ABSTRACT

This paper will investigate emerging notions of evidence-based practice in education in the context of changing and often conflicting agendas on the part of governments, systems, schools and teachers. Within this conflict, the relationship between teacher research/evidence-based practice and the development of a range of teacher professional identities will be addressed, particularly in the light of ongoing debate in Australia and elsewhere around the issue of professional standards and teacher professionalism. In particular, the paper will focus on teacher professional identities which involve an activist or participatory role for teachers and the ways in which different approaches to 'evidence' help and hinder their development.

Introduction

Evidence based practice has become a growing movement in education since the 1990s. Despite the narrowness of some approaches which fall into its camp, under the right circumstances evidence-based practice holds significant potential as a vehicle for the development of teacher professionalism. In this paper we argue that there are a number of key questions which frame the way in which evidence based practice operates and impact upon the potential of such work to assist in the forming and reforming of teacher professionalism and professional identities. We argue that a key factor in the determination of the impact of evidence based practice is the issue of where the impetus comes from, and to what extent that impetus is localised within the school or centralised through an external body. The paper is organised into four sections, the first providing a brief overview of evidence based practice in education, the second detailing the essential questions which we see evidence based practice giving rise to, the third developing a case study of a school...
where a culture of inquiry is embedded and the fourth pointing to implications for the development of teacher professionalism and professional identity.

A Background to 'Evidence Based Practice' in Education

Despite being hijacked in recent years by proponents of 'what works' (for example, , the notions behind evidence based practice can be traced to work on action research developed by John Dewey and Kurt Lewin in the first half of the 20th century and work on practitioner inquiry which emerged for the UK and Australia in the 1970s and 1980s and from the United States in the 1990s. Three notions are central to the intent of evidence based practice in education, namely the role of teachers in the development of knowledge for and about their practice, the use of inquiry in both problem-solving and problematising educational practice, and the potential for such inquiry in terms of social reform and 'emancipation'.

The notion of the active participation of teachers in the creation of new educational knowledge was initially developed by John Dewey , who saw "teachers who are moved by their own intelligence" and elements of what has subsequently become known as reflective practice as the remedy for faddism in education. In recent years, this notion has been further developed by teacher research advocates, among them Marilyn Cochran-Smith and Susan Lytle, who have argued in various places for an emerging epistemology of practice for teacher researchers, where practitioner inquiry provides a point of access for teachers to come to "know their own knowledge" (1993:45), where, through systematic inquiry and reflection, teachers "come to know the epistemological bases of their practice" .

Teacher research in the United Kingdom grew out of the Humanities Curriculum Project in the 1970s, where it was developed as a means of curriculum development in the context of attempts to redress the institutionalisation of social inequalities in the education system through the reform of humanities education. Within that context, Lawrence Stenhouse (1985) defined teacher research as that where the research act (which aims at finding something out) is also necessarily the substantive act (which aims at improving student learning). In subsequent years, this 'problem solving' model of practitioner inquiry has been broadened somewhat to reflect the growing understanding of the complexity of teachers work, where the problematisation of practice has become perhaps a more important aim of the process .

Finally, evidence based practice has at its core the notion of social improvement and 'emancipation', insofar as it draws on the processes of action research, initially developed as a methodology for social change and defined by Kurt Lewin as "comparative research on the conditions and effects of various forms of social action and research leading to social action" , and further defined by Wilfred Carr and Stephen Kemmis as that which "is about relentlessly trying to understand and improve the way things are in relation to how they could be better" . Carr and Kemmis argue for the emancipatory power of action research for teachers, linking the social research activity of action research to social action through the critical connection with teacher (and thus social) improvement. For Carr and Kemmis, the purpose of teacher inquiry is to mount a radical challenge to the status quo, particularly those aspects of the system which permit, reinforce and perpetuate systemic inequities. It is upon this heritage that the current notion of evidence based practice has been built.

In recent years, the notion of evidence based practice has been appropriated in the name of the advancement of 'best practice'. In his 1996 Teacher Training agency Lecture, David Hargreaves lamented the lack of 'value for money' in publicly funded educational research and called for educational researchers to concentrate their efforts on 'what works' in the classroom, so as to systematically begin the codification of teachers technical knowledge
and skill for the purpose of cataloguing and subsequently dispersing 'best practice' amongst the entire profession. For Hargreaves, evidence based practice is the key to achieving widespread 'best practice', a goal he, at least, finds both desirable and unproblematic. Hargreaves' approach was echoed in the UK in the Tooley and Darby report on Educational Research, and more recently in Australia in the DETYA equivalent, 'The Impact of Educational Research on Policy and Practice', both of which advocate the use of evidence based practice in the development and application of 'what works' in schools. As Jill Blackmore has indicated, however, while the proponents of this approach advocate the use of action research techniques, they do so as a managerial technique, effectively depoliticising what is essentially an emancipatory movement for the development of democratic reform.

The discourse of 'what works' and the pre-eminence of this model of evidence based practice has been roundly criticised by scholars, most of whom have been helpfully classified by Hargreaves as "postmodern hermits". The criticism has centred around a number of key issues. Martyn Hammersley, Tony Edwards and Harvey Goldstein, among others, have attacked the narrow notions of 'evidence' upon which comparisons between education and medicine have been predicated, arguing that greater expenditure is the key to improving any deficiencies which may exist in educational research. Elizabeth Atkinson has argued vehemently 'in defence of ideas', offering that "a narrow focus on 'what works' will close the door that leads to new possibilities, new strategies, new ways of reframing and reconceiving the educational enterprise" (p.328). Peter Foster has criticised the 'never mind the quality, feel the impact' approach to research which his methodological assessment of TTA-funded teacher research indicates is prevalent and calls for greater methodological rigour in research which is considered to be contributing to the ever-expanding 'best practice' database. Jill Blackmore has applied the discussion to the Australian context, arguing that evidence-based practice, particularly the model derived from medicine, fails to capture the complexity of the educational field, especially with relation to the theory-practice dynamic and relationships between education policy, research and practice.

While evidence based practice in its current iteration can justifiably be seen to be problematic, we point to the underpinning notions of the development of an epistemology of practice, the questioning and problematisation of teachers' practice and the potential for emancipation and social reform in arguing for the value of evidence based practice in terms of providing a catalyst for teacher learning, the advancement of teacher professionalism and the development of teacher professional identities which have an activist or political bent.

**Essential Questions**

While evidence based practice can still be seen to hold great promise for teachers and schools in terms of professional development and bottom-up or democratic reform, a number of issues can be identified as variables in the process. Broadly, those issues relate to:

- **Questions of purpose and intent:**
  - Who sets the research agenda and questions?
  - Does the research endeavour seek to problem solve or problematise, or both?
  - Whose interests are served?
  - How does the evidence contribute to a broad political initiative/interaction?
• Questions of evidence and process:
  o What kind of evidence is collected?
  o Once collected, how is the evidence approached?
  o How representative is the evidence of the field or population?
  o How is the evidence collected?
  o How transparent are the processes?

• Questions of action and effect:
  o How far do those involved hold the requisite power to disseminate and act upon findings?
  o What are the consequences, are they manufactured or real?

These key issues and questions frame up the context of the application of evidence based practice within schools, and at a local level, their answers provide an indication of how generative for teachers such a project might prove to be. Questions of purpose and intent relate to the broader issues of inclusivity and impetus for inquiry, which in turn impact on the ways in which teachers involved come to have ownership of the projects they engage in. Questions of evidence and process relate to the broader issues of epistemology and rigour, which are linked in the first place to the purpose of the enterprise and in turn give rise to discussions around the issues of accountability and how far the research conducted is and should be generalisable. Questions of action and effect relate primarily to issues of sustainability of research findings and long-term impact on student and teacher learning.

The following case study provides an illustration of the ways in which the implications of these questions and issues are played out within the practice and outcomes of practitioner inquiry in the school context.

Evidence Based Practice at Loreto Normanhurst

Aspects of the journey undertaken by teachers at Loreto Normanhurst in terms of the embedding of a culture of inquiry have been documented elsewhere along the way. The school is an independent Catholic girls school, which was founded in by the IBVM (Loreto) sisters in 1897, a religious order which has long been recognised for its commitment to the education of women and the achievement of social justice. In recent years, the school has developed a commitment to the effective use of technology for the improvement of student learning, and Loreto Normanhurst students now have extremely high access to technology, with approximately one computer per two students.

Since 1999, the school has embraced what can best be described as a 'knowledge-building' approach, initially for the purpose of achieving more effective decision making through the gathering and analysis of information from stakeholders and then later as a primary means of enabling teachers to "know their own knowledge" (Cochran-Smith and Lytle 1998:45) and a vehicle for teacher professional development generally. In the context of Loreto Normanhurst, the notion of 'knowledge-building' extends much further than practitioner inquiry, and also much further than Hargreaves' initial conceptualisation, which tied it closely to 'evidence-based practice'. The school's understanding of what it means to be a 'knowledge-building school' relates primarily to the valuing of ideas and knowledge, whether those ideas are generated by 'academics' or 'practitioners', and regardless of whether those ideas are foremostly reflective of theory or practice. Such valuing of ideas is, in the words of Elizabeth Atkinson, a way of looking forward "not to guaranteed improvements, but to the
rich potential of critical discourse and the promise of an uncertain future" (2000:35). At their best, 'knowledge-building activities' are characteristically generative for the teachers involved and the school as a whole (Cochran-Smith and Lytle, 1993), foster collaborative collegial relationships between teachers involved and facilitate partnerships between school and university-based educators to the benefit of both.

Evidence based practice in the guise of practitioner inquiry is, however, certainly a significant component of the knowledge-building activities engaged in by the school. Sachs provides a neat synopsis of the purposes of practitioner inquiry when she writes "in general, the purpose of these activities is fourfold: i. as a strategy for a broader change initiative within a school or classroom; ii. The improvement of classroom practice; iii. As a contribution to an understanding of the nature of teachers’ knowledge base, or; iv. As a basis for teacher professional development.". The aims at Loreto Normanhurst incorporated, and still do, each of these four purposes, situated within an understanding of the emancipatory and democratic possibilities of such inquiry, notions which sit very well with the ethos of the school and its founders. This approach values the development of autonomous and 'activist' professionals, and takes a central aim the development and exercise of teacher professional judgement as a primary vehicle for 'emancipation' for teachers (Stenhouse, 1979).

There is an undeniable and often unrecognised link between the creation of a culture of inquiry and the creation of a culture of professional learning, and within the model developed at Loreto Normanhurst, each relies on the other. To develop a culture of inquiry without an accompanying culture of professional learning would almost be tantamount to suggesting that 'what works' is the only thing that 'counts'. Cultures of inquiry and professional learning have grown in tandem at Loreto Normanhurst, through the development of knowledge-building activities such as:

- A monthly 'Readers' Circle', where teachers come together to discuss a current and topical journal article or book chapter;
- A Young and Beginning Teachers' Network, where teachers in the first five years of their career meet and discuss issues relevant to their career stage;
- Practitioner Research Projects, both funded and unfunded, faculty-based and cross-faculty;
- The establishment and continuation of a Practitioner Research Advisory Committee, which oversees practitioner and other research within the school and provides a forum for the dissemination of research reports;
- Annual surveys of staff, students and parents, which have become more systematic over the past three years;
- Individual Professional Learning Portfolios, where teachers reflect on their career history and goals and document evidence of their professional learning;
- Ongoing evaluation projects conducted by researchers internal to and external to the school;
- The 'Loreto 5' initiative, where a group of five teachers are given an ongoing time allowance for a year to work collegially on the development of technological or pedagogical skills;

While all of these activities have led to the establishment of Loreto Normanhurst as a knowledge building school, evidence-based practice and practitioner inquiry is the central focus of this paper, and it is on this aspect of the journey we shall focus.

2000 was the first year of implementation for the New Higher School Certificate (HSC) in New South Wales. The HSC is the final secondary school qualification and provides the basis for the calculation of the University Admissions Index for our students. The primary way in which the New HSC differs from the old is in the shift from norm to standards
referencing, a shift which brought about a focus on issues of assessment and reporting for much of the government-funded professional development in 1999 and 2000. Members of staff were fortunate to be awarded a small grant which enabled the school's first practitioner research project to be run, which focused on authentic assessment within Science and culminated in a report entitled * Achieving the Impossible: Authentic Assessment for the NSW HSC* (Mockler et al, 2000). The Science project was a catalyst not just for the Science faculty within the school but for the teaching staff as a whole, who although perhaps at that stage did not understand exactly what the project team was doing were able to recognise that teachers were being given release time to have collegial conversations and undertake a 'different' type of professional development to the usual 'spray on' or 'drive by' in-service model. The single most significant outcome of the Science project within the Science faculty was the increased confidence displayed by teachers in their own and their colleagues' professional judgement. A major part of the project had centred around the exercise of professional judgement in relation to moderating student assessment, and it is significant that even now, over two years after the commencement of the project, members of the Science faculty still draw on the experience in discussion of student assessment.

The Science faculty had not been the only one to volunteer for the project funding. (It was chosen because of the particularly large paradigm shift which Science teachers needed to make in order to embrace the spirit of the new syllabus documents.) By the time the project was completed, the report published and the broader teaching staff brought up to date on the processes and outcomes of the project, there were a number of faculties wishing to undertake similar projects, and so it was that the notion of the 'Good Learning Project' (GLP) was born. Initially the GLP was designed to be very open-ended and designed entirely by the faculty project team in relation to the question "What is 'good learning' in our subject area?", but the pilot GLP, situated within the English faculty, highlighted the need for a framework for faculties to work within which would assist them in documenting their learning. Drawing on some of her earlier work, Susan Groundwater-Smith worked with members of staff to adapt the notion of an 'Independent Professional Learning Portfolio' into a 'Faculty Learning Portfolio'. It was envisaged that the Faculty Learning Portfolio would include the following elements:

1. Faculty History (*In living memory, how has our faculty grown and changed? What has been learned and how?*)
2. Philosophies and Beliefs (*What are the values and beliefs held about: knowledge of our discipline; pedagogical practices; assessment practices; our interaction with each other?*)
3. Focus Area (*Questions to be collaboratively developed by each faculty*)
4. Goals and Needs (*What are our goals for the future as a faculty? What do we need in order to achieve our goals?*)

In addition to the pilot faculty, two faculties (Technology and Applied Studies and Social Science) are currently in the process of undertaking a GLP. In both cases, the Faculty History has been written using source material gathered in interviews with all staff members and some document analysis from the faculty archives. The articulation and documentation of philosophies and beliefs has been the subject of a one-day workshop facilitated by an outside consultant, and the development of the focus area has been jointly facilitated by the director of Professional Learning and the relevant Head of Department. The Science faculty has now indicated its desire to follow its 2000 project with a GLP, and although the process will be slightly modified to build on the work they have already done, a similar format will be followed.

In 2001, the NSW Quality Teacher Program (QTP) began. QTP is a three year federally funded teacher professional development initiative which aims to focus on the areas of
Literacy, Numeracy, Mathematics, Science, Information Technology and Vocational Education and Training through, among other ‘delivery options’, practitioner inquiry and action research. In 2001, Loreto Normanhurst was successful in bidding for QTP funding to carry out practitioner research in the area of Information Technology and Literacy, and a project team comprised of teachers from five different faculties worked to develop what has become known as ‘A Framework for Authentic Learning’. The framework is essentially a tool for developing web-based units of student work which incorporate information literacy outcomes and higher order thinking skills. The tool itself was developed collaboratively by members of the project team, drawing on information gathered from students and teachers about current practices and recent research and writing on learning and technology. Units of student work developed using the tool were then implemented and evaluated by members of the project team and the framework was then refined before being published to the web for use by other members of staff and is now in the process of being shared with other schools.

In 2001, further QTP funding was sought and gained for a project situated within the Mathematics faculty with a focus on 'assessment for learning'. Teachers of Year 7 Mathematics worked to evaluate their own practice and sought to implement pedagogies which are collaborative and student-centred in the teaching of Algebra. Together they have gathered information from their students, engaged in professional reading, developed teaching and learning resources and implemented and evaluated strategies. The project has led to a rethinking of assessment practices in Mathematics in Years 7 to 10, as well as helped to develop greater collaboration and collegiality between staff members.

In a final example of practitioner inquiry, numerous teachers within the school are engaging in individual inquiry into aspects of their practice through the completion of a professional learning portfolio, where a teacher is mentored through the process of reflecting on their career history and philosophies and beliefs and then chooses a focus area for practitioner inquiry which is documented in the portfolio. Since 2000, ten teachers at the school have enrolled in the Independent Professional Learning (IPLP) program (offered by the University of Sydney) and inquired into diverse aspects of practice such as student engagement, metacognition, authentic assessment, academic pastoral care and negotiated learning. The IPLP is a way for teachers to individually identify a focus area which is relevant to their specific needs while collaborating with others in terms of the processes and practices of practitioner inquiry.

These are examples of the broad range of evidence based practices which Loreto Normanhurst teachers have engaged in. Three years from the outset, approximately half of the teachers at the school have been or are currently involved in practitioner inquiry, either individually or as part of faculty or cross-faculty teams. The gathering of information from stakeholders for the purpose of informing decision making at all levels within the school has become institutionalised - people expect that staff, students and parents will have been consulted prior to any major change being contemplated. The notion of 'gathering evidence' is beginning to become embedded within the processes at work within staff meetings, parent gatherings and classrooms.

In terms of the development of activist professionals, participation in practitioner inquiry and other knowledge-building activities assist in elevating teachers' views of their practice far beyond their own classrooms. Sachs (2000:93) claims that "the activist professional creates new spaces for action and debate, and in so doing improves the learning opportunities for all of those who are recipients or providers of education." An observation of the Loreto Normanhurst experience shows that such spaces are opening up both within and outside the school at the hands of teachers. Collegial conversations predicated upon trust engendered through working together in new ways, exercising professional judgement in a range of contexts and engaging in reflective practice and self study within a collaborative framework
are on the rise within the school. Anecdotal evidence would suggest that for many teachers, practitioner inquiry has been instrumental in prompting a revisioning of their professional identity through providing transformative moments through the linking of their work to broader educational endeavours and helping to conceptualise themselves and their work in new ways which transcend traditional divides such as subject areas and the age or stage of their students.

Implications for the Development of Teacher Professionalism and Teacher Professional Identity

Evidence based practice holds significant potential for the development of teacher professionalism and professional identities with an activist or critical intent. The examples provided in the above case study highlight a number of conditions which we believe are necessary for the realisation of that potential.

Purpose and Intent

In the first place, where the overarching aim of the enterprise is professional development and growth rather than the documentation of practice for purposes external to the enterprise itself or the solving of particular problems, practitioner inquiry is likely to be most generative for teachers. Secondly, practitioner inquiry is likely to be most generative for teachers when the purpose and intent is either developed at school level or where there is scope for the research to meet the needs of the individual school and the teachers involved (Sachs, 1997). Research questions and projects posed by bodies external to the school which hope to engage teachers in consideration of problems and dilemmas not of their own choosing and scarcely relevant to their needs are much less likely to be generative than those developed collaboratively by teachers seeking to engage in professional learning through investigating aspects of their practice. In situations where funding is available contingent upon bidding for a project, the challenge for schools is to meet the needs of both the funding body and the teachers or groups of teachers involved. The experience at Loreto Normanhurst and elsewhere would indicate that where it is not possible to meet both, the 'positive' of the funding gained is often outweighed by the 'negative' of involving teachers in work which contributes to their already large and intense workload and provides little if any return for them in terms of learning and development.

Evidence and Process

Much depends on evidence and the ways in which it is used. Writing of the nature of evidence within evidence-based practice in education, Gerry Corrigan and Susan Groundwater-Smith have drawn a distinction between what they term 'adversarial' and 'forensic' treatments of evidence. Within their distinction, adversarial approaches are those employed for the primary means of proving or disproving a hypothesis, while forensic approaches are those employed primarily to enable the researcher to come to a deeper understanding of the phenomenon being studied. Corrigan and Groundwater-Smith argue for the employment of the latter within practitioner inquiry. While some of what we do at Loreto Normanhurst employs a forensic approach to evidence in attempts to come to a deeper understanding of practice, the approach taken is perhaps in many ways more historical than forensic.

In her work The Invention of Athens: The Funeral Oration in the Classical City, historian Nicole Loraux writes by way of rationale for her radical reinterpretation of fifth century BCE Athenian society "When confronted with democracy, with the word as well as the thing, and
when confronted with antiquity too, I feel that I am in a strange world and thus entitled to attempt a new reading." She goes on to provide a new reading of some of the most significant and analysed texts in the ancient world and through her treatment of the evidence establishes an alternative interpretation of the 'facts', which leads her to render some of the most taken-for-granted understandings of classical Athens problematic and certainly generates more questions than it answers. Loraux' work is an example of some of the best historical analysis currently being undertaken, and the way in which she uses evidence provides practitioner researchers with something to aspire to.

In the context of evidence based practice, such a treatment of evidence is one which transcends the elusive search for 'best practice' or 'proof' of 'what works' and is instead focused on constructing multiple plausible explanations, valuing perceptions and rendering problematic that which is generally taken for granted. To draw for a moment on Foucault's archaeology of knowledge, such an approach to evidence is to read it as text within the discourse of professional practice. Such an approach is another condition which provides scope for the emergence of teacher professionalism and the formation of teacher professional identity within the exercise of evidence based practice.

Action and Effect

Evidence based practice holds the greatest potential in terms of the development of teacher professionalism and generative professional identities when the research undertaken is actionable and where the research enterprise has been established in such a way that the consequences have an impact on both student and teacher learning. Practitioner inquiry which has an acknowledged and visible effect within the community also assists in building a culture of inquiry and investigation through providing a rationale for ongoing work in this area. Significantly, in so doing it helps to create the conditions in which teachers begin to see themselves differently, in terms of how they can work in different ways with various constituencies and how the understand the nature of their professional work in schools. This process is the beginning of an identity building or transformative process for individual teachers and the teaching profession as a whole. Indeed it contributes more strategically to the broader professional and political project of developing and sustaining an activist teaching profession.

Conclusion

Evidence based practice and practitioner inquiry hold the potential to provide a trigger for the recasting of teacher professional identity both on an individual and collective basis, to assist teachers in thinking about how they use information and become more active in the production of new knowledge about their work. In order for such transformation to take place, however, it is essential that teachers themselves are active in the framing of research questions and parameters, that the focus of the research enterprise is relevant to and timely for the particular needs of individuals, that evidence is collected and constructed in ways which are generative and provoke authentic professional discourse, and that the research conducted is rigorous and actionable.

References