whilst enhancing immediate student learning, an authentic curriculum is also likely to supply the skills necessary for effective life-long self-directed learning. In an era of constant change, adopting appropriate approaches for life-long learning seems critical (OECD-Organization for Economics Co-operation and Development, 1987).

The appropriate learning approach in an authentic curriculum is the deep learning approach. According to Ramsden (1988) and Biggs (2003), when confronting a task, learners who adopt the deep learning approach would critical analyse it, relate it to prior knowledge, apply it in new situations and theorise and synthesise it via reflection. They would go deep or ‘beyond the lines’ of the text. It is obvious that learning is a potentially powerful transforming experience for learners adopting the deep learning approach.

Students who adopt a deep learning approach are likely to have intrinsic motivation to learn. Intrinsic motivation is the unconditional desire to learn (Gibbs, 1999). Students have a love for learning and are keen to explore to world of knowledge and experiences. They are likely to be active, independent and effective learners. The intrinsic motivation multiplies learning opportunities and intensifies learning outcomes.

In conclusion, the case has been presented that an authentic curriculum aims at helping students to transform with the perspective of a critical and reflective professional. By providing students a conceptual framework, encouraging them to adopt a deep learning approach and inspiring an intrinsic motivation to learn, an authentic curriculum has value within and beyond the institution.

While an authentic curriculum is believed to be beneficial to student learning and professional development, research into ‘best practice’ is limited. With an aim to increase understanding of authenticity in practice, this paper set out to explore the ways in which a curriculum incorporated authenticity to enhance student learning and development as professionals. The outcome of the study will be detailed in the next section.
Authenticity in practice in a teacher education context

In this section, I would like to review a professional development programme for university teachers in which I participated in the School of Education, The University of Queensland to explore authenticity in practice. The review will discuss the programme with reference to ‘value within and beyond the institution’.

The reviewed programme was a year-long part-time course intended for experienced university teachers and university staff whose jobs involved teaching practices. It was equivalent to six months of full-time studies. Classes were fortnightly for three hours with individual study modules in the weeks when there was no scheduled class. There were 28 teacher participants in the course. All participants had had at least three years of university teaching experience prior to their enrolment. Successful participants were awarded with Graduate Certificate in University Teaching.

The course aimed at providing participants with a conceptual framework with which they critically reflect upon their teaching practices and plan for improvement. As a result of this process, participants are expected to become more effective and reflective teachers.

In line with the above goals, the first half of the course was organised in terms of modules, which are actual activities that could be expected of a university teacher. The first module introduced action learning (AL) theory which formed the basis for the methodological development of the critical and reflective teacher. The following modules were about university learning, university teaching, teaching for diversity, assessment for student learning, curriculum design and using educational technology. These modules unfolded issues in the teaching profession and presented participants at possibilities and alternative approaches to the profession. The last module revisited AL theory with the investigation into processes and procedures of AL projects. This module led participants from the construction of an AL project to its implementation and evaluation in theory. At the end of each module, a bibliography was provided for further reading and future reference.

In the second half of the course, participants were expected to be conducting an AL project in their own context. Class meetings focused on discussions on emergent issues or simply on the progress of participants’ AL projects. Given the aims of the course were to encourage participants to approach their own teaching practices from an alternative AL perspective, a half of the course time was invested on participants conducting and evaluating their AL projects. This timeline allowed for participants to receive comments and feedback from multi sources, including those from the course co-ordinator, peers and colleagues, and learn from these comments and feedback.

This design of the course content proved to be coherent and self-contained in the context of teacher education. As it was designed for those already in the profession, it was critical in incorporating AL theory and AL projects as methodological lenses for participants to reflect upon their teaching practices and to actually attempt to improve them via the implementation of their own AL projects. This methodological thread ran through the modules while the content stayed open for other possibilities and alternative approaches.
The claim is supported that the course was appropriately designed and showed high level of coherence, consistency and relevance to the teaching profession. Together with the conceptual framework, the bibliography had value beyond graduation.

Not only the content of the course was authentic but also class activities were directed towards authentic learning. Each module consisted of three parts, of which part one overviewed key issues on the topic in the literature; part two recommended a number of readings with suggested questions to encourage participants to explore the theme in depth; part three asked participants to keep a reflective journal with reference to their own teaching practices. This design provided a conceptual framework for participants while allowing them to enrich their own understanding and directing them to discursive interaction with peers and the course co-ordinator as class activities.

Class activities dealt with discussions on any of the three parts. Discussions were expanded via the use of web CT (computerised technology), specially designed for the course, and via the mailing list. These discussions were handled by the course co-ordinator to ensure quality and smoothness. Via discussions, learning opportunities were maximized, including opportunities to learn from, and with, peers and to learn from prior experiences.

Class activities also included invitations of guest lecturers and peers from previous cohorts to present their work. Sharing experiences with ‘outsiders’ from the course helped to diversify strategies and approaches, at the same time, opened to peer support, which was an invaluable learning experience for participants.

In terms of assessment practices, there were three assessment items, namely, a literature review on an issue identified from participants’ teaching practices (due at week 9 semester one); a proposal prepared for the AL project (due at beginning of semester two); the project report (due at the end of the course). The reflective journal, which was part of the course learning activities, was not directly assessed. In stead, it provided material for the project report that asked participants to include reflections on learning from the course. All the three assessment items were criterion-referenced, embedded in course content and part of class activities.

Criterion-reference assessment with clear statements of the criteria increases the clarity of assessment requirements and practices (Brown & Knight, 1994; Goos & Moni, 2001; Race, 2001; Roach, 1999). Paradoxically, however, explicit assessment criteria can place heightened emphasis on assessment, rather than learning. As Norton (2004) argues, this risk can be addressed by aligning assessment with desired learning or best integrated with learning outcomes (Cowan, 2004), which is evident in the reviewed course.

In analysing the assessment items, it was found that they were also learning tasks, and were made integral to the teaching/learning process in terms of content and processes. In the relation amongst the four assessment items, the later was an extension of the previous and all together the three assessment items assisted in directing participants’ learning and documented their learning processes. The project report was the summarising evidence of the participants’ professional development as the outcome of participation in the course and their learning.
The way they were scheduled benefited participant learning. It allowed for participants to receive feedback from peers, the course co-ordinator and colleagues and use this feedback to improve their work. Integration of assessment practices into teaching/learning activities enables participants to focus on their learning while avoiding over-loading their work.

In addition to ‘formal’ class activities, the course co-ordinator initiated the idea that class members took turn to prepare tea break for the class. Having a tea and a chat together developed class bond and created a supporting environment open to learning from, and with, peers. This class bond has been staying with graduates ever since and through this, peer and teacher assistance has been extended to individuals’ learning beyond graduation.

In conclusion, the high level of authenticity in the course was evidenced in the alignment of the course goals, the course content, the teaching/learning activities and the assessment practices. The high integrity and consistency among elements of the curriculum promoted participants’ learning and development as professionals. As commented by most participants, their experience was productive, and in many ways, transformative. The construction, implementation and evaluation of the AL project in participants’ classrooms as one course learning and assessment task widened their professional perspectives. Beyond graduation, several participants have been granted research funds by their institutions to extend their AL projects as a form of innovative teaching.

Conclusion

This paper has identified features of an authentic curriculum. These features included: (a) a clear focus on students’ learning from active engagement in authentic activities of the profession; (b) a critical alignment amongst content, teaching/learning activities and assessment practices, which are derived from carefully articulated criteria reflecting the culture of the teaching profession; (c) a professional link between university-based learning and school-based learning; and (d) the maximization of opportunities for student learning, particularly allowing for learning via productive collaboration and critical reflection. When a curriculum features these points, there is likelihood that student learning and development is promoted. As a result of educational experience, students are likely to become effective and reflective professionals and active meaning constructors of the domain.

Alongside with benefits of an authentic curriculum, the use of authentic assessment with an increased autonomy for students entails complex social processes within and beyond classrooms (Reynolds & Trehan, 2000). This points to a need for further research on implementation processes and on the extent to which authenticity can enhance student learning.

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Knowledge of epilepsy and the media – who falls down?
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Abstract

Epilepsy is the most common serious neurological condition, affecting at least 1 in 200, with claims of 1% Western population having some form of seizure disorder. The labels of ‘disease’ and ‘handicap’ evidence the reality of stigma and discrimination that some endure. It develops suddenly, ceases spontaneously and seizures have a tendency to recur. Research has often ‘singled out’ those with epilepsy – and in turn tried to address the issues inherent in the lifestyles of those who live with this ‘disease’. Studies over the past thirty years have proven that a diagnosis of epilepsy has a social effect on the affected person with no regard for cultural or social background.

Although it may be said that teachers possess a ‘personal practical knowledge’ – their past experiences, present beliefs, attitudes and values are intertwined with future plans and actions – these are often integral to the situation at hand. Society’s ‘acceptance’ of epilepsy is influenced by the way in which schools and teachers relate to the individual and the disorder. An important feature for successful socialisation of students with epilepsy is acceptance by their teachers. Up to 30% of teachers in some countries still associate epilepsy with insanity, and as a group, the children have a lower rate of acceptance. Research also informs us that a majority of teachers receive information on the condition not from the parents, but from other sources.

This study will review the voice of the media in the promotion of knowledge of epilepsy. There are implications that the stigma of epilepsy remains a very powerful factor in the formation of general opinions about the disease. We, as teachers, are conduits of the knowledge passed to us - often through tradition. The media is a powerful tool for the construction of knowledge and may also be responsible for the promotion of ‘fiction’, by confirming the real and serious stigma of epilepsy as a disease.

Introduction

The 1997 editorial of the British Medical Journal summarised the history of epilepsy as ‘4000 years of ignorance, superstition, and stigma followed by 100 years of knowledge, superstition, and stigma’. The move from ignorance to knowledge is not always overwhelmingly evidenced in our society information-giving process – the media. Teachers are part of society and receivers of knowledge through the media. Our ‘knowings’ are informed by the selection and use of words and language. This knowledge influences our attitudes and behaviours towards those with epilepsy, and our expectations of the same.

Recognised since the earliest medical writings, epilepsy, as a medical condition, has attracted much attention and controversy. Throughout history, it continues to be ‘linked with the story of magical beliefs and their refutation by scientific physicians’
Aronson (1999) stated that “few diseases arise so abruptly, speak so boldly, and define themselves so readily” as epilepsy. Research has often singled out those with epilepsy – and in turn tried to address the issues inherent in the lifestyles of those who live with this disease.

Epilepsy has been defined as ‘a paroxysmal disturbance of the function of the brain, which develops suddenly, ceases spontaneously and has a tendency to recur’ (Haskell & Barrett, 1993, p. 21). In essence, epilepsy is a neurological condition, which affects the nervous system. The seizures may be related to a head injury, a defect in the structure of the brain or infection causing the epilepsy, but in the majority of cases, the cause is unknown. The term ‘epilepsy’ does not indicate cause, type or severity.

When is epilepsy ‘epilepsy’? When is a person labelled with this ‘disease’? When a seizure occurs, the only symptom of epilepsy – is it then one is suffering from epilepsy or is one then an ‘epileptic’? In addition to the questions of what is epilepsy, its causes, and why not all people, the following questions need to be addressed: ‘Why in this day of supposedly uninhibited attitudes does the very word “epilepsy” bring a look of startled horror? Why will people accept most things but not epilepsy? Why is it feared? What causes this unconscious recoil?’ (Scott, 1969, p. 137). Its label as a ‘disease’ and a ‘handicap’ evidences the reality of epilepsy’s stigma and the discrimination which some sufferers endure. Epilepsies have been defined as ‘socially handicapping disorders’ (Aicardi, 1986, p. 319), occurring without warning, and bringing both social and psychological consequences (Pointu & Cole, 2005). Epilepsy can be seen as a disease whose primary impact is social, not physiological; the burden of the illness is experienced by the individual and those close by, even when the disease is not severe (Levisohn, 2002).

Throughout history, the ‘epileptic’ was regarded as unclean and despite the label of the ‘sacred disease’, was not considered holy (Scott, 1969). Atetaeus in the second century AD described those with epilepsy as ‘languid, spiritless, stupid, unsociable …slow to learn from torpidity of the understanding and the senses...’ (Fenwick in Hopkins, 1987, p. 511). The myth that if smeared on a baby, the infectious saliva of an epileptic may result in the development of epilepsy in the child, is certainly worth consideration. This idea originated in the Dark Ages in Europe, but is an example of how far-reaching the consequences of fear and stigma may be. Compared with other emergency health diagnosis e.g. diabetes and asthma, Betts and Smith (1994) claimed that epilepsy continues to be neglected and overly stigmatised.

Bladin (2001) maintained that material contained in popular medical texts written to deal with family life crises in C19th and first half of C20th played a major role in the formation of public perceptions regarding medical conditions such as epilepsy. Epilepsy thus entered the C20th with a poor public image, which endured for the first half of the century. There was a constant fear of public seizures, restriction of involvement in community affairs, and a negative public perception of the nature and causes of the condition.

Haskell and Barrett (1993) began their text with a statement concerning the criteria of society that provides the framework for determination of success or failure for each individual at the moment of birth. These initial criteria are medical. In contemporary
times, researchers into learning difficulties or conditions such as epilepsy continue to be constantly referred to medical models and experts, and the context of special education.

As Erba (1983) noted, as these disadvantages are often not readily apparent, epilepsy has justly been called an invisible handicap. The parents, in addition to society, their attitudes and feelings, have the potential to handicap children with epilepsy even when their seizures are completely controlled.

In Third World countries there is a common belief that ‘epilepsy is the work of the devil’ (Jan, Ziegler & Erba, 1983, p.8). In the West there is a tendency towards the perception that seizures indicate that a person is ‘crazy’ (Jan et al., 1983). Scott (1969) also discussed the ‘many misconceptions and half-truths about fits and the people who have them…..the epileptic person is of unstable personality and poor intelligence’ (p. 83). This was echoed by Jones (2000) who reminded us that despite the improved perception of society, from the accepted assumption of an epileptic as seized or possessed to that of a human being with a medical condition, even modern literature questions whether people with epilepsy are responsible for their behaviour. Titles of books, journal articles and the like often tell the same story – society’s fear as a result of lack of knowledge and information - for example, “Hypnotism, hysteria and epilepsy: an historical synthesis”(Thornton, 1976).

It is interesting, but frightening to note that in the past, crimes of an antisocial, sexual or violent nature were attributed to the epileptic personality with no scientific basis for support (Jan et al.1983). Mendez (1998) reported the link between epilepsy and violence peaked during the 19th century when the criminologist Casare Lombroso promoted the association of epilepsy with aggressive and sociopathic tendencies. Dam and Gram (1985) noted mental changes including restlessness, irritability, aggression and bad temper verging on depression as a side-effect of epilepsy medications. It has also been recognised that individuals may react violently if they become the object of teasing, particularly children and young people, who are already ‘at risk’ socially and emotionally (Laidlaw & Laidlaw, 1984).

The concept of mental disorders as diseases of the brain is as old as the ancient Greek philosopher-physicians – for thousands of years, the majority of doctors as well as laypersons, held strongly to the belief that epilepsy and madness (i.e. schizophrenia) were caused by demonic possession. Both these share the symptom of impaired sustained attention (Mirsky & Duncan, 2005).

Laidlaw and Laidlaw (1984) maintained that the diagnosis of epilepsy for the majority of people is a minor disadvantage and not a disability, Buchanan (1983) concurred, stating ‘it can be anything from a minor inconvenience to a major disruption of a person’s life’ (p. 47). Scambler and Hopkins (1986) believed a ‘doctor’s diagnostic utterance “makes a person into an epileptic”’ (p. 507). Jacoby (2002) defined epilepsy as “both a medical diagnosis and a social label” and later described the inevitability of informal stigma and formal discrimination for those with epilepsy.

Goffman (1963) defined stigma as an “attribute that is deeply discrediting and that reduces the bearer from a whole and usual person to a tainted, discounted one” (p. 3). Stigma continues to have an impact on well-being and quality of life. The belief that
Epilepsy was stigmatising has been linked with poor self-esteem (Westbrook, Bauman & Shinnar, 2002). Exclusion, restrictions, overprotection and isolation are also identified as a part of the epileptic condition (Fisher, van Emde Boas, Blume, Elger, Genton, Lee & Engel, 2005).

Recent studies show that little progress has been made in public attitudes, especially in developing countries where stigma continues to the neglect of up to three-quarters of patients who receive no diagnosis or modern treatment (Aziz, Akhtar & Hasan 1997; Fong & Hung 2002; Reynolds 2001). Even in developed countries anxiety and fear remain the commonest emotion in patients and families (Fisher, 2000; Van Brakel, 2006). Stigma is related to chronic health conditions such as HIV/AIDS, leprosy, tuberculosis, mental illness and epilepsy. It is a global phenomenon with a severe impact on individuals and their families, and on the effectiveness of public health programmes (Cramer, Brandenburg & Xu, 2005). Their study revealed a significant link between depression and anxiety and decrease in quality of life in epilepsy patients. A high rate of suicidal behaviour in adults and adolescents with epilepsy has been identified, and studies with evidence of high rates of depression in children with epilepsy confirmed (Caplan, 2004).

Epilepsy is notorious for its effects on the personality: not so much the seizures themselves as the reactions of individuals and their family to a chronic problem (Carnal, 1996). Pond and Bidwell (1960) did not hold epilepsy as the cause, but rather noted that ‘brain damage, the stigma of epilepsy, difficulties with schooling, employment and interpersonal relationships all contribute’ (p. 518) to perceptions of an epileptic personality. Burden and Schurr (1976) in their discussion of the concept of an epileptic personality indicated the possibility that the individual so labelled may indeed feel that everyone is against him, and his mental health and well-being is compromised – becoming ‘depressed, resentful and withdrawn’ (p. 28). Holsworth and Whitmore (1974) described the most troublesome side-effects to be the long-term psychological ones, with social acceptance a major problem for individuals who continue to have seizures as adults (Hermann, 1982). Research findings note that individuals with epilepsy who continue to have seizures have a lower educational and occupational level of achievement than those who no longer have seizures (Harrison & Taylor 1976; Holowach, Thurston & O’Leary, 1972; Voeller & Rothenberg, 1973). Thornton (1987) likened late onset of epilepsy and the individual’s reaction to it along the lines of bereavement. He reported that ‘people with epilepsy are a particularly stigmatised group’ (p. 42), as unlike physical handicaps that are always visible, and epilepsy itself ‘evokes little support’ (p. 42).

Attitudes toward people with epilepsy are influenced by the degree of knowledge of the condition (McLin & de Boer, 1995). In 2003, the International League Against Epilepsy (ILAE) advocated the need to raise public awareness of epilepsy and the surrounding issues, citing numerous accounts from people with epilepsy of personal experiences in which their condition was misunderstood, misinterpreted and inappropriately handled.

Laidlaw & Laidlaw (1984) discussed the concept of a ‘popular’ prejudice (p. 113). The general public, although possessing common sense and supportive of the ‘underdog’ and helping those in trouble find themselves in the company of bigots and
extremists. Reasons for this include the ‘frightening’ seizure itself, its suddenness and the difficulty of looking behind the convulsion to the individual.

Rogan (1986) warned that a lack of public understanding of epilepsy would cause fear, and in turn, fear would induce prejudice. Prejudice manifests itself in discrimination. The essence of discrimination is forming opinions about others not based on individual merits but rather on being a member of a group that has certain assumed characteristics (Dantas, Cariri, Cariri & Filho, 2001). Laidlaw & Laidlaw (1984) discussed the attitudes of professional groups, and links the tendency of the general public to absorb and reflect these very attitudes, sometimes tinged with latent prejudice.

Scambler and Hopkins (1986, in Hopkins, 1987) also spoke of stigma coaching among parents, citing examples where the term epilepsy in never used, within or outside the family circle. Aicardi (1986) too, speaks of the use of the term epileptic, believing it an adjective to be deleted from use, citing the frightening effect on families, and its association with ‘the idea of a chronic, incurable condition’ (Fenwick, in Hopkins, 1987, p.4) in a comparison of children with epilepsy with those without, the former were found to be ‘significantly more socially isolated, inattentive, overactive and anxious’ (p. 115).

Bishop and Slevin (2004) described the school environment as the most important social environment, after family, for the child. Laidlaw and Laidlaw (1984) warned that unless the attitudes of the child, the teachers concerned and the peers are established in a positive frame, the child would be at risk of persecution and ridicule. This would be damaging to the child, having a negative effect on the social and emotional wellbeing. Buchanan (1989), too, stressed the importance of ‘epilepsy in a developing child be well managed so as to avoid possible social, psychological and educational problems’ (p. 58). Teachers might also assist with socialisation, encourage confidence and initiative and provide opportunities for the child to earn the respect of peers (Engel, 1989).

The 2007 National Conference of Epilepsy Action (UK) notes that ‘having epilepsy isn’t just about having seizures. It’s also about the social and psychological consequences of the condition’. Finding ways to address some of its negative effects, for example stigma, is the focus of one of the sessions, investigating public perceptions of epilepsy and how these affect the daily lives of people living with epilepsy. The media has a major role to play in the construction of knowledge concerning epilepsy.

The Media

The Disability Council of NSW in their Media Guidelines of 1986 stated that language is critical in shaping and reflecting our thoughts, beliefs, feelings and concepts. They warned that some words by their very nature degrade and diminish people with a disability. By tradition and in custom, the language customarily used to denote disabling conditions may be described as being condemnatory, judgemental or else perhaps couched in medical jargon, which then may suggest sickness or imperfection. The most dangerous misuse of language in describing people with a disability has been to label the person as the disability, or dehumanise the individual.
One example may be where a person with epilepsy is described as an ‘epileptic’. Such words focus attention on the condition and not on the person as a unique individual. The language has the potential to reinforce negative assumptions and stereotypes. In recent years the language of disability has encouraged a move away from medical jargon to a social perspective that reflects the relationship between the individual and his or her environment. This approach recognises that people with a disability are more likely to be handicapped by environmental barriers and attitudes than by the disability itself.

Jakubowicz (2003) maintained that media itself holds many possibilities for democracy and social participation, through its role and the impact on the receiver. The growing role of media in the broad range of social relations has resulted in media studies being identified as one the most rapidly developing fields of scholarly work in the humanities and social sciences (Hardt, 1998).

Although a growing field, media studies has been oblivious to the role that disability studies can play in illuminating communication processes – each element of the media production/consumption system may often play a role in “disabling” people with impairments (Jakubowicz, 2003). If the media studies comes to incorporate disability perspectives into its analyses of the social world, and thereby affects the whole structure of media practices, then the political and cultural concerns of the disability movement may well be advanced. (Jakubowicz, 2003).

Biklen (1986) maintained that journalism replicates wider social prejudices. Of concern is the manner in which labels are attached or individuals categorised as a direct result of the way the stories about them are framed by the media (Pirkis 2001). Jakubowicz (2003) agreed, stating that the media uses people with disabilities as stories, drawing upon the CTVA (Commercial Television Australia) Advisory Note on the Portrayal of People with Disabilities as evidence of the power of this communication tool.

Disability studies theorists note there is a critical relationship between knowledge creation concerning disability and the capacity of disability communities to engage with the wider society. The reluctance of the media to respond may be considered to be a consequence of the lack of political leverage by disability organisations, the tendency of governments to regard disability within the realm of health policy questions, and the disregard paid by advertisers and therefore the media to people who are disabled. Disability organisations have been therefore active advocates of strategies to bring the media to account, and to ensure that broadcasters, publishers and producers recognise the critical role they play in ‘disabling’ disabled people. (Barnes 1992).

**Methodology**

An analysis of media will be undertaken involving the headlines and content of news articles identified during a Google Alert Word search, with a focus on the language and context. Metaphors and terminology used to describe seizures and epilepsy will be identified and collated. The categories for data analysis include the terms: ‘epilepsy’, ‘epileptic’ and ‘seizures’. For example, it is interesting to note the
empowerment and exacerbation of fear within the media where the phrase ‘epileptics having fits’ is utilised rather than ‘persons with epilepsy experiencing seizures’.

Unfortunately, and inaccurately, people with disabilities are often viewed as victims, or objects of pity and burdens, either on society or on their families and carers. They may be also portrayed as horrible or grotesque, or perhaps as evil, or some threat to the comfort and safety of others. At times, these individuals are portrayed as unable, or assumed to be unable, to do things, perhaps having multiple disabilities or being “special”.

Stereotypes can lead to discrimination as they take away a person’s individuality and oversimplify qualities that may have a passing acquaintance with the truth. The portrayal of people with a disability as helpless, mindless or suffering beings deserving of pity and sympathy is one of the many powerful stereotypes which can lead to discriminatory treatment.

In many media stories it is quite unnecessary to mention a person’s disability, yet this characteristic is often highlighted. Focusing on a person’s disability may result in the exclusion of the other characteristics of the person. This study involved an analysis of over 1,107 citations over a period of seventeen months, a significant number of negative connotations have been identified within the text. This paper provides an initial analysis of a selection of the data identifying themes for the basis of a more complex analysis.

**Results and Discussion**

Common citations are headlines such as: ‘epilepsy – fatal crash’; ‘lied over epilepsy’; ‘guilty of hiding epilepsy’; painkiller linked to seizures; driver’s epilepsy “caused crash” and ‘epileptic driver killed family’. The headlines reflect concerns raised over stereotyping and negative imaging associated with having epilepsy.

A specific example is taken from 5 March 2007, when media headlines alerted the world to the results of a study led by Dr. Wendyl D’Souza in Melbourne concerning reflex toothbrushing-induced epilepsy. For the next ten days, this research was a focus of media interest, with many references to the disability aspects of epilepsy, and those who are affected. This was then generalized by the media to apply to the general class of people with epilepsy.

The term ‘epileptic’ was evident in a number of countries, although media guidelines recommend use of alternative language. Traditionally, the term ‘epileptic’ has been connected to manifestations of one who is ‘unclean’ or ‘suffering from a disease’. Headlines appeared across the world such as:

‘*Does Tooth-brushing Cause Epileptic Seizures?’*

‘*Toothbrushing Can Trigger Epileptic Seizures.*

‘*Teeth brushing may cause epileptic seizures*

‘*Tooth–brushing can trigger epileptic seizure: study*

‘*Epileptic seizures sparked by tooth brushing*

‘*Simple Act of Brushing Your Teeth can Trigger an Epileptic Fit’*

‘*Teeth brushing may cause epileptic seizures*.’
D’Souza’s article, published in Neurology, reviewed the cases of three adults with epilepsy who experienced ‘jerking or twitching-type’ seizures while brushing their teeth. The inclusion of these descriptors of the seizures may be questioned, with some media reports being very explicit. The focus at the time of reading these articles is very much directed towards the symptoms, and not on the individual who experiences these manifestations.

The generalized statement of ‘brushing teeth can trigger epileptic seizures in people with damage to a small, specific spot in the brain’ (Herald Sun 5/3/07) contains such words as ‘trigger’ and ‘damage’ – both reinforcing the aspect of alerting and danger, and imperfection.

Another Australian media headline questioned: ‘Can tooth brushing cause seizures?’. Further ‘Tooth-brushing triggers rare epilepsy’ – one can question, with perhaps a tongue-in-cheek - the far-reaching consequences of dental hygiene. The Akron Beacon Journal (USA) in the opening comments of the article states that ‘good oral hygiene might have unexpectedly bad consequences for some patients with a particular type of epilepsy’ and the headlines in New York City, New York: ‘Brushing Teeth Can Trigger Epilepsy’, ‘Does Tooth-brushing Cause Epilepsy Seizures?’, and ‘Tooth-brushing triggers rare epilepsy’ could be interpreted as a fear-inducing comment, and may alarm individuals.

The reality of this research is based on a study of three individuals, with a specific form and cause of epilepsy – which is predicted to only involve up to twelve people world-wide. The study, although important for these individuals, and for the flow-on effect of the research, is not indicative of broad warnings. This alerting and alarming process links with media headlines in San Francisco and an on-line Patient Support Group for Neurology - BrainTalk Communities: ‘Fits Caused by Brushing Your Teeth’ and ‘Tooth-Brushing Can Bring on Fits’. Media guidelines in Australia emphasise the deletion of the term ‘fits’ – the content of the first article continues to state that ‘the rhythmic action of tooth brushing can trigger a rare type of epileptic seizure’. Further, the article continues to state:

‘The seizures, which were confirmed by video monitoring, occurred when people brushed the sides of their mouths, and caused their faces to jerk and twitch. One patient salivated vigorously while another couldn’t let go of the toothbrush during the seizure’ (8/3/07).

Again, the focus is directed towards the symptoms, which have traditionally led to fear and stigma as a result of the helplessness of those who are on the sidelines.

Media power and influence is global. Technology information sharing processes result in these media headlines and texts being available worldwide, and are themselves ‘seized’ as worthy of attention for the readers. Stereotyping and negative language is still associated with written text, which in itself is a form of information-giving to society at large. D’Souza is quoted as stating ‘the rhythmic act of brushing teeth may excite an already overly excitable area of the brain’. Although medically accurate, the explicit nature of the description of the resulting seizures linked with the language used and then aligned with the perceptions reinforced surrounding loss of control have implications for the understanding and acceptance of these individuals within society. This may be described as negative language use – which is quoted within the articles world-wide. This study reflects a minority of the population, and a
minority of people who have epilepsy. Yet, through the voice of the media, the meanings and the links become generalised, establishing a context of fear.

Other more generic headlines that may be read and perhaps misinterpreted by the readers include:

‘Tooth Brushing Associated with Reflex Epilepsy’; ‘Tooth-brushing link to epilepsy’; ‘Tooth-brushing may trigger epilepsy seizures’; ‘Brushing teeth Linked to Seizures in those with Epilepsy’.

The act of brushing teeth is traditionally viewed as pertaining to personal hygiene. Historical myth surrounding the causes of epilepsy, involving risks associated with saliva and contagion, may be linked to media generalisation. Significance is given to the act of brushing one’s teeth when, as noted, the number of people world-wide being affected is very small.

A further example is taken from The Weekly News, Cheshire, UK in December 2004 entitled ‘Our Thanks’.

The parents of a toddler who suffers up to 150 fits a day have spoken of their anguish.... epileptic baby Harry.... (suffers) seizures ...causing violent limb jerking and Harry to cry and scream hysterically... the youngster cannot hold his head up or swallow and has to be fed through a stomach tube. He needs suction to clear his airways to prevent choking and has to be fed slowly over an hour with a pump to stop regurgitation.

A recent media article taken from New Delhi, India is entitled: ‘Young epileptic children could benefit from animal models of epilepsy’. The article continues to outline research to be presented at the American Academy of Neurology’s 59th Annual Meeting in Boston, USA from April 28-May 5, 2007. The development of an animal model of infantile spasms, has the potential to improve the opportunity to find new treatments for:

…the thousands of young children who suffer from these catastrophic epilepsy seizures.

Again, the choice of the word ‘suffer’ within the text and the descriptor of epilepsy seizures as ‘catastrophic’ is reminiscent of earlier studies surrounding family shame and the resulting stigma of those with epilepsy, and those who care for them.

Examples of media projection world-wide and a breach of media guidelines in relation to terminology and imagery are common. The media reports are also subject to misinterpretation concerning the condition of epilepsy itself.
Historically, negative imagery has been aligned with epilepsy and towards those with epilepsy. The myths, the persecution and the resulting fear and stigma associated with the disease have been documented in many facets of society. Scambler (in Hopkins 1987) suggested that although the public is 'generally better informed and less hostile towards epilepsy today than it was a generation ago, it does not follow that discrimination based on stigma is necessarily diminished or dying out' (p. 499). For those with epilepsy, Laidlaw and Laidlaw (1984) defined two types of stress - the stress of having a chronic condition that often is associated with personal, social or economic disadvantage; and the stress caused by epilepsy itself, in all its facets.

The media has been shown to be currently reinforcing these negative images, through their commitment to focus on the 'attention-value' of headlines and text. This power and influence of society is accepted, rather than the effects on the individual with thoughts and feelings - a human being, worthy and deserving of respect.

This paper has demonstrated the power of the media as a tool for information and knowledge for the masses, for society worldwide. Stereotypical language has been shown to be evident throughout the samples chosen. The extensive coverage of the study involving 'tooth-brushing' induced reflex epilepsy demonstrates how information concerning a minority becomes generalized in its context. It also has the potential to reflect society's inability to discern fact from sensationalised narrative.

What influence does this trend have on teachers? An important feature for successful socialisation of students with epilepsy is acceptance by their teachers (Sturnido & Galletti, 1994). Hseih and Chiou (2001) espoused that the attitudes and perceptions of people who deal with students every day e.g. families, schoolteachers and class mates have a great and direct influence.

What is necessary is for teacher education programs to develop an awareness and deconstruction of media image to move towards positive inclusion of students who may have other health impairments. To achieve this goal, it would be necessary for student teachers to be given appropriate medical information, for example, to be able to identify and understand types of epilepsy, and be calm and unflustered when a seizure occurs.

An important aspect of support for teachers is to enhance communication between home and school and reduce teacher anxiety concerning duty of care - safety issues and physical activities for individuals. It is recognised that knowledge breaks down the barriers - the 'lack-of' often results in teachers being 'too' kind, displaying pity and promoting learned helplessness. Sympathy, understanding and support together with genuine praise, not patronage, has the potential to empower the individual - our goal as teachers!
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Young epileptic children could benefit from animal model of epilepsy
SpiritIndia - New Delhi, New Delhi, India
Online Pedagogy and Academic Work

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Abstract:
This paper emerges from a study that foregrounds the complex nature of the consequences of a decision to implement a range of new technologies including a Learning Management System at one university. The paper draws upon data from interviews with academics to provide insights into the experience of being academic in the 21st century during a time when new technologies of teaching, learning and administration impact on the work of professional academics. It focuses on how academics view and understand online teaching environments; how they make professional judgments about their use of online environments in their teaching and how they make professional judgments about pedagogy. In doing this the paper looks at the differing levels of uptake of new technologies by academics, their levels of engagement and disengagement, the complexity of their relationship with these technologies and their impact on the pedagogy of academics in the study as it looks at patterns of usage in terms of age, gender and levels of experience of academics. It demonstrates the importance of pedagogy to academics and the problems that academics face many of which can be attributed to the impact of measures of bureaucratisation and standardisation including the introduction of an LMS that some argue has lead to the homogenisation of the experience of teaching and learning for both academics and students.

Introduction

This paper draws upon interviews that provide insights into the experience of being academic in the 21st century during a time when new technologies of teaching, learning and administration are impacting on the work of professional academics. This paper is by nature both political and emotional. I have taken on Foucault’s challenge to tackle a real political task. Foucault argues that:

… the real political task in a society such as ours is to criticize the working of institutions which appear to be both neutral and independent; to criticize them in such a manner that the political violence which has always exercised itself obscurely through them will be unmasked, so that one can fight them

(Foucault, 1974 p. 171).

The ‘real political task’ is to make visible the consequences of whole scale changes, in the form of imposed new technologies of teaching and learning, on the experience of academic work. This paper presents insights into how academics experience this change process that is part of the politics of university administration. Academic work takes place within the current climate of competition in higher education in Australia and what Blackmore calls “the managerialisation and commercialisation of education” (Blackmore, 2007). The current funding model of higher education is
implicated in creating this competitive climate, one in which Universities are constantly trying to gain a 'competitive edge'. The focus on the use of new technologies is one way in which some Universities brand themselves and market themselves to the public (Stensaker, 2005), one way they can be seen to be distinctive in an environment of increased national and international competition within higher education.

**Background**

Academics in this study were all from a Faculty of Education. During semi-structured interviews academics were invited to discuss their experience of the imposed introduction of a Learning Management System (LMS) to support online teaching in the University and the impact of these changes on their pedagogical practices. During the interviews many academics brought up issues related to the impact of other measures of bureaucratisation and standardisation as well the introduction of a LMS.

The interviewees were all members of a Faculty of Education. The anonymity of academics has been maintained through the creation of composite characters. Connell used a similar methodology for his research into ‘Teacher’s Work’ (Connell, 1985). This method of constructing ‘composites’ allows for ‘sensitivity’ in the presentation of interview data while also demonstrating respect for the expertise of the academics. The selection and use of ‘composites’ also provides a means to maintain a sense of biography, ‘the way things hang together and take shape (and sometimes fall out of shape)’ (Connell, 1985 p.3) in the work lives of academics as well as the sociology of the workplace. All the detail, all the spoken words, come from the interviews although they have been deconstructed and reassembled so the characters are not real people, nor are they representative of any one academic. These composites are created to ‘represent’ particular experiences while protecting the privacy (and generosity) of my interviewees. The composite characters you will meet in this paper are Angelina, Miranda, James, Emma, William and Jemima.

The LMS that was introduced at this university is WebCT Visa. It contains within it a range of tools for web based content delivery, text based threaded discussions, quizzes and tests, assignment submission and the recording of student results and usage and behaviours of both students and academics.

**Academic Use of the LMS**

One of the questions used in the interviews asked the academics to describe or rate themselves in terms of their skill as users of new technologies including computers and other communication technologies before the introduction of the LMS. It could be expected that the academics who volunteered were for the most part those who were less likely to be threatened by new technologies. Based on their responses about their level of skill and expertise and their comments about using technologies during the interviews I placed them into three categories. These categories are themselves problematic in that someone else might categorise them differently. Often academic’s use of technical language is indicative of their use and familiarity with computers and computer systems. That is, some academics are more immersed in the discourse of online pedagogies than others.
Highly skilled users were those who spoke confidently about their use of technologies and who mobilised the technical discourses of the IT support people. Reasonably skilled users included those academics who spoke of themselves as being proficient but did not mobilise the more technical discourses of LMS and IT personnel. The low skill users included those academics who expressed fear and/or a lack of knowledge about the LMS, who did not use the LMS themselves and did not mobilise the technical discourse.

The range of discourses around LMS and IT use indicated a small group of Highly skilled users (4), a larger cluster of Reasonably skilled users (6) and the concentration of less skilled users (7).

**Characterising the relationships of academics with the LMS technology**

Academics indicated a desire to use the LMS to work collaboratively with their students in ways that promote intellectual conversations, but they saw this desire as being compromised due to the academics’ lack of technical skill with the LMS or their lack of knowledge about how to create teaching materials that allow them to work in collaborative and democratic ways. A common response by academics to questions about the introduction of the LMS was that it was ‘clunky’, ‘slow’ and ‘cumbersome’. Some indicated that the requirement on academics to use LMS develops a dependency on others to setup, manage and create learning resources. When online materials are created for academics by other staff, the time eventually arrives, sooner or later, when changes need to be made. In this situation academics are dependent on other staff to carry out these tasks when (or if) the other staff have time or are available, or if in fact the same staff are still employed in the same capacity within the faculty or learn to do it themselves. One of the most common emotions expressed during these interviews was that of frustration. This frustration develops due to a lack of agency by academics. If academics lack the skill necessary to carry out basic tasks such as uploading a unit guide or setting up discussion areas, the technical steps which are quickly forgotten when undertaken only a few times a year, or the system has changed, let alone use the LMS in innovative ways, then they feel they are positioned as unskilled workers in their own professional workplaces. This challenges their sense of professional efficacy.

The relationship of academics in this study with the LMS technology is an organic one – organic in that the relationship is ever changing and problematic - a relationship that does not fall easily into categories. But what is clear is that the differing levels of engagement and disengagement and the ensuing relationship with and to the LMS across the faculty participants. The following are attempts to portray the complexity of these relationships.

For some academics their capacity and skill in the use of online technologies is an area of expertise which they value and for which they are valued and highly skilled proactive users. There are those who seem quite accepting of the university’s mandated requirements and who have attempted to exploit the technologies in order to enhance the teaching and learning experience for their students. Some academics have for the most part ignored the LMS, getting support staff to carry out tasks so as to be seen to meet basic requirements of the university in relation to the LMS. These
academics are not simply resisters, although many employ resistance strategies as part of their repertoire of responses to particular aspects of the new technologies. They are not simply adopters, although some have infused some aspects of the technology into their repertoire of pedagogical skills. Academics whose entire teaching workload is in off campus units have had to use and adapt to the technology in order to support and teach their off campus students. They have not had the luxury of totally ignoring the LMS although Jemima managed to use a limited in presence in the LMS to notify her off campus students that she would communicate with them via email rather than in the discussion space.

Academics who were deemed to be highly skilled users tended to use a range of new computer technologies in their pedagogical practices and in their research work as academics. Some had adopted new technologies with energy and vigour. But other deemed to be highly skilled users, used their previous experience of other technologies to argue the case against what they see as a technology based on a business model which they view as slow, clunky (as previously mentioned) and outdated before it was implemented. Academics complained that they wanted to be able to use the LMS in ways similar to how they had used other technologies. Miranda wanted to be able to move things around her online sites in the LMS by using “a drag and drop facility or something like that” as they could on their computers but this was not a facility of the LMS. She wanted to be able to use her ‘web building skills to create resources’ for her students. Others expressed a desire for ‘a nice simple little system that is easy to manage and not very complex’. This was a common plea. ‘Then I couldn’t really stuff things up and that would be great!’ was Jemima’s plea. Many academics wanted to only use the online discussion space within the LMS with their students but they wanted a discussion space that was fast, simple and efficient. Comments about the slowness and clunkiness of the LMS was made repeatedly, ‘It tries to do too much!’.

Some academics in the study expressed concerns that they did not have the power (access is ‘given’ to academics at an administrative level) to do certain things and they found that very frustrating. Miranda explained that she asked for more privileges so she could go in and extend and enhance the activities she was seeking to engage her students. In some instances, she acted without ‘permission’. She said, “I’m aware of how complex it is and how busy I am. I think that there’s a downside to everything and the downside to using the LMS in more innovative ways is that would be that I would be spending even more time working on THE LMS than I do already. So that is a real dilemma.”

In particular, the mandated use of online technologies in this particular form was seen to intensify what was an already high workload at this university. Concern about the amount of time taken up using older technologies such as email, and the time taken up learning about, using and meeting the administrative requirements of the LMS was wide spread. Each academic had strategies by which they sought to manage this more efficiently.

There was a strong feeling that academics were having to undertake remedial action to rectify the inadequacies of the system to make it more workable and more student and teacher friendly. The highly skilled users group developed relatively sophisticated repertoires to make the system work for them despite its deficiencies. For these
academics learning to use it came more easily than for others and they felt more comfortable; they quite liked the possibilities it provided, and they sought to integrate it more widely and effectively than did other academics. These were commonly highly sophisticated users of new technologies. Some were interested in the possibilities they foresaw by its usage. Some of these academics see the LMS as an integral part of being academic even though they find it cumbersome. Because of the complexity, there were elements of THE LMS that were rarely used even by the highly skilled users, and each academic preferred particular elements of the system over others.

Some of the academics who made little attempt to meet even the most basic of requirements used support staff or colleagues to upload unit guides – a basic requirement. Some also use these same support staff to upload some resource files and/or to create a discussion space for students. Some of this group of academics view the LMS as outside their area of influence, their area of expertise so they avoid, ignore or actively try to position the LMS in negative ways. Because of the way they have positioned themselves within the faculty and because they only teach face, they can continue with little reference to THE LMS.

**Patterns of usage: age, gender level of experience**

Patterns of usage could not be predicted by categories of age, gender or experience as an academic. Some of the older and longer serving members of faculty were those who used the technology least commonly (both male and female), one member who also fits this description was mentioned by many of the interviewees as the most skilled user of technology. She also identified herself as a high level of user of the LMS, one of the oldest members. She uses a range of technologies in the preparation of her teaching materials. She uses the latest technologies and spends vast amounts of time in this type of work. Other highly skilled technology users were both male and female and covered both longer serving members of faculty and newer members of faculty although there was a slightly higher number of highly skilled in the levels of newer academics in the faculty. So attitudes were not solely linked to age or gender.

Of the highly skilled users of technology who chose to position the LMS as ‘less than’ all were longer serving male members of faculty. Of the highly skilled users who identified that they tried to push the boundaries and learn how to use the LMS in innovative and engaging ways all were female; both longer serving and newer faculty members.

Although gender was not a significant factor as might be expected from anecdotal comments and widely accepted views that females are less interested in, and less skilled users of, technology (reference) it was apparent that males who commonly avoided the system whenever possible and highly skilled technology users who were male, actively worked to position the LMS in negative ways albeit in different ways. Interestingly, many of these were longer serving male academics. The less technologically skilled males, tended to use the excuse that the students did not like or did not use the system as their reason for not using it while their more highly skilled male colleagues tended to use technical deficiencies to explain their lack of use. The male academics who strongly avoided the LMS were often those who also seemed to be most threatened by change in general and who expressed nostalgic comments about the better quality of the work experience of academics in the past times. This
nostalgia common amongst many academics is indicative of the radical changes to the nature of academic work.

Responses and resistance strategies

The highly skilled users agreed with, Burbules (2004 p. 4) who says that the development of online courses will follow technical instructional design rules (some of them implemented through the design of commercial courseware), which have the effect of standardizing and narrowing the range of educational design options — typically based on the traditional assumptions of classroom teaching and learning (Burbules, 2004). William, deemed to be highly skilled user, complained that “It tries to do too much and that there are better technological models, and of course it is far too slow”.

These highly skilled user responses demonstrate how technical instructional design rules can be the criteria upon which decisions about educational technologies are made; rather than decisions based on sound pedagogical knowledge. Academics in this group were quick to investigate new web2 technologies eg blogs, wikis and podcasts. They support the emergence of new and better technologies in general but once the technologies become more widely used these academics tend to be highly critical of such technologies and actively work to position the technologies in negative ways. When a technology starts to be taken up by the mainstream these academics seem to quickly move their interest on to another set of new technologies. They spend a lot of time at the cutting/leading edge. In this case the LMS was created from a business model by technicians who did not have an educational background. It was adapted for use in institutes of higher education which themselves have taken up corporate business models and managerialist systems to run their day to day operations. So it should not be surprising that academics in this group tended to actively resist the LMS and work to position it as less than.

One sub group of those who also rated themselves as highly or reasonably skilled, while showing awareness of these issues, were still motivated to find the best uses they could for the LMS. Many of these were females, both young and older members of faculty, both long serving and newer members of faculty but one male could also be placed in this group. They were interested to learn more about how they might change the LMS to get it to work in ways that more closely fitted their beliefs about effective teaching. They wanted to use the LMS in ways that are innovative and not necessarily in the ways envisioned by those in the technology or marketing divisions who expected all aspects of the branding of the system to remain consistent.

The creation of an online presence for each unit happens while operating in the ‘build’ mode where academics or educational developers prepare the online presence for each unit. Some academics soon realised that the administrators do not actually ‘see’ what individual units look like to students because only those enrolled in any unit actually see unless administrators have sufficient time to check on the changes in every unit across the university. So these academics changed the ‘look’ (against advice to the contrary) regardless of consequences. So these academics quickly realised that they could make changes to the look of their units by using different images for their icons and different colours and including multimedia that would be more representative of
the focus of the units – the teaching of children in schools – that made them more engaging for their pre-service teaching students. Academics in this group, who described themselves as highly or reasonably skilled technology users before the implementation of the LMS, used their technological skills to exploit the LMS to make it work in ways that more closely fitted with their beliefs and values about effective pedagogy.

**Pedagogy and the online environment**

William spoke of his concern about the lack of effective pedagogy in the online environment expressed a desire to:

provide students with opportunities to learn how to use the tools effectively – to know the difference between an ICT hammer and a chisel and an angle grinder how to use them as tools. But then I want to get them to the next thing; to help them to see how they can use them to construct something pedagogically effective; well that is something else again. Okay maybe they can use the LMS to click and look, but what have learned out of that about? Have they learned how to construct learning experiences for students in their present or future classroom that are going to facilitate the learning of those students? I think not.

Concerns about the underlying messages sent to students may be a consideration that does not concern those teaching in other faculties. But for those committed to the field of Education, then the hidden or implicit message that are sent to Education students is a central issue for academics. They do not want to be seen to be giving the message, ‘Do what is say, not what I do!’ They do not want to be caught in the contradiction of espousing theories about effective teaching, that they teach about and that underpin their research, that are not played out in their own teaching.

While these concerns may be valid some other academics take a different view as they try to tease out the possibilities and find ways to overcome or work around the limitations of the system. Some academics spoke of the ways in which they try to use the LMS in innovate and pedagogically effective ways but ways that are not necessarily predicted. Jessica said:

When I’m in a classroom face to face I might have an idea that I want to explore with the students I can go into the LMS later and conduct an online discussion after thinking through an issue. With the LMS I think a lot about how I might pose a question for an online discussion and what sorts of things I might ask them to do. I try to think about how they might all respond. I might post a message or a piece of information and they will respond to it and I’ll come in the next day and it has all happened while I was away. And it might not have happened the way I wanted it to and I might not have met the objective that I had in mind. In a classroom situation that wouldn’t have happened because if it wasn’t working I would change direction and said ‘Oh well that didn’t work really well did it? Let’s have a think about why that didn’t work.’

Jessica also noted that “there’s a downside to everything and the downside to the LMS is that to do more interesting things I have to spend more time working on the LMS than I do already”. Emma explained that:
This stuff we do in the LMS is pretty static unless you get in and make it jump around. I think is it is already old fashioned and will be replaced. I worked with a multimedia developer to prepare interactive learning objects for maths and literacy that my students were then asked to evaluate in terms of their appropriateness for use in schools. This was a pretty worthwhile experience in that we created interesting and challenging learning objects (activities). It was great to be able to draw on the skill of a multimedia developer because I did not have the programming skill to do this myself but I found it frustrating too. The long drawn out timeline did not really suit me. It was a lot of time and effort for both of us but in the end they weren’t quite what I had envisioned. It wasn’t her fault it is just really hard to explain what I wanted and she didn’t have any teaching background so that took a lot of explaining. The real frustration was the lack of control on my part. I couldn’t add to, edit or change any of it in anyway. I was always having to ask someone else to make even the simplest change I wanted. In the end I just accepted them as they were and did the best with them. Luckily I wasn’t trying to present them as examples of great uses of computer technology.

This example of the frustration was experienced by Emma who is deemed to be in the highly skilled user group. For academics who are less skilled the whole experience of the LMS can be frustrating due to their lack of control over their teaching environment.

Some academics identified advantages the system afforded them. James stated that it “allows for more flexibility so students can be engaging with materials and others outside the class time and continue learning in a more flexible way. I think the online medium has huge advantages in terms of flexibility and learning, for collaboration, and cross cultural collaboration and therefore opening up views of other cultures”. He also acknowledged that “theoretically there are enormous possibilities as far as online work is concerned. Theoretically you could run some astonishingly elaborate pedagogical situations for students online” …. “but I don’t think we’ve got over the simple technical problems for most of our students; but on the whole I think what students want is the most direct way into the conversation”.

Frank commented that:

.. if you sit down and have to build a the LMS site for a unit it really does force you to think through the curriculum and learning activities and do a more thorough job so that’s sort of an upside of that.

Most academics in the study mentioned the importance of the social aspect of learning. The undergraduate teaching program makes particular reference to this view of learning throughout the four year program and one unit of the course includes a study of all of these. Thus academics in a Faculty of Education bring their specific understandings about teaching and learning and their expertise in this field to online pedagogies.

William spoke about the influences on his view of effective teaching. He said that he wanted his students to know and understand the work of people like Vygotsky and particularly the concepts of the zone of proximal development and scaffolding as he sees this as being crucial to effective teaching. William was not convinced that the LMS allowed for this type of teaching. He argued that because it is based on a transmission model of teaching and learning that is at odds with a constructivist
approach to teaching and learning. William said that the LMS does not allow him to hand over responsibility for learning to his students because it was designed with a transmission model of learning model in mind. It assumes that the teacher is the knower and the transmitter of knowledge.

Emma also expressed similar concerns when she said:

I subscribe to the views about the social construction of knowledge and learning is the development of knowledge that is always linked to the students own world, their particular viewpoint and that they’re building on previous knowledge, on their experience, related to their expectations and their particular goals and their agendas which are not necessarily the agendas of the one who’s in a teaching role and that those experiences and agendas and motivations and ways of learning that don’t necessarily match up with the some sort of ideal student that often underlies the way that curriculum is developed and way that learning tasks are developed.

These academics refer to the LMS as restricting their pedagogical practices when really what they wanted to do was to use online pedagogies to open up rather than close down the educational experience for their students. In their view the business model underpinning the LMS allowed for greater control by administrators but caused the academics problems in terms of their teaching practices and the students learning experiences because of the lack of flexibility and the lack of student control of their learning environment. The LMS is designed to deliver content, to manage discussions, to record student results and to monitor usage and behaviours. It is not designed to allow academic staff to gradually relinquish responsibility to the students in the manner of scaffolding or indeed to have responsibility themselves for how something is presented to their students.

The LMS does not allow for the complexity of the teaching process. William said that, “the university is pedagogically naïve, lemming like, leaping into mandated, wholly online units is just ridiculous for on campus students”. He was referring to the university decision to mandate the use of the LMS in all units and that all courses must have one fully online unit even for on campus students. It does not seem to take into consideration what the units were about, their objectives and indeed the arguments around what should be taught and how teaching might happen in differentiated ways. Those who wanted to provide more differentiated and individualised and/or situated learning that takes into consideration the specific contexts and learning in specialised faculties were not happy about the decision. They want to be able to select the most appropriate combination of teaching and learning contexts to meet particular student needs. This does not seem to be easily facilitated by LMS.

Comments by academics reflected the social and emotional aspects of learning and the relationship building that is possible and desirable in teaching. An oft repeated comment by academics in this study was that students want, and need to, develop relationships with their lecturers; they want to have the ‘conversation’ with their lecturers.
Academics views and understandings about online teaching environments are bound up in their values about effective pedagogy. Desires around pedagogy also have to be mediated by the knowledge of the recent intensification of teaching workload with higher student/staff ratios (Marginson, 1997, Marginson, 2000, Blackmore, 2004) which reduces the opportunities for quality relationship building. Many of the academics in the study described how their pedagogy was being limited because it is being made more predictable due to the format of the delivery of teaching materials that is corporate in appearance, based on a business model and which is predicated by the use of templates for delivery in predictable and prescribed ways and with a common ‘look’ set out in consistent ways. Standardisation and consistency are equated in this bureaucratic view as quality. The Learning Management System introduced into this University was designed to create online environments that are consistent in ‘look’, consistent in operation. It was designed to deliver content in standardised ways while collecting data on system users. It was selected by and is managed by centralised administrators (Peszynski, 2005). It is primarily a management system, and only secondly a teaching tool. As a consequence academics tend to view it as an impediment to their pedagogical practices rather than as a tool to promote quality learning.

Academics perceive quality in higher education teaching as having a range of dimensions – ambiguity, aesthetics, excitement, challenging ideas, etc. The selection and implementation of a business model Learning Management System (LMS) meant that even if many academics wanted to make the environment look different (such as the use of different colors or images which portray the content of the area of study) or if they want to set up different forms of communication they are stymied by requirements and rules under which the computer system runs, by the lack of user friendly functionality and by rules and regulations put in place by administrators. Rather than a bureaucratic model of pedagogy academics in this study expressed a desire for a more democratic form of pedagogy which they did not see as being facilitated by LMS.

**Pedagogical Conflict**

Many academics were challenged by the need to reconstruct and transform their work practices by the new technologies that do not necessarily mesh easily with the forms of pedagogy these academics value most. Wyn (personal communication with Davies, 2003 p. 96) describes how in institutions of higher education ‘There is a rush to use information technology, which can be very flexible, but fits best with modulated, unitised, pre-packaged kinds of teaching’. But modulated, unitized, pre-packaged kinds of teaching are not necessarily the forms of pedagogy academics in the Faculty of Education prefer. Sandra described her view of effective pedagogy in the following way:

I want to engage my mature age students with ideas, to give them confidence and the skills to find the information they need in a supportive environment I have established so that their ideas are accepted, that diversity is valued … in which I’ve set up a culture that allows principles of effective teaching to grow and mature. I care about my students’ learning. I think it is important to be willing to learn from your students, to put your ego to the back, to give them confidence. I want to facilitate a group process, where students are listening
to others’ ideas and where my belief in collaborative ideals can be realised because the group brings out much better perspectives.

This description of how Sandra wanted to engage with her students is at odds with Wyn’s description of (n.d.) ‘modulated, unitised, pre-packaged kinds of teaching’ which many see as promoted by the new LMS. She wanted to have a very ‘different’ relationship with her students than this system allowed. It is not online teaching and learning per se that academics see as the problem; it is the lack of control of a system that is perceived to be based on a business model rather than a model of effective pedagogy for online teaching.

Angelina described it thus:

I was initially keen to be involved with the new technologies. But I found I was really offended by it. It is so structured. I found I was losing my teacher presence. I was confident last year. I tried to take the whole lot of what I did in the previous conferencing system straight into the new one. I deliberately did that. I wanted to see if it would work. But it was so standardised ... so driven by regulation rather than good pedagogy and assessment practices. I really wonder if the people who designed it and who manage the implementation, IT people, have any idea about what good pedagogy and good assessment practices look like.

Being an educationalist as well as an academic who has a history of teaching in online environments Angelina was in a position to be able to compare her previous experience with teaching online in this new environment. She found the new system less flexible, less able to meet her personal teaching style and less able to fit with her view of effective teaching and learning. Other participants made comments in a similar vein such as “Decisions about the selection of the LMS were made on technical advice and economic/financial advice not on theories of effective pedagogy”, “The university was naïve in its selection of a business model, pedagogically naïve.” “My main concern is that it (the LMS) really does position the teacher as the education designer, the builder, the producer of products, the producer of knowledge and I don’t want to be positioned that way in teaching – that is at odds with my beliefs about effective pedagogy.” Comments such as these reflect the concern of academics about the discordance between their views on effective pedagogy and the types of interactions they find possible through the LMS they are required to use and the processes of commodification of academic knowledge (Blackmore, 2007) to which they felt subject.

As with any technology, the technology itself is not the determinant of effective learning but how the technology is used and as the research into effective teaching demonstrates it is the teacher that makes the difference (Brown, 2000). Academics who have sufficient interest and sufficient skills in terms of pedagogy and in the use of necessary technologies, as well as the time and commitment are more likely to be effective teachers in online environments than those who do not demonstrate these traits and capacities. Those who do not have this combination of knowledge and skills are less likely to use the LMS effectively and are more like to display resistive technologies.

It was argued by some academics that the technology is in conflict with their pedagogical desires such as wanting to ‘model an open approach to communicating
with people and an open approach to knowledge’. They expressed concern about a view of pedagogy promoted by the LMS that is in conflict with their views on effective pedagogy. They want to employ a pedagogy that does not place them as the all knowing teacher. This highlights the dominant view of effective pedagogy within the Faculty of Education. James made it clear that he wanted to engage his students in a critical pedagogy. He was not happy to prepackage his teaching and deliver it to the ‘market’ as a commodity. Gregoriou terms this a didactic pedagogy in which education becomes the ‘delivery of communiqués and the parceling and packaging of meaning into digestible (i.e., marketable) forms’ (Gregoriou, 2004 p.233).

Miranda was concerned about the manner in which the LMS assumes a role onto the teacher was described in this way; “My main beef with it is that, it really does position the teacher (academic) as the producer of knowledge.” Miranda did not want this role designated to her. She desired a more dialogical approach to learning in which her students learn to be ‘critical thinkers who question and are open to new ideas’. The business model under which the LMS was developed assumes the teacher as the producer of knowledge, as having full control over the learning environment. It was not designed for collaborative learning nor does it encourage critical thinking. It does not readily support those who are strong visual learners. It is linear and hierarchical in its design and structure, primarily text based and control focussed in its delivery.

Walker (n.d.) argues that implementing an online distance program requires ‘new forms of pedagogy … time and resources as well as technical assistance… organisational infrastructure is vital to make educational programs work. There is no space for amateurism and lack of supportive infrastructure (dedicated library, study support, student records and admissions) … all is visible and there are no places to hide’ (Walker, n.d. n.p.).

This paper tell the story of academics with particular beliefs about their pedagogical practices, many idealist, highly motivated, battling to make the fit between their changing teaching practices arising from the commodification of their labour, and their ideals/beliefs. For academics in this Faculty of Education, the challenge to their expressed and shared commitment to what constitutes effective pedagogies, both on and offline, requires a change in their values and their beliefs and consequently to their pedagogical practices, a change to which many are resistant, but ultimately they will have to demonstrate a degree of compliance due to the range of accountabilities and disciplinary technologies that are superimposed on them through quality assurance processes. This produces what Ryan calls a ‘grudging compliance’(Ryan, 2005 p. 116).

**The emotional dimensions of academic work**

There are also emotional dimensions to the changing nature of academic work in which there are new challenges. Wenger (1998) describes identity as a learning trajectory of forming who we are by where we have been and where we are going (Wenger, 1998). Many academics in this study expressed nostalgia for where they had been and experienced anguish about where the University seemed to be wanting them to go, particularly in terms of the use of the new LMS and other new technologies. Similarly Blackmore and Johnson (2001) found that:
'while there is increasing recognition that any radical changes in educational practice arising out of the use of ICT require both teacher ownership and also extensive teacher professional development (Lankshear and Bigum 1998), there is less discussion over what that actually means in terms of teacher work identities. Policy makers assume a simple linear model of implementation that is highly technicist, and are constantly surprised when it does not happen the way they intended. Much of the educational literature on change management of innovation, whether curriculum reform, gender equity reform or the introduction of ICT, treat it as an organisational problem that can be addressed through providing more information or individual upskilling through professional development (Blackmore and Johnson, 2001 p.8). They suggest ‘that such theorising of how change occurs is too simplistic because it fails to deal with the individual and collective identity work that has to be done to change fundamental practices and ignores contextual factors and discourses that shape the possibilities for change’ (Blackmore and Johnson, 2001 p.8).

The need for the nourishing of the identities of professional academics is one aspect of consequences in the emotional dimension in this example of the impact of change processes. Cornford and Pollock (2003), and King (2006) argue there has been ‘very little research into the collegial or the emotional dimensions of educator's experience of the change process’ (King, 2006). Even so some of the literature provides some useful insights. According to Fineman (2003) emotions-our largely invisible reaction to actions and social settings-are a dominant, all-embracing force for the actions, decisions, and productivity of employees’. She uses the example of workplaces that ‘create ambivalent emotions of engagement and apathy (Fineman, 2003 p. 370). Engagement and apathy towards the LMS were both apparent in this study along with frustration, anger and even fear. Frustration was the emotion most commonly mentioned.

Fineman, (1993) talks about how emotion work is: the effort we put into ensuring that our private feelings are suppressed or represented to be in tune with socially accepted norms... Emotional labour is the commercial exploitation of this principle; when an employee is in effect paid to smile, laugh, be polite, or be caring (1993:3).

According to Reed (Reed, 2007) this results in a cost to personal service workers not experienced by manual (Hochschild cited in Williams, 1988:106) or abstract intellectual workers but in this study academics fit the personal service workers profile more closely than the intellectual abstract workers profile. Some academics in this study experienced alienation. Some disengaged.

When academics such as those in this study are located in online learning communities, (particularly when such a requirement has been mandated as has happened in this case) some may perceive themselves as less able to successfully establish a ‘teacher presence’. Angelina described it thus; “I felt really offended by the change. I found I was losing my teacher presence. It was really quite a bit of an identity crisis for me, and I had been really confident. I lost a lot of that confidence because of the “tool” (the tool being the LMS). Some academics described being positioned differently when required to use the online teaching and learning environment whereas others demonstrate a sense of professional identity and self-
esteem that is tied to understandings and beliefs about what constitutes effective teaching in the strong face to face relationships developed with on-campus students. Academics who teach more commonly in these environments are understandably less willing to forfeit these relationships by risking the use of the LMS which positions them as “less than”.

Giddens presents the notion of a ‘protective cocoon’ (1991 p.3) that we use to filter out any threats to our identity (including our professional identity), and to ensure ‘ontological security’. Comments by academics an be seen as them employing the protective cocoon as such a filter when they make comments such as ‘the online technology stuff is just another nuisance the university has created to make life difficult for us and to supposedly save them money’. According to Dixon (Dixon et al., 2004) ‘Identity is ‘never static or permanent, it is becoming rather than being, never singular and rarely unified’ (Baker, 2000 p.23) It is individual and changeable in and for different contexts and over time, and needs to be nurtured. Wenger (1998) suggests that we come to understand who we are in our organisational practice by what we perceive is familiar, usable and understandable, and just as importantly, we know who we are not by what is foreign, unwieldy, or unproductive. Thus, in this stage of implementation, when everything felt unfamiliar and foreign, participants had difficulty re-establishing and re-confirming their professional and collegial identities. Their professional identities were lacking in nourishment. This phase of the change process can be likened to Fullan’s (1992c) description of the implementation dip, where the costs of implementing a reform far outweigh the rewards. James describes the current dilemma in this way: “At the moment I think academic identity is being reshaped by a much more bureaucratic view of the role of the university lecturer.”

The LMS – a centralised administrative system?

Lewis et al. (2005) express concerns that while their universities present ‘educational technology as an opportunity to move towards new models of pedagogy, the tendency was for teaching and learning software packages to be used as little more than centralised, administrative systems’ (Lewis et al., 2005 p. 67). In this study the implementation of a centralised system of networked technologies with the associated surveillance and accountability technologies (Wells, 2005) was experienced by academics as an increase in bureaucratic processes, an increase in the standardisation of teaching and learning and as a move towards a top-down corporate managerial model, with an associated loss of flexibility and autonomy for academics as they go about their pedagogical and other everyday work practices.

One of the participants, James, spoke about how the increase in standardisation procedures thwarts any attempts to maintain the unpredictability of intellectual interactions; interactions which may lead to valuable intellectual conversations. This was supported by other interviewees who also indicated that standardisation, as a consequence of the implementation of the array of new technologies has led to increased predictability and therefore less opportunity for intellectual debate, and therefore less intellectual rigour as a consequence. Standardisation in particular challenges what many academics value as the intellectual work of the academy.
A New Work Order in the Academy

Blackmore (2002) refers to the new pressures being experienced by universities that create new possibilities but also new problems for academics as educational workers. She associates this new work order with the ‘rise of an information society; internationalisation and economic globalisation; and culturally diverse and mobile student populations’. She goes on to say that:

For academics, this means increased demands for innovation and productivity for the institutional and national good, at a time when employment is insecure. Meanwhile, deregulation of student and research markets is changing the relations between academics, their students (clients), their ‘partners’ in research and their stakeholders (professions, government, business). Finally, the internet, e-learning and e-commerce are changing the processes of knowledge production and dissemination (Blackmore, 2002 p. 422).

Blackmore elaborates on the range of new technologies can be seen to be changing the relations within which academic work takes place. As Blackmore suggests:

the response by universities to the dual problems of financing higher education and promoting access/equity has been a ‘technofix’, through online learning to increase access that will also be the new export education industry, converting academic content into high-quality online courses (Blackmore, 2002 p. 425).

The problem was that of access and internationalisation, and online learning provided what seemed to be a ready solution. Universities are also seeking to attract new niche markets of students, be seen to be seen as distinctive in local and global markets, and to service the professions. The mandated use of online learning provided symbolic status as to how the university was different and relevant.

The findings of this study show evidence of intense levels of emotion produced by the mandated implementation process. They demonstrate the level of emotional turmoil experienced by some academics and they provide vivid descriptions of the turmoil experienced. Not all participants experienced all portrayed emotions, but many of the experiences presented will be familiar to most participants in this change process. No distinct gender differences were found in either the degree or range of emotions portrayed in the data as all participants, both male and female, responded with high levels of emotion.

Experienced academics speak of their disappointment at the impact this enforced change has wrought on their positions as formerly highly respected academics. Some argued that the introduction of the LMS lead to the “homogenisation of the experience of teaching and learning for both academics and students”. Some felt the system lead to a loss of their teacher presence and professional confidence and were offended by the way they were repositioned by the technology. Even though some academics have developed technologies of resistance to manage their pathway through this ever changing landscape, they are not necessarily happy, some are angry, most are frustrated about the imposition of a system that has lead to their perceived need to perform resistance strategies.

Fullan (2003) argues that “it is not the pace of change that is the culprit, it is the piecemealness and fragmentation that wears us down” (Fullan, 2003 p.24-25) while others argue it is the pace of change that challenges our sense of identity as
professional academics. It is more likely it is all of these things plus the ongoing nature of change. “Just wait a minute and there will be another change.” The next change may well overwhelm all of the previous changes.

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The Pedagogical Significance of the Use of Digital Video in Preservice Teacher education Programs

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Abstract:
Digital video (video technology) is rapidly becoming prevalent in schools and tertiary settings. As a result, teacher education programs need to be able to access, implement and accommodate preservice teachers with the technological/pedagogical tools within the tertiary classroom to better prepare students for the reality of schooling in the 21st Century. The development of preservice teachers’ pedagogical content knowledge and the ability to identify and accommodate diverse learners has come to the forefront of teacher education programs. Bond University’s Teacher Education Program has incorporated the use of Digital Video in multiple applications to allow reflective practice amongst the students, provide added value to their professionalism, and assist in the accommodation of all learning styles through constructivist approaches to instruction. The potential of video technology for preservice teachers is varied and significant. Applications of video technology for reflection, instruction, and peer review in the teacher education program assist in supporting preservice teachers in their ability to creatively represent and connect information regarding their pedagogical understandings. The applications and benefits of video technology within teacher education will be discussed and explored. Case study and digital video examples will be given.

Introduction

The applications and benefits of video technology within teacher education are substantial. Applications of digital video in a teacher education program could include the development of videos for use in teacher portfolios, marketing, and multicultural understanding among the preservice teachers and within their field experience in schools. Participants in other studies have noted that using digital video for projects in their teacher education programs allowed them to think about how they could use these resources to introduce creativity, interest, excitement and experiential learning to their teaching practices (Potter, 2006).

The use of video technology for preservice teachers aids in transforming their beliefs about themselves as practitioners. It also allows them to acquire pedagogical content knowledge and develop pedagogical understanding of learners. This type of technological tool has the ability to expose preservice teachers to many different teaching situations. In so doing, more creative ways of representing and connecting information on how to best teach will emerge for the purposes of teacher education (Hartley & Wang, 2003).
It is difficult for a novice teacher to enter any classroom and feel comfortable with the demands placed on them. In addition to the demands expected of a novice in the more traditional curriculum areas, teachers are expected to integrate technology tools to improve student achievement. Teacher educators continue to search for effective strategies that will enhance the use of technology tools in the preservice program and, ultimately, in the novice teacher’s classroom. Unfortunately, despite increasing demand for technology use in the classroom, many teachers still feel ill-prepared to integrate these complexities of classroom activities into focus and supporting preservice teachers in connecting theory to practice.

This paper will identify the pedagogical and epistemological significance of using digital video in preservice teacher education. Bond University’s Master of Educational Practice degree program’s use of digital video and its significance will be discussed and delineated through case study examples.

Avoidance Instead of Acceptance

The current digital explosion bombards us with a myriad of digital media on a daily basis—television, internet, ipods, emails abundant and computer programs too many to mention. Despite this trend, many prospective teachers come to teacher education programs with little or no technological expertise. Prensky (2001) refers to this group as “Digital Immigrants,” while others are “Digital Natives.” Digital Natives are identified as people who are “all ‘native speakers’ of the digital language of computers, video games and the Internet” (Prensky, 2001). By contrast, Digital Immigrants are those who, more recently, have entered and adopted this networked, digital world, but were not born into it. Prensky’s (2001) definition of Digital Immigrants and Digital Natives is relevant to some preservice teachers. Many are quite adept in the use of a wide range of technologies, while others may be termed “technophobes”. In either case, the preservice teacher education students currently present new challenges to our teacher preparation programs.

Some contend that teacher education programs have been reticent to fully embrace the digital world with excuses ranging from financial and logistical limitations to pedagogical concerns. According to a report from the Milken Exchange on Education Technology (1999), the changes that were predicted to occur through the catalysts-effects of digital technologies use has not occurred. University teacher education programs are currently requiring technology subjects and courses; however, the depth of the content in the courses generally seems to be targeted at developing the extremely, low-level lesson plans, units of work and curriculum design. The beginner skills needed to complete these required tasks alone will not prepare a future teacher for the needs of today’s classroom.

We, as teacher educators, must develop pedagogical and epistemologically valid strategies and methods to improve this situation. Hall (2006) indicated that making the technology integration more authentic in teacher preparation programs could assist in alleviating the lack of ICT integration. Wilson (2005) stated that for changes in teacher
education to occur, the personal beliefs and constructions of what it means to teach and learn must be considered. Preservice teachers must be given new frameworks for pedagogy in the new digital classroom to allow them to be able to move past the older paradigms of “good instruction”. Preservice education programs need to design learning environments that are specifically targeted at the infusion of technology and the development of an understanding of the critical relationship between pedagogy and technology.

Preservice teachers must learn to not only “use” technology/digital media, but also how to “produce” digital media. According to Kearney (2003), incorporation of instructional technology applications into actual teaching classroom situations provides greater opportunity and support for student development of their own technology-based projects. Students are encouraged to expand their expertise. Kearney (2003) states that this can be accomplished by integrating content-specific technology into the preservice technology courses.

Integration of technology into teacher education courses should include the development of the technological skills to facilitate learning in technologically-enhanced classrooms, to provide pedagogically rich project-based strategies through the use of technology, and to develop meaningful and authentic problem-solving activities in content-relevant areas (Sanders & Craig, 1999). According to a report from the Commonwealth Department of Education, Science and Training (DEST), students/teachers need to not only have a technical view of competence in ICT, but should also have an understanding of “how” to make effective use of ICT in the classroom. This type of understanding would include technical skills, but also would include “higher order cognitive knowledge, skills, understanding and attitudes related to professional knowledge, professional practice and professional attributes” (DEST, 2002).

Demands for future teachers to be prepared for the “generation.com” will require teacher educators to increase the preparation of university students so that they are as eager, excited and prepared for new technologies as their students will no doubt be. For teacher education programs to ensure that this occurs, they must require the university lecturers to become technologically knowledgeable and literate. Modeling of good classroom practice that has technology integrated into the curriculum will also be necessary. One of the other most important tenets of successfully preparing preservice teacher educators will be through the incorporation of technology into all classes, not just the “technology-heavy” subjects. Upgrading the skills of all preservice teacher education students can be accomplished by gradual immersion when all subjects have a technological component, thus moving the students to the point where they become technologically literate. The combination of technologically rich university courses and ample opportunities for field experiences involving technology at the school level will increase the ability of students to move from being immigrants of the digital-age to productive, technologically literate leaders of tomorrow (Sanders & Craig, 1999).
The Pedagogy of Digital Video-The Effectiveness of Digital Video in the Classroom

The impact of digital video in a classroom is multifaceted. Preservice teachers should understand this potential power and use it in their lesson and unit planning to maximize the impact of the information that they are attempting to convey. The ease and accessibility of digital video can create opportunities for expression, creativity, and authentic project-based learning that infuse the classroom with relevance and self-motivated learning by the students. Video can capture the complexity of classroom interactions, enabling preservice teachers to view the ‘real’ teaching and learning strategies utilized by a practicing teacher. Digital video can allow a group of students to share a common experience and review, perhaps over several sessions, important or critical teaching strategies. As a result of this powerful technological tool, teacher education programs need to be able to access, implement and accommodate preservice teachers with the technological/pedagogical tools within the tertiary classroom to better prepare students for the reality of schools in the 21st Century.

Transformation of Preservice Teacher education through the Use Digital Video

The potential of video technology for preservice teachers is varied and significant. Applications of video technology for reflection, instruction, and peer review in teacher education programs assists in supporting preservice teachers in their ability to creatively represent and connect information regarding their pedagogical understandings.

Incorporation of the new and exciting medium of digital video in teacher education programs could possibly be an ideal format for the transformation of teacher preparation for the classroom. Today’s digital camcorders and computers allow users control of the editing process, which previously was not an easy task. Use of digital video in preservice teacher education can serve as a bridge between theory and practice; linking a person’s evolving theoretical understanding of teaching to the actual practical implementation of strategies and practice (Cannings & Talley, 2003).

The Teacher Education Program at Bond University, like most programs around the nation, is continually assessing the delivery of the programs to ensure that the instruction is “meaningful”. The focus of the activities in the teacher preparation program at Bond University is providing learning environments that allow preservice teachers to learn how to learn and learn how to teach with and through digital technology. The goals of the program are to assist students in the development of new understandings of learning and teaching with rapidly evolving digital technology, to develop an understanding of the critical relationship between pedagogy and technology, and to foster the seamless integration of pedagogy and technology.

Case Study Example of Digital Video for Instructional Content in Subjects

The following case study examples will describe and evaluate the efficacy of digital video in a variety of applications in the preservice teacher education program at Bond University. This type of project-based collaborative learning as the pedagogical context for digital video production gives value to students’ creativity in the promotion of deeper
engagement with subject matter through hands-on activities. This type of experiential/active learning strategy also involves a variety of learning modalities as opposed to predominantly passive reading and listening.

Bond University’s Teacher Education Program has incorporated the use of Digital Video in multiple applications to allow reflective practice amongst the students, give added value to their professionalism, and to assist in the accommodation of all learning styles through constructivist approaches to instruction.

**Case Study One - Video for Instruction**

In the subject, *Teaching Methodology and Implementation*, which is part of the Master of Educational Practice Program at Bond University, students are required to produce a digital video project that counts as a major assessment. This project takes novices with no or very limited knowledge of video making to the point where they have experienced most of the steps involved in crafting a finished (though almost certainly unpolished) digital video. The intent is to assist students in understanding the process of embedding technology into the content of their subject-area of teaching. During this process, students are required to become proficient in the use of video cameras, Windows Movie Maker software, and the utilization of computers in the development of their projects. Students learn the basics of storyboarding, shooting video in the field, and editing the raw footage in the computer lab. The assessment item specifically requires students to develop a video that has educational value, along with a lesson plan and a reflective writing piece on the project. The video project can be developed as an introduction to a unit of work, a visual representation of the content, or a replacement of a lecture on a topic. The rationale for the use of Microsoft Movie Maker is its availability on PCs in most schools. Although it is not as sophisticated as some non-linear editing software, it is an excellent piece of software for the novice user. The value of this assessment is in the “added-value” component that the students achieve. In a job market that looks for distinguishing attributes in applicants, the ability to use ICTs in an educationally creative manner sets these students apart from other applicants.

**Case Study Two - Video for Assessment**

A further use of digital video in the Teacher Education Program at Bond University is through the development of metacognition as they evaluated and reflected on the application of their practical skills. The final digital video project and the culmination of the application and integration of digital video in the education program was a peer-assessed three-minute digital video of the students’ teaching practice. The students have the ability to edit the video tape down to the “best” three-minutes of their teaching. The process of the students reviewing the videotape of their teaching was in itself a self-reflective activity. The three-minute video segment was uploaded to the Bond University Blackboard site, iLearn. Groups were assigned and set up on iLearn. Four students were assigned to each group with the task of viewing each person in the three-minute digital video and adding constructive feedback to the site. The three-minute digital video was then utilized to assess and reflect on the taped teaching scenario. By carefully assessing
the video, students analyzed the aspects of talking, gestures, eye contact/gaze, use of manipulatives, etc. In addition, digital video allowed for repeated observation of the teaching event for microanalysis and multidisciplinary analysis. This digital video project also allowed the practicum teacher to analyze their actions in a naturalistic field environment, rather than a simulated teaching environment. The use of digital video avoids the “what I say” versus “what I do” problem that can occur in self reports. Digital video taping can support looking critically at methodology, but also allows examination of the lead-up and downstream consequence of the lesson.

“It Was Like a Bright Mirror”

After this assessment was completed, students were given a survey to determine the effectiveness of the assignment. When asked about the value and complexity of the task, students, generally, felt the task to be overwhelming at first. However, after becoming fully engrossed in the process, they found it to be engaging and fun. As for the complexity of the task, a student’s response was, “I found this assessment task to be a little confronting, however, it turned out to be an easy task” (Student, 2006). Another student stated, “In terms of seeing myself teach, I found this task to be very helpful. It is always good to see yourself on camera as you become aware of your own flaws and faults” (Student, 2006).

The effectiveness of the feedback portion of the task was also evaluated by the students. Overall students felt the task to be helpful, as one student stated, “I liked the video peer assessment task. It was very helpful in gaining feedback from your peers and ideas on how you could do something differently. It also gives us a great look at ourselves teaching. It helped me a lot with my classroom positioning and speaking” (Student, 2006).

Although the responses were mixed, overall students felt that the peer feedback was not as helpful as the self-reflection. The creation/editing of the three-minute video clip, which caused a great deal of self-reflection, was more valuable than the peer feedback. One student stated, “This task was useful from an intrapersonal perspective; perhaps we could give ourselves a critical evaluation, instead of giving feedback to our peers” (Student, 2006). Another student felt that, “the feedback was not really necessary because everyone chooses their best part of teaching and it was only 3 minutes so it was really hard as the viewer to find faults!” (Student, 2006). Other comments that substantiate the value of the “self-assessment” portion of the task were, “Just seeing myself was enough for me. I didn’t really need to have feedback from others, but it was still good” (Student, 2006). In addition to the fact that students valued their own self-reflection of their teaching over their peers comments, some students did not feel comfortable giving feedback to their peers for a variety of reasons. One student stated, “I felt uncomfortable giving candid feedback to my peers. Perhaps it would have been better to remain anonymous when giving feedback” (Student, 2006).

Although it was anticipated that the students would learn a great deal through the process of editing video tape of their teaching practice down to three minutes, it was unsuspected
that the peer feedback would be not be considered as “helpful” or “necessary”. However, a student’s comment that “Even though the video is only three minutes, I think it looks like a bright mirror” (Student, 2006), expresses the validity of the task and the process. Students were able to “see” themselves critically from their point-of-view, as well as, the point-of-view of their peers.

Overall, the process allows preservice teachers to become better consumers of their practicum experiences. The reflection process can be critical to creating reform in teaching and learning. A combination of field-based experiences and videotaped self-assessment supported the reflection process, which builds the kind of teacher change necessary for educational reform. These case studies show that through the process of assessing a lesson that had been videotaped, preservice teachers were able to critically assess their own practice in a reflective manner. In most cases, this type of pedagogical application of technology will aid in the development of professional skills (Collins, Cook-Cottone, Robinson, & Sullivan, 2004-2005). According to Spurgeon and Bowen (2002), digital video, while confronting, can increase preservice teachers’ ability to critically reflect on their teaching performance. These case studies represent an example of the effective use of digital video in one preservice teacher education program. Whilst this paper does not lay claim as an exhaustive empirical study, there is enough emergent evidence in the above examples to warrant further research.

Conclusion

We, as teacher educators, in this new digital crazed world must redefine the context of and our approach to teacher preparation. Kearney (2003) also states that a new, more-sophisticated, pedagogic challenge exists as a result of this new technology. Preservice teacher education programs can make significant strides by advancing the use of digital video in the classroom for assessment and self-reflection. Cunningham (2002) also agrees that as teacher educators, we must follow the lead of other universities and keep the focus on the final product, making sure that the technology facilitates, not drives, the development of quality video-based performance assessment. Studies have shown that ICT has been delivered as stand-alone introductory courses and has been marginalized within programs. This may be the result of an absence of modeling. To address these challenges, a number of recommendations are offered in the research. Lock (2007) provides the following exemplars for efficacious technology integration in teacher education programs:

(a) implement a vision and values driven technology integration plan

(b) encourage education faculty members to infuse and model effective technology use across the curriculum

(c) provide authentic learning opportunities for student teachers to integrate technology in campus and field experiences
(d) foster greater campus and K-12 school partnerships that cultivate and nurture technology integration

(e) provide ubiquitous access to a more than adequate technology infrastructure

(f) disseminate research on effective use of technology for learning (Jacobsen & Lock, 2004, p. 82).

It is our responsibility as teacher educators to provide future teachers with the opportunities to explore, practice and reflect through the use of digital video. The use of digital video in the Preservice Teacher Education program at Bond University has increased the students’ ability to be metacognitive, reflective and has provided them an instructional strategy for use in their classroom that will be innovative and exciting for their students.

References:


LEARNING ABOUT TEACHING THROUGH
SCHOOL/UNIVERSITY PARTNERSHIPS

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Abstract
As students of teaching enter schools we often hear the cry ‘forget everything you learnt at university, you’re in the real world now’. We also read much about high early career teacher attrition rates and difficulties in attracting and retaining quality teachers. Universities and teacher educators are often accused of not preparing students of teaching in practical ways as they enter the profession. In turn, bureaucracies and schools are blamed for not providing useful induction programs that offer strong professional development strategies about teaching and learning. Mentoring programs are more often about surviving difficult school cultures and contexts than thriving in rich and diverse professional communities. This paper describes an innovative school/university linkage program that aims to alleviate some of these issues through partnerships with local schools and practising teachers, with students engaging in everyday school activities during their placements. The philosophy behind the LiNKS program is that ‘real life’ experience in ‘real life’ schools should produce higher quality teachers of students who choose to teach well and stay longer in the profession. Issues and challenges that arise as a result of such close relationships are discussed.

Introduction
Many teacher education students and graduate teachers have professed or would be familiar with the following thoughts of a graduate teacher:

I am young. I am new. I am too big for my britches. I am unaware of all the thousands of reasons that we can’t do this or that …. there is one of me with my enthusiasm and my beliefs. (Page, Marlow and Malloy, 2000, p229)

What happens to a graduate teacher in their first year as a professional educator? What experiences influence whether they will remain to become a knowledgeable, practiced educator or leave to join the ranks of the disenchanted through resignation or career change? Are formal and informal support mechanisms such as induction and mentoring programs indeed useful to graduate teachers? What role should the principal, as the educational leader in a school, play in the professional ‘evolution’ of a graduate teacher? What professional responsibilities should experienced staff have to graduate teachers? How can supportive, effective supervision and professional development be encouraged as a professional growth strategy? Indeed, what role can the graduate teacher play in programs to encourage them to stay in schools? And how does what they learnt
about teaching at the university prepare them for being teachers of learners?

These questions and many others plague graduate teachers and their colleagues as they enter schools to continue learning about teaching as professional educators. One could argue that similar kinds of questions concern preservice students as they undertake their teacher education program. Certainly concerns about professional support strategies are high on the agenda for schools and bureaucracies as the many teachers of retirement age exit the profession in the coming decade. We put forward the notion that successful school/university partnerships, where school and universities collaborate closely about the processes of learning to teach and learning about teaching, may produce higher quality teachers of students who choose to teach well and stay longer in the profession. Research findings from the many projects and studies on graduate teachers indicate that even superior support strategies sometimes do not prevent attrition (Ingersoll, 2001a, 2001b; Gore, Williams and Ladwig, 2006; Johnson, 2004; McCormack and Thomas, 2001). We know, from the literature and research available, what it takes to support, challenge and professionally grow our new teachers. Quality supervision, accredited mentors, systematic school based induction programs and collegial networks assist teachers in their first years of learning to teach by providing invaluable personal, professional and pedagogical support. Higher levels of support from principals, administrators and systems by committing time, finances and personnel to graduate teacher strategies, coupled with a strong partnership with between universities, could assist in stemming the flow of recent graduates from our schools. In ensuring the retention and professional growth of our students of teaching, we maximise the possibility of achieving the best possible learning outcomes for all students in our future classrooms (Gore, Williams and Ladwig, 2006). We believe being able to interpret the substance of what is learnt in teacher education programs to what is taught in classrooms is central to successful school/university collaboration, as well as to improving student outcomes. Moreover it may contribute to increased teacher quality and improved retention during the first years of teaching.

Learning from theory and research

Since the late 1960s academics, schools and education systems have investigated the phenomenon of graduate teachers exiting from the profession in their first years (Eddy, 1969; Lortie, 1975; Martinez, 1994; Manuel, 2003; Gore, Williams and Ladwig, 2006; Veenman, 1984; Zeichner and Tabachnick, 1981). Similar conclusions have been drawn from research findings to explain just why it is that up to forty per cent of teacher education graduates leave their schools in the first three years of appointment to US and NSW schools (Ingersoll, 2001a; Manuel 2003; Thomas and McCormack, 2001). Low salaries, challenging student behaviours, personal and geographical isolation, a lack of administrative and professional support and an idealistic view of teaching have been discussed as reasons for new teacher attrition (see Ingersoll, 2000; Leete, 2001; Ramsey, 2000; Williams, 2002 for example). In New South Wales (NSW), Australia the current hot debate centres around the effects that the retirement of the current majority of the teaching service, ‘the baby boomers’ will have on management and teaching staff numbers in schools and early childhood centres. It is projected that by 2010, more than half of those teaching in schools will have less than five years experience of teaching.
since graduating from their teacher education programs. (Daily Telegraph, 30 Jan 2007, p.7). We could argue that this is a positive and productive opportunity for graduate teachers and the students they will work with. But that is beyond the scope of this paper. However, we will discuss the importance of school/university partnerships in supporting the entry of our graduate teachers to this changed context of schooling, where in many schools early career teachers will outnumber those with longer periods of service.

Various strategies have been developed and implemented to encourage and support new teachers in their first years. Globally, orientation and induction programs, mentoring, collegial networks and online communication have been instigated in various countries and states (for example, New York’s ‘New Teacher Project; The New Teacher Center at the University of California- Santa Cruz, the Newly Qualified Teacher Induction mandate in UK schools). Many graduate teachers survive their initial experiences of teaching and go on to grow and prosper personally and professionally. What should be of great concern in the research findings from these projects and others is that not only do many teachers still leave even though supported and encouraged in their first years, it is often the brightest and best who chose to separate from the profession (Ingersoll, 2001b). An analysis of North American research reveals similar characteristics as NSW in terms of teacher supply, turnover and maintenance. Whilst North American authorities are looking at a target of 2.2 million teachers (Ingersoll 2001a; Johnson 2001b) to meet demands over the next ten years, Ramsey suggests that we may be looking at the supply of 54,000 teachers to replace those who will leave the NSW state school system over the same period (2000,p.190). It is important that we maintain those who enter the teaching service. It is also important to point out that current research tells us that (in general) those who now constitute part of the teaching service have a very different set of reasons for becoming teachers than their predecessors (Richardson and Watt, 2006). They find their way to teaching through different entry pathways, are quite aware that they could earn more money in other occupations and are prepared to move on if their administration or principal-supervisor does not support their efforts to become effective teachers (Ingersoll 2001a, Johnson et al 2001a, 2001b; Richardson and Watt, 2006). How teacher education students are prepared to enter the schools of the 21st Century, the educational homes of the digital natives, is therefore crucial to both the quality and retention of effective graduate teachers.

The reality of teaching

Whilst most graduate teachers are new to the schools they find themselves appointed to, they have spent countless hours as students, participants and observers in a variety of school situations and settings, in what Lortie (1975) refers to as ‘an apprenticeship of observation’. During field experiences, practicums and internships they have gained invaluable teaching and learning experiences that may inform their first weeks and months of professional practice in their own classrooms. Ways of managing student behaviour and responding to student learning difficulties are also learned in these preservice experiences. When combined with advice and guidance specific to their new school culture and context, graduate teachers can construct ‘pedagogy tool kits’ (Williams, 2002), with which to develop and manage their own repertoire of teaching skills. Through collaboration and collegial dialogue with both experienced colleagues and
their peers, graduate teachers gain the important and valued professional, pedagogical and personal support needed to make their transition from teacher education to teaching much more likely to be successful.

In many instances, graduates are expected to be capable and efficient in these practices, with little guidance or advice about how it is supposed to happen. Page, Marlow and Malloy reported from one of their research participants of the ‘expectations that principals and teachers expect the novice to be expert and competent from day one’ (2000, p.229). Ramsey (2000) reported that ‘no other profession expects so much from their new practitioners in their early years on the job’ and it has been widely reported and written that many principals expect their newly appointed teachers to be expert and competent in their first year of teaching. This can induce teacher stress and lead to a lack of confidence in graduate teachers. Anecdotal reports from both preservice and early career teachers tell of being advised by their experienced colleagues and principals to ‘forget everything you learnt at the university- this is the real world’ only to be later told ‘you should know about this – you’ve been to university haven’t you?’ These conflicting statements serve not only to devalue the learning experience of the new teacher, they add to feelings of isolation and loneliness described by graduate teachers in their first weeks of appointment (Rogers and Babinski, 2002). Sometimes treated in a patronising manner as somehow deficient and lacking in teaching skills and framed as ‘problems’ (Veenman, 1984), graduate teachers are often left to discover just how things work in their new school, with no recognition of their professional capital, that is, what they bring to teaching.

Preparing teachers for the real world of teaching

At the University of Newcastle in the School of Education, one of the strategies we have implemented to prepare our teacher education students to become quality teachers of students in the ‘real world’ of teaching and learning in schools and early childhood centres is the establishment of the LiNKS Program. This is a purposeful approach where students are assigned to ‘home’ schools for a greater immersion in pedagogical and professional practices. It is also about developing and maintaining collegial professional relationships between practising teachers-teachers of learners- and teacher education students- those learning about teaching. This paper examines the growth of the program which is aimed at enhancing our educational community partnerships as well as encouraging teaching excellence. We share some of the initial problems associated with establishing a long term program connecting universities and schools and also some of the learning and reflection of and about the activities students are engaging with in the LiNKS program. We want our teacher education programs to have strong credibility with the education community, including the wider academic community within the university. To achieve that we want to work closely with our colleagues and partners in education during our research about, and on, our culture and context, while maintaining a critical stance in terms of the educational practices of ourselves and our partners.

What is the LiNKS Program?

The philosophy behind the LiNKS program is that ‘real life’ experience in ‘real
life’ schools will produce better educated teachers. Pre-service student teachers attend schools and centres to assist in everyday activities that would occur in these settings. In return the school or early childhood centre provides mentoring advice and guidance. The LiNKS program is intended to put theoretical perspectives and practical ideas from university courses into context and allow students to develop a greater commitment to their studies and the education community. It is hoped that students are able to perceive that what they are learning is worthwhile and that they will have an increased disposition to excel in this demanding career. It is hoped that the LiNKS program engages both partners. Student teachers will hopefully gain a more thorough understanding of the curriculum and bring that back to the university classes for enhanced contemporary classroom experiences. The school or centre, and its staff, benefit by gaining access to a valuable human resource, gain an understanding of our Teacher Education programs, and learn from the expertise students have developed from university programs.

Each student completes a minimum of ten hours work over one semester. Students are assigned to a LiNKS school/centre for six semesters of their program and so hopefully will develop collegial and professional relationships with the staff. The LiNKS program is distinct from a Students’ Professional Experience or Internship, which take place in contexts other than the LiNKS school or centre. That the students experience a variety of places is important to their understanding of the individual and unique qualities of different educational sites. In the LiNKS program, students are attached to a school/centre rather than an individual mentoring teacher. The activities are individually negotiated by students with their schools or centres. The hours are recorded in a journal and signed off by the supervisory teacher at the school or centre after every visit. The LiNKS Journal has become an important document for future employment interviews, together with the Certificate of Service awarded to the student at the end of the LiNKS experience. Additionally over the three-four years of a degree, students visit the school or centre at infrequent but regular times to complete observations and tasks assigned by the university. These visits are separate to any time they may give above the LiNKS requirement.

Why build school/university partnerships?

Some of the key recommendations of the Ramsey Report (2000) were that initial teacher education should be reconnected with schools, that professional experience should be at the centre of initial teacher education, that there should be an improvement in the quality and effectiveness of school-based induction and that we should be effectively preparing present and future education leaders to be highly responsive to rapidly changing societal and educational contexts. Although not actually acknowledging the long history of university – school partnerships beginning with Dewey, Ramsey’s contention that there should be improvements, and preparation for graduate teachers in rapidly changing societal and educational contexts is supported by the literature (Leiberman, 1992; Russell & Chapman, 2000; Sachs, 2003a; Seddon, Clemans, & Billett, 2005; Smith & Edelen-Smith, 2002; Yinger & Nolen, 2003). With this in mind our LiNKS program has been developed. These varied approaches to learning to be a teacher should also work towards producing good learners as defined by the Australian Council of Deans (2001) – assisted and self-directed, flexible, collaborative, good communicators, of open sensibility, intelligent in more than one way and broadly knowledgeable.
The NSW Institute of Teachers (2005), *Professional Teaching Standards* has two of its seven elements associated with the importance of teachers continually updating their professional knowledge and working in their communities – *Element 6: Teachers continually improve their professional knowledge and practice and Element 7: Teachers are actively engaged members of their profession and the wider community*. The DEST Ministerial Discussion Paper, *Higher Education at the Crossroads* (2002) argued that one of the purposes of higher education is to enable individuals to adapt and learn at local, regional and national levels and likewise the University of Newcastle Strategic Plan (2001) advocates developing collaborative partnerships with business and professional groups and that research from the University of Newcastle should have impact and relevance for the region. Therefore strong support exists Australia-wide for working towards a greater regional profile and involving our teacher education students in a wider variety of experiences to enable them to be flexible learners.

Internationally there is strong support for increased partnerships between schools and their community and for teachers to take more initiative in their own continuing professional development. This requires that the skills of a teacher be much more encompassing than simply learning tried and true approaches to classroom tasks at the feet of an academic mentor. Groundwater-Smith and Dadds (2004); Day and Sachs (2004) and Honig, Kahne and McLaughlin (2001) argue for the need to develop a broader conception of what learning is and where it takes place, to focus on what enables school-community connections for opportunities to learn and teach and to reconsider traditional relationships between researchers and practitioners in order to expand knowledge about opportunities to learn and teach. Educational research demands focus, partnership and wide approval if it is to become a part of the culture of teaching and an action learning approach to this study should enhance this aspect of the professional development of all partners (Garner, 2000).

The added dimension to the University of Newcastle LiNKS program is that it is a ‘giving back’ strategy. The LiNKS program offers an opportunity for our students to be educated but also to be committed citizens. We would hope that the sheer mass of students out there doing work related to schools might infuse a culture of socially committed teachers who we can be proud to say are our own. This in itself is an important aspect in building university-community partnerships, perhaps leading to the formulation of new community-defined priorities (Bringle and Hatcher, 2002; Angelique, 2001). This social justice aspect of the LiNKS Program adds to the importance of the research into what the university students are doing and the impact of this on the schools involved.

**Why aren’t there many strong university school partnerships?**

There are problems associated with working in such relationships. Peters (2002) mentions a variety of issues with university/school partnerships from developing ownership to reconciling views of learning, teaching, research and reform. Goodlad’s, (1998) obstacles to reform, Ramsey’s recommendations and Peter’s issues are not pioneering; they have frequently appeared in the literature over time. However there does not seem to be evidence of improved practices in enhancing these partnerships. Myriad present day researchers, (Leiberman, 1992; Russell & Chapman, 2000; Sachs, 2003a; Seddon et al., 2005; Smith & Edelen-Smith, 2002; Yinger & Nolen, 2003) have cited
similar issues to those highlighted by Goodlad, (1988) in the 1970s and 1980s. This tends to indicate that today’s researchers, like those of the 1970s, perceive that significant benefits will arise if these partnerships exist and so the sense of importance amongst academics and practitioners of such programs has not been quelled. It is not clear why these partnerships are not longstanding. There are very few examples of partnerships that last more than a few years. There are frequent presentations on University School Partnerships given at educational conferences; Cameron, (1998); Hooley & O’Brien (1997); Hunter and Beveridge (2002) Peters (1998); and Sachs, (2003b) indicating a continued momentum of interest at the academic, practitioner and systematic levels but there does not appear to be a definitive answer as to why they are not an entrenched part of our teacher education programs. Wollongong University’s Knowledge Building Communities (KBC) Project is an outstanding example of the success that can be attained from a well-organised and systematic approach to school/university partnerships.

Much of the discussion about partnerships has focused on research partnerships between schools and academics with a view to participating in a ‘community of inquiry’. As Zeichner (1994) points out, teachers’ school-based efforts in research are not seen as valuable as academics’ research which is seen as knowledge production for presumably wider audiences. Issues associated with partnerships tend to focus on these research agendas with problems related to ownership, expertise, communication, trust, and different work practices and values (Grundy, 1998). There is a perception that academics are only interested in research and teachers are only interested in teaching whereas the notion of the reflective practitioner infers that both the academics in teacher education and the teachers in the school can each be working on research and teaching, and that part of the research can be on their own teaching wherever their workplace is (Zeichner, 1992; Zeichner and Liston, 1996). The perception of university academics and school teachers as having similar roles - just in different contexts- may help bridge the gap between preservice students and newly graduated teachers.

The place of LiNKS in all of this

The LiNKS Program is aimed at providing an enduring program that has an ongoing and valuable purpose for schools, for teacher education students and the University of Newcastle with the positive outcome of providing confident and resilient teachers upon graduation who are able to effectively transform theory into practice. The LiNKS Program provides a forum for discussion and research on:

1. The development in student teachers of more encompassing skills than simply learning tried and true approaches to classroom tasks, (Groundwater-Smith & Dadds, 2004; Day & Sachs, 2004; Ulichny & Schoener 1996);
2. A broader conception of what learning is and where it takes place. (Kahne and McLaughlin 2001);
3. A reconsideration of traditional relationships between researchers and practitioners. (Kahne and McLaughlin, 2001).
How was the data gathered?

The progress of the Links students, and the validity of the program, has been monitored in a number of ways. Students have LiNKS log books in which they record all the activities they participate in their schools, the hours they attend and any comments that they and the teachers have to make. Additionally surveys are sent to schools and to students every year to ask about how they utilised the students’ services, what the problems were, how the program can be enhanced and what, if anything, they gained from the program. Teachers and students were asked if they would agree to be interviewed about their LiNKS experiences and if they are willing to show some of the material they worked on during their LiNKS visits. Additionally, anecdotally the Professional Experience staff talks to teachers about their LiNKS placements and any problems or positive benefits that may have emerged. Academic staff likewise, talks to teachers and try to gauge the interest and troubleshoot any difficulties. This campus based initiative is intended to be a longitudinal study and the real evidence will emerge as we track selected students over their four year program and into their teaching career. The experiences that they undertake in schools and the ideas they are developing about what makes a professional teacher are being compared to the NSW Institute of Teachers Professional Teaching Standards (2005) with the view that this study can provide some significant snapshots of how teachers develop when they have such broad enculturation experiences.

The First Six Months - What did the students do at schools and centres?

The students involved themselves in the every day life of schools with great enthusiasm. They:

- attended staff meeting, parent teacher meetings, grade/stage meetings, assisted with training sporting teams, musicals, concerts;
- lead school assembly, grade/stage assembly;
- took small groups for literacy and numeracy, and Science and technology.
- related to teachers in staff room relaxed conditions;
- accompanied teachers on play ground duty and bus duty;
- attended excursions as helpers;
- interacted with children 0-5 in centres, K-6 in primary and 7-12 in high schools;
- planned lessons and mini programs of work;
- assisted in the school library;
- supervised teams during school sport;
- provided computer classes;
- provided homework support.

It is interesting to note that some staff perceived- and we were told this- the students as a nuisance, not from their approach or behaviour but with teachers feeling they had to find something for them to do. Others were highly valued with principal requesting more students- especially at a one teacher school.

### Number of Students involved in particular school-based activities (N=184)

<table>
<thead>
<tr>
<th>Tasks they are involved in</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging with normal classroom activities</td>
<td>177</td>
</tr>
<tr>
<td>Observing lessons in all grades.</td>
<td>184</td>
</tr>
<tr>
<td>Teaching small groups of children within view of teachers.</td>
<td>167</td>
</tr>
<tr>
<td>Shadowing teachers on playground duty.</td>
<td>70</td>
</tr>
<tr>
<td>Assisting with arrival and departure (transport) duty.</td>
<td>6</td>
</tr>
<tr>
<td>Helping with sports teams and events, as a volunteer.</td>
<td>3</td>
</tr>
<tr>
<td>Attending and helping at sports carnivals, cross country events and themed activity days.</td>
<td>28</td>
</tr>
<tr>
<td>Attending school assemblies - speaking at assemblies to give announcements.</td>
<td>46</td>
</tr>
<tr>
<td>Attending staff meetings.</td>
<td>14</td>
</tr>
<tr>
<td>Shadowing teachers as school discipline procedures are put in place</td>
<td>18</td>
</tr>
<tr>
<td>Meet and chat with the Principal, Deputy and Assistant about roles and responsibilities of the executive (eg at morning tea or lunch time).</td>
<td>22</td>
</tr>
<tr>
<td>Sitting in on parent / teacher interviews.</td>
<td>0</td>
</tr>
<tr>
<td>Attending excursions as a volunteer helper.</td>
<td>10</td>
</tr>
<tr>
<td>Taking lunchtime activity groups as a volunteer helper eg. Guitar group, choir, sports teams and clubs.</td>
<td>2</td>
</tr>
<tr>
<td>Assisting in school musicals / extravaganzas.</td>
<td>9</td>
</tr>
</tbody>
</table>
It is obvious from this data that there are certain aspects of teachers’ work that has been targeted as appropriate for these LiNKS students. They have overwhelmingly been experiencing classroom interactions, adopting the role of teacher’s aide. Many have had the experience of teaching a small group of students under the supervision of the classroom teacher. They have had less experience in seeing and experiencing the wider role of the teacher in their interactions with community, in whole school events, in working with teams of teachers in curriculum work, in working on assessment and professional development activities. We suspect that students in ‘normal practice teaching’ situations would experience fairly similar types of activities. Our teacher education programs are aimed at much broader conceptions of teaching and so we probably need to consider whether our pre-service teachers really understand why we do a lot of what we do at university when most of their experience in schools is limited to only a few of the practices of teachers. The scrutiny of these activities will help us adapt our professional experience guidelines to better match state standards and broader conceptualisations of teaching.

The First Six Months - What did the students say about the LiNKS program?

Most students took great pride in the fact that their efforts were appreciated and valued and that they were considered as teachers in the schools they were ‘working’ in. A number were very upset that schools/teachers did not acknowledge that these students are extremely capable, are keen and willing to try, will make mistakes but look for guidance. This reflects Ramsey’s (2002) observation that teaching is perhaps the only profession where graduates are expected to arrive in schools ready to teach as if they are very experienced professionals. However in general our students are well received and supported by the majority of school/centre staff. We see this as an affirmative and encouraging field of support for our efforts in providing real life experience for both students of teaching and teachers of students. Students have also reported that their capacity to reflect on what they have learnt in schools and centres is enhanced by their connections to and dialogue with practicing teachers.

The First Six Months - What did the university staff learn about this?

We want to get the message out that these students are worthy of that great Australian tradition of ‘a fair go’ and encourage schools to give them a try. We found remarkable examples of LiNKS working well for students, university and schools. We also found out about:

- Complexity of teaching experience
- Complexity of partnerships – different expectations of the role of a pre-service
teacher in a school.

- Pedagogy versus curriculum versus relationship skills
- Links to induction literature
- Differences and similarities in children of different ages - needs, interests, command of language and social skills,
- Variety of behavioural problems and examples of teachers dealing with this
- Complexity of whole school management rather than just one class
- Need for collaboration amongst staff
- How some staff in schools and centres don’t value what students are learning at university usually because they don’t have any understanding of it

Where does this lead us?

This study has the potential to pinpoint issues that can enhance or inhibit the collaboration of school/academic partnerships, and can lead to further exploratory projects. The longitudinal nature of the study can provide useful descriptive material about the professional development of pre service teachers and may inform future studies on the progression of these students into their early years of teaching. The efforts of many university teacher education programs have been applied towards increasing school-based experience so that pre-service and graduate teachers are ready for the practicalities of school practice as well as the research that underpins these practices. We are hoping that our program will provide the best of both worlds: it may reduce teacher attrition in the early years of their career and could provide a stronger approach for teachers who make a difference in children’s lives. At the very least this project has the potential to provide useful guidance as to how to better enhance school/university partnerships.

Conclusions

We would reinforce in our conclusion the notion that universities can only ever prepare graduate teachers for life in schools and early childhood centres. It would be impossible to prepare a graduate teacher for the individual culture and context of any one of the more than 3000 schools and hundreds of child care centres in NSW alone. We suggest that this limitation be acknowledged, and that while we continue our attempts to prepare teacher education students for the profession and can deliver a general induction to the profession of teaching, the major responsibility for successful induction must be held by schools, systems and bureaucracies. That being said, we can contribute to successful teacher induction through school/university partnerships like the LiNKS program. We also acknowledge how we can strengthen these partnerships through school/university collaborations that highlight the value of what goes on in each context, how both carry out important roles and have equal status in the eyes and minds of all participants. We believe that the LiNKS program demonstrates ‘real life’ experience in ‘real life’ schools through a strong school/university partnership. We also hope it produces higher quality teachers of students who choose to teach well, stay longer in the profession, and carry on to thrive and prosper as they continue learning to teach.
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Critical literacy and inquiring minds: More critical than ever in our text-saturated world

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ABSTRACT:
Critical literacy is integral to a balanced repertoire of literacy practices in these New Times, given the continual barrage of texts, sometimes invited at other times unsolicited, from a disparate array of known and unknown sources. Critical literacy, together with an inquiring mind, offer tools for deep understanding that have been valued in Australian schools for some time. Given the hazardous ground associated with our text-saturated lives, it could be harmful to one’s personal well being to be left exposed without such tools. However, current debate in Australia targets critical literacy in considerable and profound ways. There is a strident public discourse in opposition to the teaching of critical literacy in schools, and within teacher education programs. Regular articles continue to appear in the media, blaming critical literacy for a purported decline in literacy standards; suggestions that critical literacy derives from a left-wing conspiracy to undermine Australian values have been used to further politicise this process. Should the ‘conservative’ political view win the day, teaching of critical practices will most assuredly be deleted from the school curriculum and the potential benefit it offers to future students lost.

This paper attempts to ‘objectify’ the critical process, offering sound, clear argument for promoting an inquiring mind and critical approaches to literacy within teacher education programs. Using excerpts from some of the literature across this public debate, I put an argument that encourages ‘logical’ thought about the merits of critical views on literacy and thinking. These views are located in the argument as essential elements of a futures-orientation to literacy and learning, to stand alongside the broadly unchallenged acceptance of phonemic awareness and adherence to conventions of spelling and punctuation as essential ingredients in what it is to be ‘functionally literate’ in 21st century Australia.

Introduction
Education in Australia is a responsibility shared by State and Federal governments, independent of the incumbent parties and their foundational differences in ideology; however, educational issues have become highly politicised in Australia recently with public debate often polarised along party lines. Such debates can be somewhat ‘chicken-and-egg-like’ as to whether an issue emerges as political exchange in parliament then gets picked up and reported by the press or, if members of the press decide to take on an issue, politicians then fall into line with a response. In such cases newspapers report on educational matters, repeating a perspective consistent with the paper’s political alignment, to the point where it becomes an issue of public concern such that politicians must make clear their own and their party’s position. In response to a newspaper campaign against the teaching of critical literacy in schools, for example, the newly appointed Queensland Labor Minister of Education jumped on the campaign bandwagon with his commitment to “…remove post-modern ‘mumbo jumbo’ from the classroom” (Slattery, 2005a). The media can, through a concerted and focussed campaign, using regular and frequent reporting of this sort, speak a preferred truth into existence, causing particular ways of thinking and speaking about the issue to become an ‘everyday truth’ in the public discourse and an educational crisis emerges.
Freebody (1997) described six such ‘crises’ that had emerged around literacy issues at the time his paper was published ten years ago. It is clear that informed and on-going public debate around literacy must continue among various interest groups in attempts to deal with many complex matters in the most productive way. There are undeniably major issues with literacy and numeracy preparation of teachers at universities and teaching in classrooms that need to be addressed. The concern however, is that ‘the discourse of crisis’ (Freebody, p. 5) that arises from media campaigns surrounding such issues often confound the discussions. Such campaigns can impede a productive response to a changed world in which literacy teaching and assessment, for example, may need to be conceptualised in new ways that get obscured and obstructed by the ‘crisis discourse’. Such is the case surrounding the public debate on critical literacy in Australia today. This paper is an attempt to examine this public discourse and an appeal for reasoned and informed debate about what is clearly a major national concern.

The critical literacy crisis

The ‘education in crisis’ discourse has received a strong revival from Donnelly’s book Why our schools are failing (2004) and subsequent publications by this and other like-minded writers. Donnelly, suggesting that “our education system is in crisis” (p.1), provided a staggering array of ‘facts’ and interpretations of evidence to confirm his crisis theory. Freebody (p.6) described this tendency to “…include even more references to research data than usual” in order to prove the presence of a crisis as typical in building the ‘crisis discourse’. It is not the intention of this paper to debate the accuracy of Donnelly’s claims; others have done so (Freebody, 1997; Keese 2005; Reid 2006) offering some clear evidence refuting these claims and their purported proof of crisis. However, this paper does explore how the current newspaper campaign builds on Donnelly’s assertions, attributing causality for a literacy crisis to the teaching of critical literacy which, we are told, is bound up in left-wing ideologies and political correctness with the only outcome being students who can no longer ‘correctly’ read ‘the classics’ and other important works. I argue that, through clever selection of extreme examples and repetitive use of pejorative terms in newspaper columns, a ‘crisis’ has been spoken into existence, popular opinion has followed and politicians are scrambling to establish their position of ascendancy. The campaign against teaching critical literacy has a clear goal, “…the inevitable passing of critical literacy into the large well of dumped educational fads” (The Weekend Australian Editorial, 2006). Should this occur the ‘ultimate losers’ would be young students in schools and that is a risk we should not be taking; teachers and teacher educators must be clear on how this campaign is operating against the important work being done in teaching for critical and inquiring minds. The potential for critical literacy teaching to be removed from classrooms is the critical literacy crisis and that is a clear and present danger!

Building a public campaign against critical literacy using 3 themes

Perhaps the vigour behind this campaign was, as Freesmith (2006) suggested, a reaction to an editorial written by Wayne Sawyer (2004) in the journal English in Australia where he spoke openly about the failure of secondary English teachers to get the message about doing critical literacy across to their students. The evidence he cited for this failure was that Australians had just re-elected the Howard Liberal government; clearly this couldn’t have happened, Sawyer suggested, had the populace been sufficiently well versed in critical literacy and equipped with inquiring minds. He suggested (p.3) that critical literacy is meant to teach people “…to ‘suss’ out how they are being worked over – by advertisers, by politicians, by the media” so what went wrong in the 2004 election he asked? Sawyer (p.8) concluded with questions for the future to ensure that things like re-electing such a government don’t happen again – fairly confronting stuff for some, no doubt!

Sawyer’s editorial generated hardy reactions from among the antagonists in the critical literacy campaign and is still used to advantage whenever an example of ‘extremist thinking’ among teachers is required to support their argument. Newspaper columns written by opponents of critical literacy began to appear quite frequently from early 2005 including appeals against such “…post-modern theories and academic
jargon” and other “…marginal theories” (Slattery, 2005a) as indicated by the presence of critical literacy in classrooms. Teachers are encouraged to reject this “…post-modernist mumbo-jumbo” and, instead to take up an alternative in the form of “plain English” and a return to “…the joy of reading …for its aesthetic and moral influence” (Donnelly, 2005). This campaign continues to gain momentum as the rhetoric used and its impact on popular opinion and political decision-makers intensifies (Slattery, 2005; Donnelly, 2005; Ferrari, 2006).

In order to more clearly understand the momentum behind this campaign against critical literacy, I have identified three consistent themes used in the campaign, as follows:

1. that critical literacy is a left-wing, ideologically driven “marginal theory” or fad led by teachers’ unions and left-wing radicals with a clear political agenda

2. that critical literacy is based on a “…politically correct view on social and political issues” (Donnelly, 2005) in the extreme and students are taught to become “…politically correct, new age warriors” (Donnelly, 2004)

3. that the study of critical literacy in schools, by combining these first two themes, “…takes away the enjoyment of reading, squeezes classic works off the syllabus” by forcing students to read any text “…through the politically correct prism of sex, ethnicity and class” (Donnelly, 2006).

Recognition of these themes as political rhetoric disguised as educational debate is helpful in realising the impacts of this campaign for teachers who engage students in critical literacy learning, the potential risks of preventing such instruction for future students and offers a clear rationale for more reasoned and balanced public debate. Further, use of these themes indicates less an attempt by the authors to inform or educate their readership with some balanced perspective on the issues but, rather, serves to powerfully indoctrinate and politically influence the reader-audience to join the campaign against such teaching in Australian schools. These three themes, used as textual devices for progressing the campaign against critical literacy, provide ample corroboration for the continued inclusion of critical inquiry in every person’s literacy repertoire.

Conservative historian Keith Windschuttle (2007) writing in Quadrant* magazine, provided odd, and likely inadvertent, support for the above points; he described how public campaigns against military conflicts such as the Viet Nam and Iraq wars have influenced their outcomes far more than the military battles themselves. He suggested that these public media campaigns use propaganda, the “one weapon whose ability to affect outcomes has always been notorious”, are influenced by “…our tertiary-educated, middle-class Left”, and have had dramatic and powerful effects on social trends over the past thirty years. According to Windschuttle, the “most powerful device in the propaganda arsenal is the atrocity story [italics added]” citing “ the worst Australian atrocity story of the present period is the fate of SIEV-X, or Suspected Illegal Entry Vessel, Unknown”. Many of us can remember our feelings about that one!

Despite the irony of coming from this bastion of neocon thinking, these elaborations reflect how the three themes in the critical literacy campaign comprise the propaganda, based primarily on political ideology and less on pedagogic or curriculum merit. The use of simplistic classroom examples, taken out of context and reported in newspapers, takes on the form of ‘atrocity stories’ in this campaign, not in the extreme violence of prisoner abuse at Abu Ghraib prison perhaps, but nonetheless a powerful force in this campaign. These stories help the conservative side of politics build a campaign against teaching young people to develop an inquiring and critical disposition. An examination of the three themes demonstrates the need for a more reasoned and informed debate on this important issue; examining the ways in which the campaign is used to influence people’s thinking, makes apparent how this rhetoric is powerfully shaped by ideology, clearly justifying support for critical literacy and inquiring minds.
To the three themes

1. that critical literacy is a left-wing, ideologically driven “marginal theory” or fad led by teachers’ unions and left-wing radicals with a clear political agenda

Critical literacy in its many forms has evolved over decades from diverse informing theories. Like many complex concepts, there is no singular definition embodied in the term, although it often appears in the press as if there were. The origins of the concept cross many fields including Marxist ‘emancipatory’ theory, New Literacy Studies, social critical linguistics, systemic functional grammar, feminist poststructuralism and more. Many of these have grounding in principles of social and just treatment of peoples, particularly those likely to experience social and economic disadvantage in some form. That such eclectic theories have had varying influences on critical literacy instruction in teacher education programs and school classrooms is well documented; fair-minded thinking has also shaped social policy across much of the developed world, providing legislation for a more just and tolerant society. Such ideology is not to be denied nor are the civilising results of such progress deserving of anything but celebration.

However, contrary to repeated claims by campaigners against critical literacy, these origins do not mean teaching critical literacy in teacher education programs and in school classrooms is a left-wing treachery intended to overthrow our democratic nation and destroy all worthy social values. Such claims are mischievous indeed. Rather, one could argue, Australians by and large have a strong sense of social justice embedded in the ‘fair go’ discourse. This ideology is sacrosanct across the social fabric of Australia and is anything but an extreme bit of minority left-wing propaganda. Such ‘fair go’ thinking underlies critical literacy and is the basis for its instruction in schools. It is not about driving an extreme left-wing political agenda but all about working to ensure each and every student is enabled to feel secure and included in this thing called ‘being Australian’. It offers resilience for practitioners, equipped with a critical and inquiring mind, to deal with the myriad texts of everyday 21st century life, texts which are sometimes invited at other times unsolicited, from a disparate array of known and unknown sources.

It is nonetheless those historical origins of critical literacy, from the social left of politics described above, that are used to feed the political campaign and hysteria being directed against such teaching. Claims such as “…the cultural Left has taken the long march [a clever touch, referring to Chairman Mao’s long march, used by the author to affirm the extreme left-wing, even communist leanings, of critical literacy proponents] through the education system in its attempt to change society by overthrowing the traditional academic curriculum” is the basis of the propaganda behind this theme. Dismissive statements such as “…politically correct fads such as critical literacy” (Donnelly, 2006), where politically correct is equated to whacky left-wing thinking, have been dominant.

In contrast to this politicised view of critical literacy is the assumption of critical literacy as a ‘basic’ component of this thing called literacy and not an optional extra (Would you like fries with your burger?). Freebody and Luke (1990), in their original work, described “…four components of success, based on our perceptions of what our culture expects, here and now, from people in their management of text”, including the role of text analyst involving inquiry and critical ways with texts. The place for the critical in literacy is as part of a complex whole, sitting alongside letters of the alphabet and spaces between words with no pride of place attributed to one over the other in the package. Given its importance for the literate well-being of 21st century Australians, the teaching of critical literacy and its productive application continues as vital within any contemporary schooling context, as essential content in teacher education programs. In response to the public politicisation, even demonisation by some, of critical literacy and its proponents, this paper is an attempt to objectify critical literacy as a literacy practice.
(Street, 2003; Barton, Hamilton and Ivanic, 2000) and support for continuing to teach critical literacy as integral to a well-developed repertoire of literacy practices.

2. That critical literacy is based on a “…politically correct view on social and political issues” (Donnelly, 2005) in the extreme and students are taught to become “…politically correct, new age warriors” (Donnelly, 2004)

The concept ‘political correctness’ has been applied to, among other things, adherence to language that is not demeaning, either explicitly or implicitly, of any group or individual on the basis of race, class, gender, religion, sexual preference, ability and other attributes. Such noble intentions have been supported by legislation protecting against vilification of individuals or groups by public use of prejudicial language and are enshrined in many aspects of public discourse, recognised as beneficial, inclusive and civil practice. Roberts (2006) has provided a useful retrospective on the term political correctness, or PC as it has come to be known. The one feature it always has in common, when used in a pejorative way, as is almost always the case, is its representation of intolerance (p.87). Roberts suggested that, due to a “lack of perceptual clarification” it has “allowed the term to serve as a powerful device for attacking new ideas and practices” (p.84) and “has been highly effective in silencing debate” (86).

This pejorative use of political correctness and its variants occur in virtually every article written in the recent campaign against critical literacy. It is always proffered as another reason why critical literacy has come into existence, to enable the “the thought police of the left” (Donnelly, 2004, p. 127) to catch out those who might not follow fair language use. This, the antagonists would suggest, is an even greater reason for why such a practice should no longer exist in schools. The pejorative use of the term has joined other negative labelling of socially committed peoples such as ‘greenies’, ‘peace educators’ and ‘multiculturalists’. Such use of political correctness follows the intolerance theme to suggest that to be PC is intolerant of those who, presumably, wish the freedom to publicly refer to individuals and/or groups in ways that are not respectful, nor civil nor inclusive.

What has emerged is a conservative groundswell in public discourse against PC. ABC Board of Director and well-known conservative historian Keith Windschuttle spoke recently “on the end of intellectual cowardice”, using Orwell’s difficulty in getting Animal Farm published in a day when such stories were out of political favour, as a case in point. It seems that over the past two decades this thing called political correctness, where “almost any criticism of the leftist ideological triumvirate of gender, race and class could not be expressed in print”, has silenced many voices. He described those so constrained, including editors and publishers, as engaging in ‘intellectual cowardice’, the unwillingness or inability to say and write what one thinks lest it be held up as politically incorrect.

We are now witnessing a dramatic change in public discourse, in which a new politically correct conservative voice is dominant. Newspaper columns and elsewhere tell us that studying how language might operate to disadvantage or marginalise people, as studied in critical literacy courses, has some evil, left wing, politically-correct, ideological motivation. In the public campaign against critical literacy, it is now quite okay to openly, publicly and with some level of hostility, demean well-intentioned professional educators by labelling them as ‘radical’, ‘loony’, ‘lunatic fringe’, purveyors of ‘edubabble’, ‘more concerned with ideology than education’, ‘left-wing’, ‘new age’, ‘infesting schools’, ‘wasting their [students’] time’, ‘nonsense’ and other overtly demeaning terms. (Oddly, in The Weekend Australian (2007b) Donnelly responds to two mild rebukes of his book Dumbing Down (2007) by Stuart McIntyre who, Donnelly said, “demonstrate[d] a decided lack of professional integrity” by such rebukes!) Through the repeated pejorative use of the term ‘politically correct’ as intolerance, a public sense of negativity towards the values inherent in the term is established. Now that this has been achieved the term can be used to demean, in any way one likes, things, ideas, people and practices related to it. It is a neat contradiction that political correctness can be used in such a negative way, where its very use as such is a
refutation of its existence or any potential values attached to its existence. Such is its clever yet sinister role in this theme in opposition to some more reasoned and balanced debate.

3. that the study of critical literacy in schools, by combining these first two themes, “…takes away the enjoyment of reading, squeezes classic works off the syllabus” by forcing students to read any text “…through the politically correct prism of sex, ethnicity and class” (Donnelly, 2006c).

Extreme examples in newspaper reports about critical literacy classrooms and the range of texts being studied are regularly used as ‘atrocity stories’. These are used to further ridicule teachers and their teaching of critical literacy and inquiry such as: “very well to study Buffy the Vampire Slayer and Big Brother” (Slattery, 2005b); that “the Diaries of Anne Frank be replaced with the Emails of Tom Cruise or the Text messages of Shane Warne”( Ferrrari, 2006); that those who support critical literacy claim “all texts are of equal value” and challenge the ‘obvious truth’ that “students should spend their time studying Shakespeare instead of Australian Idol” (Donnelly, 2006b); or Donnelly paraphrasing Howard “where graffiti and SMS messages shared centre stage with Shakespeare” ( 2007a).

Many, many such examples have been used to ridicule the teaching of critical literacy, providing an open invitation for newspaper readers to reject any possibility that critical literacy is a legitimate form of ‘reading’. It is this continual bombardment, with examples taken out of any meaningful context, which furthers the politicisation of the campaign against critical literacy. Given the great deceit implied in these examples and the potential for real harm to critical inquiry overall, I would make the following points in response to this most important of the three themes.

a) What is omitted from these examples is that an essential aspect of studying critical literacy naturally involves the use of texts as objects of study. In recent years the concept of ‘text’ has moved beyond just print on a page to include any spoken, written or multi-mediated event that is meaningful to an audience. As Freesmith (2006a) suggested, “the study of Shakespeare and television advertising are by no means mutually exclusive endeavours”; in a critical literacy classroom, teachers and students work with a text or texts from a variety of sources and engage in various levels of questioning of those texts. This would include determining how, linguistically perhaps, the author has created or crafted this text. They would ask a range of questions about the social roles, facts and values portrayed within the text and the purpose for including those in this text. This provides wide opportunity to study grammar, spelling, punctuation and all other aspects of text construction, to understand the linguistic and social tools used in creating texts. It mandates a deeper understanding of how the language works than any ‘simple reading’ purely for basic content knowledge would ever require.

b) On the matter of text selection, teachers typically use texts from two sources: 1. texts prescribed from within the school context such as set pieces of literature from the English curriculum like Shakespeare, Dickens or Malouf and 2. those that come from sources more typically seen as external to the school curriculum such as are found in the popular media. The latter are often chosen for relevance to the students’ lives outside school or which fit into some content area of study in meaningful ways. It has been at this fundamental level of text selection that the campaigners have been most vocal, evidenced in the examples above. They speak of Text messages of Shane Warne or Australian Idol as though they are studied as content to be learned rather than as examples of texts for study, overlaying a critical lens to develop a deeper understanding of how an author has portrayed a particular version of reality. The texts themselves are used for developing the skills and understandings that go with being critical and inquiring in response to texts. However, stating “…graffiti and SMS messages shared centre stage with Shakespeare” would quite reasonably cause people, who may not have a deep understanding about critical literacy, to see it as questionable practice at best.
c) Another device used in the campaign is what ‘real reading’ should look like. In an editorial in *The Weekend Australian* (2006) titled *Deconstructing the Loony Fringe*, a classroom study of Shakespeare is derided for exploring the text using “…Marxist, feminist or racial analysis rather than according to the universal truths such as love, hate, pride, ambition and jealousy.” Are class, race and gender somehow not ‘universal truths’ in people’s lives, which exist in various ways across different lives, times and places in history? Do these things somehow not exist within the text and have important roles to play in the meanings made? Are these somehow not worthy of study where the author’s preferred choices of “love, hate, pride, ambition and jealousy” are? What makes one basis for exploring meaning in text better or more important than the others. Need they operate in mutually exclusive and isolated ways? Is there any less bias in the ‘correct reading’ proposed in this and myriad other columns which make the same claims of truth? In this same column a claim is made for the importance of “The *Weekend Australian*’s support for neutral, apolitical teaching of English”. Are manifestations of “love, hate, pride, ambition and jealousy” so neutral as to be above reproach?

d) Perhaps the most damaging claim by the campaigners is that critical inquiry around texts results in a loss of pleasure and enjoyment for reading; that it destroys the aesthetic qualities of a well-written text to analyse it for various attributes utilised in critical literacy. Anecdotally, I can attest to the exact opposite; the senses of new-found excitement for reading my students express when they more fully understand how texts ‘work’ in subtle ways are profound. It often begins with an examination of ‘simple’ texts such as advertisements and product packaging that opens their eyes to the subtle manipulation of an audience that can go unobserved without asking useful questions. The enhanced pleasure they experience when they more fully understand the clever ways their favourite author builds a character or story line, through linguistic choices to establish power and dominance vested in the story’s hero, is common.

e) Finally, in this campaign theme students are given little credit for being able to think for themselves. One gets the impression that students learning critical literacy lose the capacity to judge when deep analysis and inquiry around texts might be useful, necessary or not at all. In fact, what students learn is to discriminate based on why a text is produced, by whom and to what end. Reading a favourite piece of fiction before peacefully falling asleep at the end of a busy day is just that, reading for pleasure and relaxation; this is not lost through critical literacy but often enhanced. On other occasions, when reading a political campaign statement or seeing an advertisement on television, for example, one may recruit more critical analysis to plumb the depths of meaning layered in such texts. Janks (2002) described various ways we might read texts, looking closely at television ads that use irony where the humour is based on not being politically correct and the extent that we want to or should critically analyse such texts at the risk of losing the ironic humour on offer. It is all about reading with awareness, discrimination and purpose, providing heightened levels of resilience or enjoyment as desired, supported by critical literacy, a clearly beneficial practice in a text-saturated world.

Some concluding remarks

For teacher educators it is important to remind ourselves that various interest groups, including parents and care-givers, rank among their primary concerns, children’s knowing how to deal with the multitude of texts available to young people through the internet, television, music, video and others. People strongly support the need for children to robustly discriminate among these texts for their personal safety and well being; they recognise resilience as a core personal attribute for uncertain futures. Yet, when people read the words critical literacy in newspapers, it is much more likely to be described as some hair-brained post-modern fad dreamed up by extreme lefties bent on destroying Australian values! This campaign, to encourage people’s rejection of teaching critical inquiry around texts to their children, is actually preventing that very thing they describe as so important, resilience and critical discrimination as life skill.
To that end, I believe we, as teacher educators, have a responsibility to engage with this public campaign against the continued offering of critical inquiry in our teacher education programs. As McBurney-Fry (2002) suggested:

*The best teachers are those who are truly professional in their approach – in attitude and through awareness of those issues that form part of the ‘education’ debate. Many of these issues are part of a wider debate about the direction society is taking.*

Understanding that New Times now include a strongly conservative politically correct world of ‘open slather’ in public discourse will require maintenance of a civil yet more concerted and united voice as we so engage in this debate. I believe we can ‘objectify’ the process of critical literacy in the face of opposition intent on forcing some political agenda on the process. This literate practice need not depend on a particular political standpoint but can apply to any text, regardless of its content and the beliefs of the reader, listener or viewer.

I also believe that critical literacy, going to its very roots (Freire, 1973; Freire and Macedo, 1987; Lankshear, 1994; Lankshear and Knobel, 2003), must continue the important role it plays in confronting issues of injustice and disadvantage. This remains paramount in the global campaign for a better life for marginalised people everywhere; any attempt on my part to ‘objectify’ the process is not to demean its continued role in making apparent such injustices. Indeed, the insistence within the conservative campaign under review here, for a return to prominence of ‘the canon’ as a privileged and sacred set of texts to be read from a pre-determined standpoint, is an example of such hegemonic thinking. David Freessmith (2005) provides an excellent critique of this campaign in his paper *The Politics of the English Curriculum: Ideology in the Campaign Against Critical Literacy in The Australian,* making apparent much of this process to date.

However, that the potential for critical literacy to serve all people in their daily encounters with the myriad texts that come our way, no matter the degree of privilege or disadvantage one may experience in life, is also important. Regardless of one’s class, gender, race, ethnicity or any other classification or attribute one might use, we are all vulnerable to the potential for texts to influence our lives in a variety of ways. The current debate on educational issues in Australia is a clear case in point; the influence of rhetoric published in the popular press is influencing popular belief that is, in turn, forcing politicians to respond, regardless of the foundations upon which the claims are made. These same ‘reports’, which are often simplistic and sensational, are causing people to develop views and form opinions on very complex issues about which they may or may not be truly well-informed but upon which they may base important decisions for themselves and their children. A solid grounding in critique and inquiry would enable people to respond in more informed, productive and responsible ways than they might do otherwise. We must work to overcome the troubling, oh-so-common acritical response to any text that comes along: *It’s true, I read it somewhere!!*

*Quadrant* magazine is described on its website as follows:

“What is Quadrant?
Quadrant magazine is the leading general intellectual journal of ideas, literature, poetry and historical and political debate published in Australia. Its stance is often described as conservative, neo-conservative, or rightwing. In fact it is not necessarily any of these things, but maintains a sceptical approach to unthinking Leftism, or political correctness, and its "smelly little orthodoxies".”

References


Literacy standards in preservice teacher education: What might be ‘the basics’ of such standards?

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ABSTRACT:

The rich national discourse, within which this study is firmly imbedded, presents great challenges for teacher educators as we move somewhat clumsily into the latter half of the ‘Noughties’ in 21st century Australia. Relevant issues sit within the broader Australian debate on literacy standards generally, as well as the discrete issues of teacher quality, performance and professional standards.

The vexed topic of literacy standards among students entering tertiary study continues as a major concern across university campuses, suggestive that there is clearly something going on which cannot be ignored. For some time the discourse has run that students present with clear deficits (yes, alas, they have been described, by some, as deficient), gaps, if you will, in certain aspects of being literate that are unexpected in those who have managed to succeed at Senior secondary school. As in other tertiary institutions, staff within the School of Education at the regional university in which I work, continue to respond in a range of ways to the matter.

This paper canvasses a number of related issues, drawing on current documents that are informing public debate, to establish a firm context from which this work-in-progress has evolved. The paper reports on work undertaken to describe in discrete ways the personal, academic and professional literacies expected and required of candidates wishing to take out teaching qualifications. The early stages of a case study in progress, undertaken to refine our understanding of just what it is a cohort of first year students are able to do with literacy on entry to our programs, is also discussed.

Introduction

There is growing angst among colleagues working in teacher education programs concerning the literacy competencies of students entering these programs, particularly among recent school leavers. The concern is not a new phenomenon but one that has been escalating over two decades (Beasley, 1984; Watt, 1990; Wilson, 1997; Allan, 2007), generating varied responses among tertiary institutions. Is the problem as bad as described by many and, if so, how can it be that students arrive at university with ‘disturbingly low’ personal literacy competencies? There are related questions about the range and relevance of literacies involved in academic literacy and the implications for people’s work as teachers, where professional literacy competencies will impact greatly on teachers’ careers and, some may say more importantly, on the lives of their future students. These ways of thinking about literacies, as personal, academic and professional, inform this paper and, to some extent, a case study I have undertaken at the regional university where I work, involving a cohort of first year preservice teacher education students. The paper explores literacy as a concept, addressing ways in which one’s understanding of the concept impacts on one’s perceptions when considering literacy as situated practice in the professional identity of individuals as emerging teachers.

We’re all in the same ‘fix’

Literacy has a contentious place in the emerging roles for education in new times as we move
somewhat clumsily through the latter half of the 21st century ‘Noughties’. The latest response from the US is the No Child Left Behind Act (2002). It includes a foundational literacy program called Reading First described as “the academic cornerstone of No Child Left Behind, which recognizes [sic] the importance of both improving student reading achievement and implementing programs and strategies scientifically proven to be effective.” The Blair government has Raising standards, improving lives: The Office for Standards in Education, Children's Services and Skills Strategic Plan 2007-2010, charged with implementing The National Literacy and Numeracy Strategies and the Primary Curriculum that clearly sets out how literacy is conceptualised and ‘delivered’ in Britain.

Australia has undertaken numerous related inquiries including the National Inquiry into the Teaching of Literacy culminating in the report Teaching Reading (2005) where literacy is described as: “the integration of [italics added] speaking, listening, viewing and critical thinking with reading and writing.” (p.7). More recently the National Inquiry Into Teacher Training, commissioned in 2005, released its report Top of the Class: Report on the inquiry into teacher education (Feb., 2007). This report provides findings and recommendations related to literacy standards for teachers, including the following conditions for entry into and exit from teacher education programs:

Students entering teacher education courses should undergo diagnostic testing of their literacy and numeracy skills. On the basis of the results, teacher education programs should provide assistance to students to ensure they develop literacy and numeracy skills to the required level. (p. xxiv)

However, I was unable to find anywhere in this report a definition or conceptual frame for understanding the term literacy; there is frequent use of phrases such as “required literacy skills” and “high literacy standards”; generally the word literacy is used in conjunction with numeracy as in “their literacy and numeracy skills” or “teach literacy and numeracy” or “literacy and numeracy skills to the required level”. On no occasion is the term ever defined.

Too often, when terms used to describe a complex concept like literacy are used in such a vague and generic way, it invites radically divergent interpretations which, in turn, run the risk of weakening the position and intention of the document. This is important, not in constraining the debate, but in ensuring some degree of commonality in ‘reading the word and the world’ (Freire and Macedo, 1987) of literacy as it is included in the document.

Discourses of decline in literacy standards
There are clearly things going on regarding literacy standards among students entering tertiary study which can no longer be ignored, call it a crisis if you will. There are two distinct yet related discourses around the issue that I draw upon for this paper. This delineation, between theories about literacy pedagogy and theories about literacy itself, is not intended to force some theory-practice divide but, for the purpose of this paper, useful in establishing which the discourse position is under consideration.

The discourse around literacy pedagogy plays an important role in the standards debate. Typically, when a student is cited as being deficient in literacy competencies it is attributed to failed pedagogy somewhere in the student’s school experience. This has provided the basis for the literacy wars over what makes the best literacy pedagogy and which continue to rage.

Though not a focus of this study, issues of teaching practices that may lead students to be literate in productive ways is important for teacher educators; it is an issue of responsibility to which teacher education programs must continue to respond. This is certainly a high priority in the findings and recommendations in Top of the Class: Report on the inquiry into teacher education (appropriate resourcing of the recommendations will be vital but that is another story altogether).

The second discourse involves theories about and constructions of literacy and what these imply.
This is all about how one conceptualises literacy and how particular literacy practices are given primacy in unique ways by various groups. One’s definition of literacy may be based more or less on current informing theories or, as is true in so many cases, derives from one’s own school experiences of literacy instruction or the experiences of one’s children in the current context. The very existence or not of a ‘literacy crisis’ is determined by and dependent on the meaning one attributes to the term literacy itself. This is an important focus of this paper and the research described below.

To illustrate this point, I refer periodically to an Opinion piece in *The Australian* newspaper (April 11, 2007, p.12). I use this article, not to denigrate the opinions expressed or to deny the important points that are made by the author, but simply as one example of many texts that follow a similar theme. The author of this piece, James Allan, professor of law at the University of Queensland, stated that “some of the best university students in the country…elite students…the very top high school students ”, entering law at the University of Queensland, “cannot cope with basic sentence construction …use semicolons and colons without the faintest idea of how they should be used…with the abbreviating apostrophe sprinkled around in the hope of getting it correct once in a while.” Professor Allan continued to cite ways in which these students, while they “have some of the best marks, and minds, in Australia”, fail miserably when it comes to “basic literacy and English grammar.” Professor Allan has described precisely the concerns being expressed widely across the tertiary sector. He concluded with “a more depressing possibility in getting basic grammar skills taught today may be that a sizeable chunk of our recently graduated teachers may not know these skills themselves.” This is the very essence of why teacher educators must respond!

### Informing literacy theories used in this paper

When considered in the way Allan describes, literacy means getting the finer conventions of spelling, punctuation and grammar accurate; this is common evidence provided in the low literacy standards discourse and one that is troubling for a number of reasons. It involves, in quite important ways, what Lankshear and Knobel (2003) refer to as mindsets, firmly held individual and/or institutional ways of thinking about complex things like literacy. These researchers describe how mindsets about literacy “grounded in the familiar physical world (book space)” for example, are being “imported into cyber/virtual/information space” (p.33) in highly problematic ways. Getting bogged down on this ‘mindset roundabout’ Lankshear and Knobel suggest (p. 32), establishes “a striking divergence of mindsets”, a set of insiders and outsiders to particular views on literacy, which has had the effect of polarising debate in unproductive ways.

In order to establish a conceptual frame, without writing a history of the evolution in thought around the term literacy, I draw briefly on the early work of Street (1984) and others in the distinction made between ‘autonomous’ and ‘ideological’ conceptions of literacy. Freebody and Luke (1990; 1997; 2003) and their familiar “heuristic guide for literacy educators” of the 4 resources/roles/practices are used to explore the range of literacy practices under scrutiny in the ‘deficiency stakes’. The New Literacy Studies – NLS – (Street, 1984; 2003; Barton, 1994; Lankshear & Knobel, 2003; 2006; Gee, 1991; 1996; 2003; 2005) add further elaboration to the concept of literacy as sets of social practices around literacy events as they comfortably exist in various discourse communities; this is of particular consequence, as these scholars suggest, in these new times of digital communications and other technologies and their considerable importance for teachers and schooling of students.

The autonomous model, Street (2003) suggests, is evident when “literacy in itself--autonomously--will have effects on other social and cognitive practices… as though they are neutral and universal and that literacy as such will have these benign effects”. The *Teaching Reading* (2005) report provides an example of the autonomous model at work:

> ‘reading (a key element of literacy) … is foundational, not only for school-based learning, but also for children’s behavioural and psychosocial wellbeing, further
education and training, occupational success, productive and fulfilling participation in social and economic activity, as well as for the nation’s social and economic future.”
(Executive Summary, p.1)

This sequence is often recruited by politicians when campaigning on declining literacy standards: low literacy competence poor work prospects boredom drinking, gambling and drug taking petty crime to ‘feed the habit’. Improving literacy standards will reduce crime, increase employment statistics and all will be well again. Literacy (reading) will act autonomously, in and of itself, to achieve such lofty results.

The ideological model suggests “that literacy is a social practice, not simply a technical and neutral skill...is always embedded in socially constructed epistemological principles...always rooted in a particular world-view and in a desire for that view of literacy to dominate and to marginalize others”. The quotes from Professor Allan’s article are indicative of this ideological view. It involves asking “whose literacies are dominant and whose are marginalized or resistant”. As Street suggested, “Literacy comes already loaded with ideological and policy pre-suppositions” (p.78) and these need to be made apparent if effective and balanced discussion is to occur and relevant research undertaken.

**Literacies as social practices involving literacy events**
What often occurs is an over simplification of the complex concept that is literacy. This reification, to some considerable extent, is symptomatic of a crisis that cannot be ignored. In order to move beyond those ideological and/or autonomous pre-suppositions, NLS advocates make a distinction between literacy events and literacy practices. Literacy events follow Heath’s (1985) notion of “any occasion in which a piece of writing [sic] is integral to the nature of the participants' interactions and their interpretative processes” and literacy practices where the “concept of literacy practices ...not only attempts to handle the events and the patterns of activity around literacy events, but to link them to something broader of a cultural and social kind”. These concepts offer productive ways of exploring issues in the current debate; a useful example of this is the Literate Futures: Report of the Literacy Review for Queensland State Schools (2000, p.9) where literacy is “the flexible and sustainable mastery of a repertoire of practices with the texts of traditional and new communications technologies via spoken language, print, and multimedia”. This elaboration of literacy practices and events expands the concept of text beyond Heath’s notion of ‘a piece of writing’ to include “spoken language, print, and multimedia” reflecting the literacy events and practices of 21st century life.

These concepts sit nicely within the heuristic offered by Freebody and Luke (1990, p.7) which has been broadly used to inform school literacy programs across Australia and internationally. Going back to Allan’s report in The Australian, each point he makes describes literacy practices such as accurate use of the colon, semi-colon and apostrophe. Freebody and Luke (2003, p.54) describe these as ‘basic entry-level [en]coding” practices with conventions unique to the literacy event involved. Applying this to students’ academic writing, marks might be attributed to following these conventions where different worth or no worth at all might be typical of email to a friend or writing a shopping list; each of these is a literacy event complete with appropriate literacy practices.

My point is not to trivialise the importance of Allan’s concerns above. It is to recognise that, in terms of the academic and/or professional literacy practices of teachers, such things are non-negotiable while in other aspects of one’s personal literacy practices, across other daily literacy events, maybe not so much. It is to reinforce that “societies and communities that we live in are not singular ‘cultures’ with uniform demands and experiences but, rather, heterogeneous societies with diverse and hybrid identities and practices, texts and media” (p. 54). Broad acceptance of the concept of literacy practices is incorporated in the term multiple literacies; common application of this principle includes everything from music to financial to computer literacies. At last count, I had 56 different ways in which I had read literacy with an
accompanying adjective to distinguish the discipline-specific or context-specific literacy practices involved.

This provides a useful construct for discussing student literacy competencies and possible ways of reacting to the challenges, somewhat free of the autonomous or ideological constructs which inhibit such debate. Understanding the range of literacy practices students entering university are able to recruit and utilise as they engage in various personal, academic and/or professional literacy events, has proven quite useful in the on-going research underway at the university where I work, as reported below.

A chronology of concern
Ten years ago, in the School of Education of this regional university, the coordinator of honours programs declared: “I have several students in this year’s honours program who are illiterate! They can’t write a simple sentence using correct grammar or punctuation and their spelling is atrocious!!” How could students have progressed into tertiary study, let alone an honours program, with such apparently poor literacy competencies? A workshop was convened to explore the literacy issues and a number of things emerged. The simple answer was that criterion-based assessment, with only one criterion scored for literacy conventions, allowed students to get high marks even with some writing indiscretions. Further research confirmed that at secondary school, prior to commencing tertiary study, the focus was on ideas, understandings, intellectual process and content with much less emphasis on writing conventions (see Cummings and Wyatt-Smith, 2001 for a comprehensive study). Here was a start to understanding the role of literacy practices and literacy events in our programs and in response to the ‘crisis’ in literacy standards as described above.

The next incident confirmed an even broader concern about literacy in teacher education. As an active researcher in this area and chair of the Literacy Working Group at this university, I was invited to several state-wide panels investigating these issues. In 2004, the Board of Teacher Registration (BTR), now the Queensland College of Teachers, held a day-long workshop to explore the issue of personal literacies among preservice education students. This forum generated Personal Literacy Competence of Teacher Education Graduates, 2004, including a series of recommendations and strategies across four broad principles of developing, assessing, supporting and credentialing personal literacy competence. It had become very clear that teacher educators must face this issue, undertake appropriate research to determine some clarity of direction and develop productive ways forward.

A great challenge for teacher educators
Typical evidence used to support claims of a literacy crisis in teacher education continues to be students’ written and, to some degree, spoken work. Despite students presenting with lower than expected function in conventions of written and spoken English, teacher educators are expected to ensure graduates can demonstrate impeccable function in these conventions, whether as internalised personal literacy practices or through a range of external strategies graduates are able to recruit as required. People expect teachers to demonstrate the highest level of English and be able to teach these to students in our schools. That seems a given at the present time.

However, as the demands on teachers’ work becomes more complex and inclusive of more things, so too does the complexity of the work required of teacher educators; as acknowledged in the Top of the Class: Report on the inquiry into teacher education: “1.1 Teaching is a highly complex profession. The demands on teachers are diverse and often intense and appear to be continually growing in response to expansions in the knowledge base, technological developments and changes in society.” (p. 1). Yet, in the midst of such challenges we are told “teacher education programs should provide assistance to students to ensure they develop literacy and numeracy skills to the required level “ (p. xxiv). This would include presumably, tending to the deficiencies deemed in individual students’ literacy practices such as conventions.
of punctuation and spelling while at the same time engaging them in an ever-increasing range of study about the complexity of teachers’ work.

Grant Wiggins, in a paper titled *The futility of trying to teach everything of importance* (1989), provides some insights which I’ve found useful in response. He suggested, “[t]he aim of precollegiate *sic* education is not to eliminate ignorance”; nor can it be the goal of teacher education programs. Fitting the teaching of punctuation, spelling and grammar is another complication in this mix and needs to be considered alongside all else that is important in enabling students to construct their identities as teaching professionals. As Klein (2005) suggested, “Pedagogic work in teacher education is identity work, and arguably at the moment relies far too heavily on normative and regulatory discursive practices that suppress, rather than support, the constitution of a new teaching professionalism for new times.” Students create their professional identities as teachers from the goings on around them; they pick and choose from ideas, concepts and theories we present to them which sit most comfortably within their own sense of self. In terms of the literacy issue, “enabling students to learn about their ignorance, to gain control over resources and take pleasure in learning” (Wiggins, p.44) will go some way to establishing a professional disposition, develop habits of mind, that will be reflected in their future classroom practices, including their conventional English literacy practices.

**The impossibility of trying to do everything of importance**

“Much of the educational research that is being done in Australia does not easily find its way into teaching practice“ (p.xxviii). This statement from *Top of the Class: Report on the inquiry into teacher education* (2007) recognises the disparity we all know exists between theory and practice. Based on my own work with students in the study described briefly below, there is emerging a strong link between students’ construction of identity, literacy practices and this disparity between theory and enacted practice. It is likely that all teacher educators will be familiar with the first year student appeal for ‘the truth’ that is somehow mysteriously tied up in an academic reading or book chapter if the student could only find it. The student persists with multiple attempts at reading the same paper, dictionary at the ready, only to come up, intellectually at least, empty handed.

Despite the vast evidence of poor student writing, there is little reference to students’ reading and/or listening and/or viewing as literacy practices and it appears that these are often a problem. Academic literacies involve students reading about a range of abstract theories, listening to others speak about them and engaging in discussions themselves across a variety of contexts, including observing the presence or absence of these enacted in school classrooms. However, there is an overwhelming tendency among first year students, particularly school leavers, to read for literal understanding, as Klein (2006) suggests, “in search of ‘the truth’”. It seems that this literacy practice, literal reading in search of ‘the truth’, is quite familiar to many students, even as a default position, from their earliest days of schooling.

A paper by Lindsay Fitz Clarence and Scott Webster (2004) describes their attempts to overcome this through their teaching. They begin by recognising this age-old problem among their preservice teacher education students, described by Aronowitz and Giroux (1985) as ‘literalness’ (p. 49). Their first strategy was in “understanding the psycho/social dynamic played out in classrooms and that actively promotes literalness”; they described their students’ difficulties in dealing with abstract concepts, preferring or perhaps limited by their ways of reading, to find only surface meanings. They drew on Dewey’s description of abstract thinking as “labourious and painful” where ideas must come into conflict with one another in order to lead to new meaning and thinking. They suggest “a movement from the actual present to the possible...for possibility to be an option, there needs to be plurality and multiplicity” to generate this conflict of ideas from which this new learning may emerge. To that end they propose that, “for genuine change and growth to occur a sustained period of tension and challenge is required. If this does not happen, the everyday practices of lectures and tutorials, organized in traditional pedagogic...
patterns, act to reinforce entrenched knowledge and habituated practices.” Their suggestion for
the “teacher educator then, is to avoid representing a curriculum of unity and to rather replace it
with one that consists in part of conflict” (p.430). It is this sense of conflict that leads one to
deeper understandings when engaging with complex and abstract concepts where literalness is
not an option.

However, academic reading (and I include listening and viewing here as well) among our
students is clearly an issue for many students; reading superficially, a disposition to literalness,
makes the exploration of complex abstract concepts very challenging, yet reading is all but
ignored in the declining standards debate. Whatever the cause of literalness, it is problematic that
so little attention is given to academic reading and thinking as literacy practices. Writing is used
to assess the learning gleaned from the reading/viewing/listening combinations and the vast
attention and concern about literacy standards is about writing conventions. It is the intellectual
interactions with the abstract concepts put by others, accessed primarily through reading and
listening, the “laborious and painful” work Dewey described above, through which deep learning
and understanding occurs.

**On moving forward…**

Our job is to create a learning environment where this disposition towards abstraction and
possibility is encouraged while at the same time supporting students in the literacy practices
required to engage in the intellectual activity that is thinking in these ways. It involves what
Lave and Wenger (1991) refer to as ‘situated learning’, where “learning doesn’t just happen in
the head of the learner but within a social world”, with links to activity appropriate to the
situation. Realising Wiggins proposal, that we focus on “developing the habits of mind and high
standards of craftsmanship necessary in the face of one’s (inevitable) ignorance” may be a first
step in this direction.

To support these worthy ambitions, I have taken to ‘doing’ academic reading in a first year
subject called *Language and Literacies in Education*; I construct this as an integral way of
‘being’ within the subject and we engage in the process throughout the semester. Using
Freebody and Luke’s (1990) notion of “texts as crafted objects”, we take a three or four
paragraph section from a set paper, following the author’s ‘crafting’ the text around a concept
and introduction of the new term to describe that concept. There is clear benefit in this process
according to the students; now, rather than introducing new terms then spending time trying to
develop deeper understanding of the concept from the term, we go the other way. We dedicate as
much time as is necessary in substantive conversations about the concept itself, finding analogies
and instances of its fit in a variety of social contexts and then, when this intellectual work has
affected useful understandings, the term begins to get used to describe the phenomenon. This
time spent seems to be leading to deeper understanding of complex, abstract concepts than might
be available to students otherwise, although at this time the evidence is still anecdotal.

A second and very important realisation derives from comments such as those found in *The
Australian* article cited above where Professor Allan speaks of low literacy standards among his
law students. We might look at this from another standpoint rather than that of low literacy
standards, remembering these students have “some of the best marks, and minds, in Australia”.
The assessment stakes in schools, as reflected in these students having among the highest marks
in the country, confirms their high intellectual performance, despite incomplete accuracy with
the linguistic ‘basics’ of punctuation, spelling and sentence structure. These bright minds have
been effectively engaging with some of the more esoteric, abstract concepts included in senior
high school curricula across the country without accurate understanding about the conventional
place for an apostrophe!

So what might we learn from looking at Allan’s evidence from this other perspective? When we
consider a futures-orientation to schooling, evidence of this intellectual higher order work seems
to have much higher priority than getting everything spelled correctly. These students Allan
describes have already demonstrated high levels of managing complex, abstract concepts – not
hindered by these literacy basics – surely we need to keep our focus on such higher order
directions and not get side-tracked by the low literacy discourse.

**School of Education strategies**
At the same time, we as teacher educators cannot ignore this dilemma. We must have strategies
in place to ensure high levels of professional literacies among our graduates alongside skills to
teach these to others, for now at least. To that end, dedicated workshops around literacy in the
School of Education have led to a strategy for establishing some common understandings about
the discipline-specific literacy practices and literacy events ‘typical’ in teacher education. The
term ‘discipline-specific literacies’ in common use, including financial literacies for accountants,
legal literacies for the lawyers and scientific literacies for the various sciences, unique literacy
practices and events common within each of those disciplines. Applying the same concepts of
literacy practices and literacy events for those studying to enter the teaching profession, three
areas of literacy competence are described.

*Personal* literacies include some of what Freebody and Luke (1990) describe as “characteristics
and conventions of the technology of text” such as “phonics, letter knowledge, spelling skills”.
Recognising the “multiliterate societies” in which people “engage with a host of texts and
contexts” this process is “made possible because of the rudimentary technologies of writing and
print, even those that may not call for reading or writing per se” (Freebody and Luke, 2003,
p.54). These are generalised practices deriving from early work with print that support
engagement with print and other non-print literacy events, used when reading a newspaper but
also useful for withdrawing money from an ATM or downloading a podcast although a whole
lot of other things also come into play when engaging in the latter literacy events.

*Academic* literacies include some of these personal literacy practices but in very specific ways
with specific literacy events that are often unique to academic work. Conventions of academic
writing are very precise, such as in this paper; on-line discussion may be forgiving of convention
breaches, although a focus on ideas and their communication to and with others is often
assessed. Writing in subjects I teach means using MS Word, Times New Roman, size 12 printed
on an A4 page. These are a few examples of what we include in academic literacies and have
begun to map so a variety of events and practices are canvassed across subjects without excess
repetition; before this exercise everybody included a formal academic essay for assessment.

*Professional* literacies include those personal literacies above but again, in quite unique ways.
These literacy practices require that any publicly accessible text that is produced by the teacher
in their professional capacity, for an audience who recognises the text as coming from the
teacher in that capacity, follows conventions of English. This is where the real crunch comes –
we have begun to include for assessment a variety of texts, spoken, written and/or multi-
mediated, as evidence of professional literacies. Obvious things like classroom resources, reports
to parents, class newsletters can fulfill the role of assessable items for academic purposes as well
as evidence of professional literacies, as described in the Teacher Professional Standards. Of
course, if students’ personal literacies are non-conventional it is not okay in the context of the
academic or professional literacies – to that end, we must either teach all that people don’t know
or, alternatively, offer a range of strategies and encourage individuals to use these and/or come
up with their own that will meet their unique needs. The latter is the preferred and current
strategy in place.

These concepts are in development and not everybody is as enthusiastic as others about such a
strategy for a variety of reasons. It is also acknowledged that one cannot be prescriptive nor
totally inclusive of all academic or professional literacy practices. However, staff who have included these ideas in their teaching find it very effective in gathering evidence of meeting Professional Standards as well as helping students monitor their own emerging repertoire of literacy practices as integral to the creation of their professional teaching identity.

**Current research project: literacy competencies among first year education students**

An important first step in this process is for staff and students to realise the range of literacy competencies among students as they arrive to study in our programs. One purpose of my current research is to help students develop a personal ‘literacy profile’ as a baseline understanding. I have focused on a number of questions such as: what indications are there of the presence or absence of essential and/or desirable literacy practices to serve our students as a functionally accessible ‘tool kit’? What form must literacies really take to enable student success in university studies to then enter a desirable place in the teaching profession? and what are the very ‘basics’ of literacy practices required in order to fulfill these disparate expectations of a teaching professional?

We had previously assumed that a Sound or better in Senior English and ‘reasonable’ tertiary entry score provided this information but not so now, if it ever did. In order to gather more detail, a standardised test, developed and refined by ACER, was used with 184 students in my first year subject. The Graduate Skills Assessment (GSA) is described as follows:

> ACER was commissioned by DEST, in 1999, under the Higher Education Innovation Program to develop a new Graduate Skills Assessment test.

> The test has been designed to assess generic skills of students when they begin at university and just before they graduate. The four areas included in the test are: Critical Thinking, Problem Solving, Interpersonal Understandings and Written Communication.

> Many universities have identified these skills as important and are included in their graduate attributes or capabilities statements.”

Each of these four elements have been highlighted as important as we move forward into these new times and so this test appeared to do what I wanted, with due reservations about the limitations of such high stakes tests. I took some comfort that the test had been used with several thousands of Australian university students across most discipline areas offering useful comparisons between education students’ performance at one university with another or education students compared with students in other disciplines and more. Results on the elements of this screen are to be analysed against age, gender, years since completion of school, full or part time study, scores on two core first year Education units and overall GPA. The purpose is to determine any correlations between and among these factors and how literacy, including critical thinking and other aspects of students’ identities as indicated by these measures, interact. This will, in turn, give staff and students some indication of areas needing attention and areas of strength students may draw upon in the identity construction of themselves as teachers. Results of this study will be available later in 2007.

**Conclusions**

The most profound way I can think to summarise this paper is by way of reference to recent works by Michele Knobel and Colin Lankshear as well as David Shaffer and Jim Gee. Knobel and Lankshear, writing in *New Literacies: Changing Knowledges and Classroom Learning* (2003) and since, continue to remind us of the dramatic distance emerging between the ‘digitally at-home’ youth and younger children and the persistently conservative places that are schools. To ignore this growing distance may be akin to ignoring the impacts of human activity on global
environments. Continuing to frame literacy in terms of the conventions of placing an apostrophe or semi-colon sits in dramatic contrast with the New Literacies they describe for us.

Jim Gee’s (2003) *What video games have to teach us about learning and literacy* and Shaffer and Gee (2005) *Before Every Child is Left Behind: How Epistemic Games Can Solve the Coming Crisis in Education* provide a startling yet optimistic backdrop of young people, sometimes very young people, and their incredible facility with digital epistemic games as literacy practice. This is not some whacky out–there-in-the-future scenario but real, what’s happening now in young people’s lives stuff that we must begin to include in our conceptions of learning and school.

The renderings of these scholars may appear to make debating literacy as I have in this paper seem trite, almost archaic, yet the discourse with which I have engaged here is still a dominant one that we cannot ignore. Bearing in mind the educational crisis Shaffer and Gee describe, we must offer teacher education programs that involve students in “making knowledge not just receiv[ing] it” (p. 7). We must recognise that “schools fixated on teaching everyone to read are ignoring far more serious problems: that our students won’t have the skills they need for life in a connected world and global economy” (p.15); at the same time, we cannot ignore the social pressure about teachers presenting with poor literacy conventions. Getting the balance right between satisfying demands for the reading and writing stuff while encouraging our students to engage in abstract thinking as “laborious and painful” work as they build professional teaching identities ready to move into the next decade of these new digital times, is the challenge for teacher educators now!
References


