Educational Research for Professional Practice: More Than Providing Evidence for Doing 'x Rather Than y' or Finding the 'Size of the Effect of A on B'

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Abstract

Educational research has been criticised by governments and practitioners. For some politicians and policy makers, there is a tendency to look for direct links between research and successful, effective and efficient practice. Research is needed to inform their evidence-based practice as policy makers, and to provide the kind of research teachers need to base their practice on the best available evidence for doing 'x rather than y' (Hargreaves 1996) or predicting the 'size of the effect of A on B' (Blunkett 2000). There is no doubt that both teachers and policy makers do make decisions on a daily basis based on some form of evidence. This paper explores Hargreaves' notion of evidence-based practice, providing a range of criticisms. It also examines Carr's historical account of 'praxis' and 'poiesis' to suggest a notion of evidence-based praxis based partly on the historical notion of 'phronesis' – practical wisdom. The basis for this is the argument that wise and practical ethical and moral judgements are central to an understanding of teachers' daily work. What to do in a specific educational situation cannot be determined solely by theoretical beliefs or by 'techne'. However the ethical dimension is not the only consideration. The paper suggests that evidence-based praxis use Stenhouse's notion of 'actionable evidence', which includes the ethical dimension, but also Thomson's concept of 'thisness', which describes the unique contextual characteristics of a school. If disadvantaged schools can make some sort of difference to learning opportunities for students, it is argued that teachers might engage in evidence-based praxis which involves them in reflecting on, and theorising what is happening in classrooms, schools and neighbourhoods. This 'praxis' also involves them in modifying their theories, critically analysing 'what works', questioning how they know and developing ideas about how things might be done differently. There will be an element of developing knowledge about teaching and

learning strategies (Hargreaves' 'body of knowledge'), but it will be in the context of the ethical and moral dilemmas associated with education. It will take up the question of local differences as well as a realistic approach to what constitutes actual school improvement. Evidence-based praxis is also essentially a collective activity not an individual approach. Future development of the notion of evidence-based praxis might also include involving students in a more reciprocal and open learning process like that highlighted by researchers who focus on student participation linked to school reform.

Introduction

Educational research has been criticised by both governments and practitioners alike. This is the case in recent years in Britain (Blunkett 2000, Davies 1999, Hargreaves 1996, 1997, 1999a, 2001a, 2001b) and to some extent in Australia. Whilst the recent study commissioned by DETYA on the impact of educational research in Australia found that 'the links between educational research and schools were clearly evident' (DETYA Higher Education Division 2000, p. 3), the report claimed that two previous reviews had found that, in general, educational administrators and practitioners perceived that research was irrelevant to their concerns (2000, p. 3). This latter comment is more in line with my own experiences as a principal, working with teachers to bring about change in schools and to understand issues like social promotion, strategies for improving achievement, student alienation, and bullying and harassment, to name just a few. In this context, there seemed to be, on the one hand, a view by teachers, that research *should* provide an unequivocal 'answer' to pressing practical concerns and, on the other, judgements about the lack of worth of the research when attempts to 'apply' research to the particular context seemed flawed.

There are a range of issues associated with educational research that might account for the linking of educational research to schools in some contexts and difficulties or unwillingness in others. A paper of this length cannot do justice to these issues. However, if there were strong connections between educational research and changed practice in schools, these connections would have to include a notion of 'evidence-based practice' (Blunkett 2000, Hargreaves 1996). This paper explores Hargreaves' notion of evidence-based practice, providing a range of criticisms. It also examines Carr's historical account of *praxis* and *poiesis* to suggest a notion of evidence-based praxis based partly on the historical notion of *phronesis* – practical wisdom.

Whilst there are differences in the education systems in Australia and Britain there are significant similarities in political, social and economic contexts for consideration to be given to arguments around evidence-based practice emanating from Britain.

Thomson (1999) observes an internationalisation of school education policy in the broader context of the policy response of national governments to globalisation. She claims that in Australia, as in England, there has been 'a swing to "back to basics", a focus on learning "outcomes" rather than "inputs and process", and increased vocational education' (Thomson 1999). These combine to produce increasing instrumentalism across the curriculum. However, as Thomson also points out, global forces are not totally dominating. The effects of 'the global' vary from local place to place. Global policies and events intersect with local histories, stories and ways of doing things, and are changed and adapted in the process (Thomson 1999).

The arguments concerning evidence-based practice emanating from Britain are not only relevant in the sense of being part of the global context ripe for adaptation in Australia, but are also relevant in the light of the 'findings' of the DETYA review mentioned above. One of the five studies included in the report recognised a move towards a greater emphasis on 'demand-side' knowledge production where:

- problems are substantially set and solved in the context of application
- use of resources and approaches cross discipline boundaries
- quality control is set by outsiders in addition to peer review (DETYA Higher Education Division 2000).

This same study lists four models of 'systematic educational enquiry' (SEE) which have current relevance to the impact of educational research in Australia, and which help shape the forms of interaction between researchers, policy makers and practitioners. These are:

1. traditional knowledge production
2. investigator-controlled applied research
3. investigator–user linkages
4. user-oriented research.

The criticisms of educational research by Hargreaves and others seem to focus on the limitations of educational research as a result of the predominance of the first SEE model, and argue for a greater role for the other forms of interaction through evidence-based practice. These models of interaction bring with them a significant caution from the field of practitioner research. Anderson (1999) warns that as practitioner research becomes institutionalised in schools it runs the risk of being incorporated into models congruent with technical rationality. She is concerned that this would lead to its bureaucratisation and blunting of any critical force it has to transform educational practices and institutions.

I have a concern that the model of evidence-based practice put forward by Hargreaves in particular is already framed in this way, and that, rather than enhancing the work of schools in an educational sense, it seeks primarily to improve the performativity of teachers with respect to the outcomes of their teaching. Elliott (2001) argues that, within the outcomes-based education framework, 'evidence-based teaching' can be characterised as a means of improving teaching through a form of technical control over the production of learning outcomes, thereby rendering them increasingly predictable. This 'bureaucratisation' that Anderson warns of is apparent in Hargreaves' view of 'the knowledge-creating school' (Hargreaves 1999b) and in his attempts to embed the notion of evidence-based practice as the cornerstone for his theory joining school effectiveness and school improvement (Hargreaves 2001a).

In this paper I seek to outline what I understand to be the key aspects of the evidence-based practice argument, and the key criticisms offered by other writers. Using Carr's account of *praxis*, and *poiesis* and the forms of knowledge appropriate to them (*techne* and *phronesis)*, I draw out the importance of the development of the notion of evidence-based practice as evidence-based *praxis*.

Criticisms of educational research

In his 1996 paper presented at the Teacher Training Agency Annual Lecture, Hargreaves claims that, since teaching was not currently a research-based profession, it would benefit from the use of the medical model of evidence-based research (Hargreaves 1996). Whilst the two professions are people-centred, Hargreaves claims that they differ in their dependence on scientific knowledge. He implies that teachers can be effective in their work in near total ignorance of the educational theory infrastructure. In addition, Hargreaves claims that the two professions differ in the extent to which practitioners undertake applied research, with very little educational research undertaken by practising teachers.

There are a number of problems which Hargreaves identifies as a result of this situation. The first is that the researchers (read university academics), not the practitioners, set the educational research agenda. The second is that teachers seem to be unable to recognise that the lack of evidence-based research is a problem and they see no need to keep abreast with research developments, giving preference to 'learning by trial and error' (Hargreaves 1996). Hargreaves blames this largely on the irrelevance of the research in research journals and the ineffectiveness of this and other modes of dissemination of research. In addressing this situation he suggests developing an evidence-based research approach in a partnership between researchers and 'users'. As a result, he claims, 'they may even command the respect

of politicians, who advocate their pet ideas in the secure knowledge that the profession lacks convincing evidence to the contrary' (1996).

Hargreaves argues that educational research needs to be redirected towards the systematic development of a body of knowledge that is capable of informing the practical judgments of teachers. He claims that the idea of 'evidence-based practice' is central to this redirection. There are three essential steps in evidence-based clinical decision making that he argues can be paralleled in teacher decision making: getting the evidence straight; developing clinical policy from evidence; and applying the policy in the right place and time.

Hargreaves agrees with Scruton's views about how to judge research:

> research should provide decisive and conclusive evidence that if teachers do X rather than Y in their professional practice, there will be a significant and enduring improvement in outcome. If 60 per cent of observed cases have produced the given result, then we conclude that, on the evidence, there is a 60 per cent probability of the next case doing so as well. (Scruton 1997, p. 16 cited in Hargreaves 1997, p. 412)

Hargreaves has not been alone in his thinking about the need for evidence-based research to address the problems of educational research. In his speech to the Economic and Social Research Council in the UK, Blunkett (2000) is similarly critical of the current state of educational research but this time from the point of view of research not offering enough that is useful to politicians and policy development. Blunkett claims that many people both within and beyond government see that social science research is 'inward looking, piecemeal rather than helping to build knowledge in a cumulative way' and 'supplier driven' rather than focusing on the key issues of concern to policy makers, practitioners and the public. He claims that if government is to operate on a more evidence-based model they need research relevant to do this. Research ought to be more accessible and usable by local communities to influence the use of resources with the proviso, Blunkett argues, that the research is 'good' in that it also draws out realistic implications, has achievable suggestions and does not embarrass governments with different views.

Blunkett describes two examples of 'bad' research: a refusal to draw out any policy implications at all and, at the other extreme, recommendations that may represent the ideal but take no account whatever of issues of costs, achievability, the interaction with other priorities and possible unintended consequences. 'One of our prime needs is to be able to measure the size of the effect of A on B' (Blunkett 2000). Whilst he claims that there is also a need for 'fundamental "blue-skies" research

which thinks the unthinkable', this is more useful in understanding how society works, rather than providing strategies for government. Hargreaves also recently affirmed his support for 'blue skies' research and does so only because 'if there is no high quality, "blue skies" work today, then tomorrow's applied research will be much the poorer' (Hargreaves 2001b). The similarity of position taken by Blunkett and Hargreaves indicates the support for interventions by policy makers to shape classroom practice is justified, 'so long as they are informed and disciplined by empirical evidence of *what works* to produce a given level of output' (Elliott 2001, p. 560).

Davies is also critical of educational research for not being evidence-based, in that the studies that do exist are seldom searched for systematically, retrieved and read, critically appraised for quality, validity and relevance, and organised or graded for power of evidence (Davies 1999, p. 109). One of the problems with examining research in education, Davies points out, is that the databases are less developed than in other fields like medicine.

The critiques of the approach taken by Blunkett, Davies and Hargreaves in the literature tend to centre on the following:

- The theory–practice dualism is not useful.
- A medical analogy in evidence-based research does not work in education.
- The engineering model of research is not appropriate for education.
- Debates about research and methodology are ignored.
- The approach to policy and implementation is linear and unproblematic.

The engineering model

In the editorial of a recent *Oxford Review of Education* volume, Sylvia contrasts the speech by Blunkett and the Hargreaves lecture with 'broader views' about research which are in a more 'enlightened' frame. She cites Foster saying that

> Research is not 'what works' … it is ... that set of activities which involves the systematic collection and analysis of data with a view to producing valid knowledge about teaching, learning and the institutional frameworks in which they occur. (Foster 1997 cited in Sylvia 2000, p. 293)

The traditional engineering model encompasses an approach where 'the facts speak for themselves' and transition from research findings to policy is a straightforward process. Hammersley argues that, although the image portrayed by the engineering model is one

that sometimes appeals to both researchers and practitioners, albeit for different reasons (Hammersley 2000, p. 394), it is at odds with the nature of human social life. It is also misleading in giving the impression that practical prescriptions can be derived solely from factual research findings. It tends to obscure the value assumptions that are always involved in the use of research.

Blunkett's speech, Hargreaves' lecture and subsequent papers can be located within the engineering model. Despite Hargreaves' apparent increasing sensitivity to accusations of 'positivism' (Elliott 2001) in papers since 1996, he does not seem to waiver from this model and, according to Elliott, seeks to strengthen the engineering model of research. Even though he qualifies the idea of 'evidence-based practice' by suggesting that relevant research *informs* rather than *displaces* the judgement of teachers, Hargreaves sees the future of educational research requiring more experimental studies and randomised controlled trials, in search of *what works* in practice to produce improvements in outcome (Elliott 2001). According to Hargreaves, educational research evidence about *what works* in classrooms should be cumulative and based on a process of continuously investigating exceptions (Hargreaves 1999a, pp. 247–8). Elliott argues that the gradual accumulation of 'what works' leads to a progressive diminution of unpredictability in human affairs, and it suggests that Hargreaves has not entirely shed the assumptions of positivism.

Who wants to be a social engineer?

Hodgkinson (2000) claims that historically the relationship between social sciences and government has not been looked upon favourably by either side.

> This is because, from the perspective of social science, the demands of government constantly outstrip its ability to deliver the type of knowledge which government requires. Furthermore, social science, for its part, has also outgrown the shackles, which the rather narrow government agenda has placed upon it. (2000, p. 1)

However, Hodgkinson claims that Blunkett's speech goes further than this. It is more expressive of New Labour's desire to implicate social science in a form of social engineering as a model for its own political practice. Blunkett's idea of 'research we need' is the kind of research that leads to a coherent picture of how society works, an idea about which of the main forces at work can be influenced by government, and research which evaluates specific policy initiatives. The purpose is to tell us what works and why and what is likely to be most effective. Hodgkinson makes the point that, for someone interested in evidence-based research, there is remarkably little in Blunkett's speech that substantiates any of his claims.

For Blunkett the entire enterprise of social science is encapsulated in the questions of how society works and how we can best engineer it. In order to answer both types of question a certain type of knowledge is called for. As Hodgkinson (2000) points out, what is demanded here is unmistakably a positivist conception of social science, where the task of social science is to 'discover' the knowledge required by politicians to enact the necessary interventions. He argues that Blunkett pursues a preferred mode of causal explanation and a desire for knowledge that will enable prediction and control (2000, p. 3).

This linear model of policy development is rejected in the policy analysis literature (Taylor et al 1997). Hodgkinson claims that the government wants a form of knowledge that will allow it to act with some degree of certainty and to avoid risk. Hodgkinson points to the inherent risks in masking values and mechanisms of power and influence by pretending there is indisputable knowledge which can be applied to social problems to 'measure the size of the effect of A on B' (Blunkett 2000).

Why what works is not enough

Atkinson (2000) strongly contests Hargreaves' claims to a lack of theoretical basis for teacher day-to-day thinking and practice. Atkinson believes strongly that the 'what works' notion does not take into account the complexity of the personal, social and cultural world in which teachers move or the thinking processes that inform their pedagogy (2000, p. 323). She believes that theories rather than evidence provide an essential infrastructure for teachers' everyday thinking and practice. This is not so much in the context of teachers consciously trying to apply theories to their practice, but comes from the view that much unconscious thinking and practice is related to theories, and probably combinations of theories. This is similar to McLaughlin's (1996) argument about vernacular theories and the likelihood that teachers combine aspects of their own vernacular theories with those of more university-based researchers in their everyday lives.

The DETYA report on the impact of educational research in Australia claims that it is likely that the findings from various models of educational enquiry will be put alongside other sources of information when professional practitioners make decisions related to their work. This is encapsulated in the notion of 'working knowledge' (DETYA Higher Education Division 2000). It includes the entire array of beliefs, assumptions, interests and experiences that influence the behaviour of individuals at work. The report suggests that working knowledge can be thought of as having three components:

- knowledge gained from systematic educational enquiry (SEE)
- experiential or craft knowledge
- local knowledge: a thoughtful review of the local situation and knowledge of the specific local situation in which decisions must be taken.

The report found that the most substantial alterations in working knowledge came from interpretations of evidence and from the inferences that related research evidence to other elements of working knowledge, not from the evidence itself (DETYA Higher Education Division 2000, p. 63).

Teachers' own vernacular theories might provide the context for interpretations and inferences. The view that evidence produced through evidence-based practice is the best or only way of informing and improving teaching ignores the role that theory plays in determining day-to-day thoughts and actions. Atkinson cites Ball (1995) saying that theory is a way of 'thinking otherwise'. It offers a language which can be used to challenge existing ideas. However, teachers (and others) may not acknowledge the theories they use, since the theory may have become part of their subconscious thinking and be tacit rather than explicit knowledge (Atkinson 2000, p. 325). Many ways of looking at the world can enhance our understanding of it. 'The freedom to generate new ways of thinking cannot be maintained through a narrow focus on "what works"' (Ball 1995 cited in Atkinson 2000, p. 326). '"What works" looks back, in reality, to what has sometimes worked for some people in the past' (2000, p. 328).

The focus on 'what works' treats superficially how someone knows it works, and for whom it works and in which context it works. Researchers in the school effectiveness field recognise that social context *does* have a persistent and long-term correlation with educational 'outcomes' (Thomson 2000, p. 157). If 'each school "place" is a distinctive blend of people, happenings, resources, issues, narratives, teleologies, knowledges and networks, in and through which the combined effects of power saturated geographies and histories are made manifest' (2000, p. 158), it would seem likely that 'what works' in one context may not 'work' in another. The risk with the 'what works' approach is that a policy maker's view of really useful research will be that 'it takes the problems which government brings to it, contributes to their solution, and refrains from adding new problems or further complicating old ones' (Edwards 2000, p. 304). In this framework, research is most likely to be helpful when it supports what the government had already, by other means, determined it was going to do. Edwards suggests that a serious implication is that researchers who are drawn into narrow agendas connected to school and student failure are likely to ignore 'wider' explanations for educational failure which include housing, health and poverty.

Is the medical analogy in evidence-based research useful?

At the heart of Hargreaves' claim for evidence-based research in education is a claim that medicine is an evidence-based profession and that doctors regularly engage in research. Hannan et al (2000) investigated this by developing and sending out questionnaires to teachers, GPs and surgeons. Whilst they point out that there were some issues with sample size that prevent more sweeping claims, there seems little evidence to suggest that doctors universally engage in research, that teachers do not, or that teachers are dismissive of the contribution of educational research, as Hargreaves claims. Surgeons did seem to show more involvement in research but, as Hannan et al point out, this may be a function of the time available. 'It may also be that GPs and teachers, unlike surgeons, do not need to prove that they have an interest in research or have publications to their names in order to obtain appointments' (Hannan, Enright and Ballard 2000, p. 14).

Davies' discussion of the medical model for evidence-based research focuses on posing 'answerable questions' (Davies 1999). This may be useful at some time, but is surely limiting if it applies to all educational research. What do we mean by 'answer' and how do we know something is answerable. There are a range of intractable problems associated with education where aiming for an answer would seriously limit the understanding of the problem. It could be argued that linking educational research more closely with practitioners and funders of research focuses too much on 'answerable' questions. There is a risk that, when one is funded to gather 'evidence' about a certain issue, a focus on the 'answers' narrows avenues of consideration and restricts the possibility of novel outcomes. For example, in a joint project between the National Foundation for Educational Research and the EPI centre in the UK, Evans describes the process of a systematic review that focused on a specific educational question (Evans 2000). The process itself required a progressive narrowing of the 'evidence' gathered with the aid of rigid rules for exclusion and inclusion of studies. Evans suggests that the application of the criteria functioned to have a bias towards studies in the USA and towards psychological studies rather than sociological studies. It was also biased towards studies that involved some form of experimentation. Evans comments that the emerging movement of 'evidence-based policy and practice' in the public sector will steer educational research in the direction of a 'medical model'. As such, 'Experimental research can only answer a fairly limited range of questions, and is not always sensitive to broad questions of values and ethics' (Evans 2000).

In the systematic review process described by Evans, it was clear that use of the medical model favoured research in which there was experimentation with controls and pre and post testing (Evans 2000). There are significant concerns when this is applied to the school situation given the lack of discussion by Hargreaves and Davies about the ethics of experimentation within learning situations. Evans also points out that there is a

significant time commitment required of evidence-based research around one small specific question (two full-time researchers for 6–8 months) that may put it well out of reach of any education practitioner. Hargreaves only very briefly touches on the time factor in evidence-based teaching and yet this may well be a significant major hurdle. His views about how a school might organise itself to be 'knowledge creating' also lacks discussion on the resources required for such an undertaking (Hargreaves 1999b).

Bias and partisanship in educational research

According to Hargreaves (1999a), educational research evidence about *what works* in classrooms should be cumulative and based on a process of continuously investigating exceptions. The identification of 'what works' and the criteria for identifying exceptions draw on one's own educational beliefs, values and 'theories'. Exceptions are not self-evident. It is unusual that Hargreaves does not address the inevitable bias that teachers would bring to research based in their own school, except indirectly by assuming that the process of gathering evidence is in some way made more 'objective' by the use of university consultants.

Elliott argues that one of the assumptions embedded in Hargreaves' thinking is that means and ends are contingently related and that the determination of means requires a clear and precise pre-specification of ends as tangible and measurable outputs or targets, against which the performance of practitioners is to be judged (Elliott 2001). The implication here is that the ends are unquestioned and the means are determined by neutral evidence.

Within the discussion about evidence-based practice there needs to be an explicit discussion about partisanship and educational research that is informed about the complex relationship between educational values and political beliefs on the one hand, and research methodologies and practices on the other (Carr 2000). Carr argues that main conclusion from a range of methodological and theoretical studies over the last forty years is that, far from being an unwelcome intruder, partisanship is an essential ingredient in educational research. It could only be eliminated by eliminating the entire research enterprise itself.

> What also follows is that the problem of partisanship only arises for those who maintain a philosophically uninformed and intellectually naive view of educational research as a purely technical and methodical activity that can and should remain uncontaminated by politics, values and ideology: a view which those who criticise the partisan nature of educational research never explicitly defend but to which they always implicitly subscribe. (Carr 2000, p. 439)

Carr claims strongly that educational research can not escape its partisan nature because 'Educational researchers cannot study education without some commitment concerning its purpose, value and goals' (2000, p. 440). Educational research always conveys an educational commitment even if this is unintended and even though it remains unacknowledged and undisclosed. Carr argues that the empiricist belief that research should allow 'the facts to speak for themselves' conveniently overlooks the point that the data are collected, categorised and analysed on the basis of concepts or theories which enable observations to be selected in a particular way. The concepts and theories are not derived from observation but determine what is to count as observations.

Carr argues that the choice of an educational research methodology always implies a preference for the theory of human nature on which it is based and thus the stance embodies an educational commitment (2000, p. 444). If the questions about which educational beliefs we are basing our work on are ignored then the research will covertly incorporate one particular and highly partisan view of education under the guise of neutral inquiry (2000, p. 445).

Dissemination of research

Using the 'frame' (Rein and Schon 1993) of the engineering model for educational research, dissemination of research is regarded as an endpoint. 'With so much attention given to dissemination as a product, and evidence as its object, where we least often look is at dissemination as a process and, in consequence, evidence as an outcome of this process' (Barnes et al 2000). This is an area where Hargreaves' concept of evidence-based research is not necessarily constrained by the engineering model in that his conception of dissemination of research is not necessarily limited to a product (which he thinks is unsatisfactory anyway). Hargreaves alludes to dissemination being a process as well, but his explanations lack detail and depth. This is a major problem for his argument since he builds the structure of the knowledge-creating school on dissemination of research from evidence-based practice, without explaining how the difficulties with existing modes of dissemination are overcome.

Hargreaves argues that knowledge creation is important in a school and that dissemination is part of the process of being a 'knowledge-creating school' (Hargreaves 1999b). Whilst he claims that tinkering provides 'much of the raw material' for knowledge creation, he implies that it needs to be guided by university staff acting as consultants to ensure that knowledge is grounded in trustworthy evidence and is validated by showing that the derived practice 'demonstrably and repeatedly works' (Hargreaves 1999b, p. 128).

This process immediately raises concerns about how the outcomes of tinkering are valued and shared across networks. Wagner suggests that accounts of planned educational change appear as a complex, dialectic process requiring substantial investments of teacher time and attention (Wagner 1999). However, he points out that the insider literature of practitioner research offers little guidance about how what some teachers learn can lead other teachers to change how they think and what they do. Hargreaves suggests that university-led research should focus on a study of the networked creation, validation and dissemination of professional knowledge (Hargreaves 1999b, p. 141). Other than this response, Hargreaves is not very forthcoming about what might be arguably one of the most complex aspects of evidence-based practice – that of sharing 'findings' with others to make a difference.

Hargreaves' move to position the knowledge-creating school within a school effectiveness framework reveals his interest in dissemination as a technical problem to solve in the bureaucratisation of the knowledge-creating process. He describes a knowledge-creating school as one that:

- audits its professional working knowledge to expose the social distribution of knowledge
- manages the process of creating new professional knowledge in a way that is similar to high technology firms
- validates the professional knowledge created in demanding ways
- disseminates the knowledge created (Hargreaves 1999b).

In Wagner's research concerning the 'Taking Stock' project, he found that, in the efforts to generate new knowledge, practitioners may move away from each other rather than toward a common and coherent reform agenda. He concluded that practitioner research has the potential to create as many divisions among practitioners as it dissolves between practitioners and other researchers (Wagner 1999). The lack of attention given by Hargreaves to the process of sharing and dissemination of evidence-based research conducted by teachers is a crucial oversight.

In a more recent paper, Hargreaves attempts to provide a theory that joins school improvement and school effectiveness fields. The key idea for linking school effectiveness and improvement is that of a school's capacity for improvement (Hargreaves 2001a, p. 488). Hargreaves claims that understanding school improvement means discovering how schools can learn to implement the high leverage strategies of effective schools. Mastering this requires an understanding of, and a professional ability to apply, the evidence of 'what works' on the basis of research or personal experience and a capacity to innovate and experiment in novel

situations and where evidence is lacking (Hargreaves 2001a). He now uses terms like 'intellectual capital' to refer to a school's capacity for the creation of new knowledge and the capacity to transfer knowledge between situations and people.

> An *effective* school mobilises its intellectual capital ... and its social capital ... to achieve the desired educational outcomes of intellectual and moral excellences, through the successful use of high leverage strategies grounded in evidence-informed and innovative professional practice. (Hargreaves 2001a, p. 490)

This clearly places Hargreaves' concept of evidence-based research/practice within a mechanistic view of schools like that portrayed in other school effectiveness accounts. Elliott (1996) argues that this view is shaped by a set of control values which define schooling as 'a coercive process of social induction' (Elliott 1996, p. 212). He describes the implied view of teachers as technical operatives in a technological system of pupil surveillance and control. A very different vision is that education is a highly personal transaction between teacher and pupil in collaboration with parents.

What is educational practice?

One of the key problems with the conception of evidence-based practice described by Hargreaves is that it lacks an *educational* perspective on the practice of teachers in schools. By this I mean that it lacks a view of the educational purpose of schooling, confining itself to a more instrumental view of teachers' connection to the learning process of students. In a paper published in 1987, Carr comments that it tends to be assumed that the meaning of 'educational practice' is so straightforward and clear that we can rely on our commonsense understandings when we use the term (Carr 1987). Fundamental to an understanding of practice is an appreciation of the ways in which the relationship between theory and practice is situated. Carr argues that there are three main ways that this has been done.

In the oppositional view, practice is everything that theory is not. Carr argues that this view generates criteria for 'practice' which, when applied to educational practice, exclude too much.

> [B]y making the twin assumption that all practice is non-theoretical and that all theory is non-practical, this approach always underestimates the extent to which those who engage in educational practices have to reflect upon, and hence theorise about, what, in general, they are trying to do. (1987, p. 164)

In the dependence view it is acknowledged that practice, like all observation, is 'theory-laden'. If the notion that all practice is guided by theory is accepted, it can refer to tacit, implicit theories as well as theory by disciplined enquiry (1987, p. 165). Carr claims that this excludes too little to be useful in an analysis of practice. It also does not adequately recognise that educational practice is never guided by theory alone.

In the view that practice is independent of theory, Carr points out that the definitive feature of educational practice is that it is an ethical activity undertaken in pursuit of educationally worthwhile ends. To engage in educational practice 'know-how' is not sufficient. There must be a tacit understanding of what it is to act educationally.

Carr suggests that it may be that all three are necessary to an understanding of 'practice'. He believes that it becomes plausible to interpret them not as mutually exclusive 'but as three essential features of a historically prior concept of practice for which problems about its relationship to theory do not arise' (1987, p. 166). In his historical analysis Carr highlights that the key distinction is not between theory and practice but between different kinds of action.

Carr's historical view is based on the philosophy of Aristotle. In its classical context 'practice' referred to a distinctive way of life – *bios praktikos* – a life devoted to right living through the pursuit of human good. It was distinguishable from *bios theoretikos* – the contemplative way of life of the philosopher or the scientist. The Greek distinction between theory and practice was a way of articulating two different forms of socially embedded human activities, each with its own intellectual commitments and moral demands (Carr 1987, p. 169). The most important distinction was between two forms of human action – *praxis* and *poiesis* – which Carr says translate roughly to 'doing something' and 'making something'.

Poiesis is action to bring some specific product or artifact into existence. The end is known prior to action. It is guided by a form of knowledge called *techne* – technical knowledge or expertise. In *praxis,* the end is not to produce an object or artifact but to realise some morally worthwhile good. Carr claims that the end can only be realised through action and can only exist in the action itself (1987, p. 169). In *praxis*, the ends are not immutable or fixed. They are constantly revised. Since the ends of practice remain indeterminate and cannot be judged in advance, it always requires a form of reasoning in which choice and judgement play a crucial role. This is distinguishable from technical reasoning whose overall purpose is to consider the relative effectiveness of action as a means to some known end. Practical reasoning is deliberative. Good deliberation is dependent on *phronesis* – 'practical wisdom'. Judgement is an essential element of 'practical wisdom' since a comprehensive moral capacity is required.

Using Carr's differentiation of *praxis* and *poiesis*, it is possible to examine further Hargreaves' concept of evidence-based practice. The use of the term 'practice' disguises two different forms of human action. Hargreaves' focus on 'what works' relies upon *poiesis* guided by *techne*. Whilst he claims to value teacher judgement, he also claims that teachers need outside university consultants to make sure the verification of the knowledge is trustworthy since the 'peer-based approach seems to be weaker in ensuring that new knowledge is grounded in trustworthy evidence' (Hargreaves 1999b, p. 138). In his development of the notion of the knowledge-creating school he argues that 'Schools must also find ways of exploiting the intellectual assets, especially of teachers' (Hargreaves 2001a, p. 498). They must learn how to create this professional working knowledge and then transfer it rapidly through the teaching force. It seems to me that this is not *praxis* he is talking about. The ability to transfer knowledge rapidly depends on decontextualising that knowledge and yet the use of teacher judgement – 'practical wisdom' – in making use of this knowledge relies upon an understanding of context.

What is distinctive about an educational practice is that it is guided not just by some general practical theory or packaged knowledge but, perhaps more realistically, by the urgencies of the practical situation in which this theory or knowledge is to be applied.

> Educational practice cannot be made intelligible as a form of poiesis guided by fixed ends and governed by determinate rules. It can only be made intelligible as a form of *praxis* guided by ethical criteria immanent in educational practice itself: criteria which serve to distinguish genuine educational practices from those that are not, and good educational practice from that which is indifferent or bad. (Carr 1987, p. 173)

What is essential to practical reasoning is that it is used not for determining *how*, but determining what *ought* to be done from a moral point of view. Education is a scene of conflicting moral dilemmas, where both the means and ends are open to question.

Practitioners reflect on alternative ethical ends (Carr 1987, p. 171) collectively. Carr argues that collective deliberation is better than individual deliberation and hence advocates a renewed awareness of educational practice as the achievement of a tradition rather than as a form of craft knowledge or technical expertise (Carr 1987, p. 173). Craft knowledge and technical expertise can be seen to be something possessed individually. To 'practice' involves being initiated into the knowledge understandings and beliefs bequeathed to the tradition. The practical knowledge is constantly re-evaluated through dialogue and discussion about how to pursue the practical goods. This discussion seeks to raise the practical knowledge embedded in

tradition to the level of reflective awareness and through critical argument to correct and transcend the limitations (Carr 1987).

Evidence-based praxis

Potter (2001) describes a project involving collaborative teacher research. She describes some of 'the tension between what they thought was best for their students based on their professional judgement and what "the system" required' (2001, p. 130). The project focused on exploring in depth the home cultures and discursive literacy practices of the families of children with whom they were working. The students were located in disadvantaged communities. 'The system', both macro and micro, seemed to discount 'individual differences and diversity and attempted normalisation for all children for organisational convenience' (2001, p. 133). The theory that 'difference = deficit' seemed pervading and self-perpetuating. The teachers involved were part of a context of 'generic outcomes, competencies, performance indicators, measurement, testing and the like that confront the cry for quality education, equity and social justice for all children' (Potter 2001, pp. 135–6).

Teachers' daily decisions about how to work with their students involve a form of what might be termed evidence-based *praxis,* because it involves the kind of *phronesis* – 'practical wisdom' – that allows critical reflection on their own life histories and experiences, and on the moral dilemmas inherent in social justice/injustice.

Building on the work of Peters and Stenhouse, Elliott argues that the

> … primary role of *educational* research, when understood as research directed towards the improvement of *educational* practice, is not to discover contingent connections between a set of classroom activities and pre-standardised learning outputs, but to investigate the conditions for realising a coherent *educational* process in particular practical contexts. (Elliott 2001, p. 564)

Elliott cites Stenhouse's notion of 'actionable evidence' as resulting from educational research. Elliott describes this form of evidence as relevant to the problem of how to make the concrete activities of teaching and learning more *ethically consistent* with the criteria that define what it means to become educated (Elliott 2001). This involves teachers adopting a research stance towards their teaching and gathering case study evidence about its effects.

However, the concept of evidence-based praxis is still limited if it does not also include local context, a sense of 'thisness' – a sense of each school 'place' as a

> … distinctive blend of people, happenings, resources, issues, narratives, teleologies, knowledges and networks, in and through which the combined effects of power saturated geographies and histories are made manifest. (Thomson 2000, p. 158)

The capacity of 'disadvantaged schools' to make a positive difference in students' learning *is* context dependent (2000, p. 158) and mediated by local subjects. Thomson argues that 'thisness' is about the specificity of place, and how it is that local action is delimited by contexts. If the capacity for disadvantaged schools to make a difference depends on an understanding of context, then the *phronesis* (practical wisdom) used by teachers in their daily work must be infused by 'an internally persuasive discourse' (Bakhtin 1981, p. 342 cited in Potter 2001, p. 135) that includes an ongoing conversation about what 'thisness' means in their own local context.

Conclusion

The argument about practitioners making use of evidence in their daily work is not in dispute in this paper. What has been argued is that Hargreaves' notion of evidence-based practice may not be useful or relevant to education. In the context of educational practice, Elliott argues that 'what counts as evidence' is not simply evidence about the instrumental effectiveness of the strategies employed to secure certain learning outcomes, but evidence about the extent to which teaching strategies are ethically consistent with *educational* ends (Elliott 2001). I would add that evidence is also about 'thisness' in the form of school mix, neighbourhood resources and issues, and system support (Thomson 2000).

Thomson argues that 'disadvantaged schools' heartily resent their representation in policy as schools that are either making excuses about poverty or who are the heroic exceptions to the poverty–learning nexus. 'They point to the complex interplay of systemic and neighbourhood issues that come together in their schools, and demand a policy framework that not only meets their needs, but also "sees" their situations as they are' (Thomson 2000, p. 167).

As a principal of a disadvantaged school, I believe that there is a sense of urgency to this. There need to be

> … public democratic conversations [that] will openly challenge the 'moral ascendancy of managerialism' (Inglis 1989) and keep such issues

> as difference, diversity, poverty, marginalisation and 'disadvantage' on the agenda. (Potter 2001, p. 135)

These conversations need to be reignited from within the teaching profession itself, but in a form that does present and use evidence to address the issues. This evidence-based *praxis* needs to involve teachers and principals in 'theorising and retheorising, what is happening in classrooms, and schools [and neighbourhoods], "what works", how they know and how things might be done differently' (Potter 2001, p. 135). There will be an element of developing knowledge about teaching and learning strategies (Hargreaves' 'body of knowledge'), but it will be in the context of the ethical and moral dilemmas associated with education and will take up the question of local differences as well as a realistic approach to what constitutes actual school improvement (Thomson 2000, p. 170).

The process of involving teachers might well produce a 'knowledge-creating school', but not in the sense defined by Hargreaves where 'Schools must also find ways of exploiting the intellectual assets, especially of teachers' (Hargreaves 2001a, p. 498). The practicalities of supporting evidence-based *praxis* in a school need to be the subject of further thinking. It seems to me that this thinking might explore the ramifications of a comment by Stenhouse, cited by Elliott, that 'the teacher cannot learn by inquiry without undertaking that the pupils learn too' (Elliott 2001, p. 567) and the arguments made by other writers about the importance of students and teachers working together for school reform (see for example Fielding 2001a, 2001b, Groundwater-Smith 2001, Wasley, Hampel and Clark 1997, Wilson and Corbett 2001). The notion of evidence-based *praxis* may well incorporate elements of Fielding's 'radical collegiality' which 'requires a reciprocity and an openness between students and teachers without which authentic learning seems less likely to take place' (Fielding 1999, p. 26).

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