Teachers' Engagement in and with Research: supporting integrity and creativity in teaching

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ABSTRACT This article explores the relationship between research and teaching, arguing that each of them is both a demanding science and an imaginative art, and that they both manifest the values and processes of learning, the open mind and the open heart, as it were. This is a rather different proposition from the notion that 'evidence' can be 'applied' to teaching in an unproblematic way. The author argues that 'what works' is not at all self-evident but needs to be held up to full ethical and intellectual discussion – which teacher-research is in a strong position to lead. The author goes on to suggest that teacher-research is about valuing the real-time, knowledge-in-action, context-specific understandings which people use to solve new problems. The article begins and ends with allusions to poetry, as one way of connecting the rational with the imaginative worlds that we inhabit.

A Poem

The Teacher

The earth rotates,
        says the pupil.
No, the earth rotates,
        says the teacher.

The hills are turning green,
        says the pupil.
No, the hills are turning green,
        says the teacher.

Two times two are four,
        says the pupil.
No, two times two are four,
        says the teacher.
Because the teacher knows best.

This austere little poem by the Czech poet Miroslav Holub, written in 1962, is an eloquently simple expression of everything that good teaching is not. How deftly the poet links the authoritarian teaching that imprisons and kills the spirit, that denies the pupil's sense of truth and self, with the totalitarian form of government that turns citizens into subjects, that keeps them unfree, isolated, invisible. (Those of you who've read some of my other writings [e.g. Saunders 2004] will know that I've quoted the poem more than once, because it so strongly exemplifies for me the connection between the work of the imagination and work-in-the-world: the inner and the outer visions.)

The happy truth is that teachers everywhere are mostly motivated by an entirely different ethic – teaching as *the* activity that enables authentic learning, that is empowering, inspiring, emancipating.

What is the role of research in this kind of teaching? In this paper, which I am delighted to have been invited to write, I'll try to show why I think teaching and research are mutually supportive in a profound way, and how together they make for the curiosity, creativity, uncertainty, dialogue, that form the basis of inspired and inspiring learning.

The General Teaching Council for England

But allow me first to set out the General Teaching Council's own commitment to research. From the outset – when we were thinking back in 2000 about our core principles – we argued that the GTC should be committed to behaving as an evidence-informed organisation, and to promoting teaching as a research-informed profession.

This is because research activity – hypothesis-testing, concept-building, critical analysis and appraisal, evaluation, synthesis, as well as the gathering of empirical evidence within an explicit ethical framework – is, and must be seen to be, relevant to the needs of the teaching profession and, more generally, of a society which takes education seriously. For, although the relationship between research, policy and practice is neither simple nor direct, research is not an optional extra. Amongst other things, research is a crucial source of evidence on which public policy should be founded: why, how and where resources, human and financial, should be allocated in order to provide the optimum conditions for excellence in teaching and learning. We explicitly uphold the Enlightenment values of rationality and transparency (not least on the grounds that public policy is an area where claims and assertions abound); as Ann Oakley wrote:

> … the business [of research]… is how to develop the most reliable
> and democratic ways of knowing, both in order to bridge the gap
> between ourselves and others, and to ensure that those who
> intervene in other people's lives do so with the most benefit and the
> least harm. (Oakley, 2000, p. 3)

Since 2000, the GTC has funded, often in partnership with other organisations, many interesting and valuable research studies that have shed light on teachers'

professional development, on the education of asylum-seeking and refugee children, on the career development of older teachers, on effective leadership of learning in the early years, on innovative teaching through new technologies, to cite just a few examples. We have also established the popular *Research of the Month* website, sponsored a special *Times Educational Supplement* feature on teachers' research called 'Classroom Discoveries', and recently distributed a leaflet to all schools on using research in schools and classrooms. Teachers can have their school-based inquiry activities recognised and valued through the GTC's Teacher Learning Academy, and can access research intelligence to support their particular roles and interests by subscribing to one or more of the GTC Networks. We also conduct an annual survey of teachers, and we co-host the National Teacher Research Panel, who organised a superb conference in March 2006 to show-case teachers' research from across the whole country. (For further information on these resources, organisations and activities, please see the list of web-links at the end of this article.)

What Can Research Offer to Teachers and Teaching?

It is plain that becoming a research-informed organisation, or profession, is not an easy option, however, despite the fact that 'evidence-based education' has become something of a mantra in current discourse.

The key thing for some protagonists is that the *outcomes* of research should provide the best available empirical evidence to inform policy and practice; this is often accompanied by a preoccupation with how research evidence can best be constructed and communicated, for example, through systematic reviews of research literature, in order that evidence can have the optimum purchase on decision-making.

For others commentators, it is the *process* of research – 'the adventure of speculative understanding' (Stenhouse 1979, quoted in Elliott, 2001; and see also, to take a fairly random sample of writings, Carr & Kemmis 1986; Cochran-Smith & Lytle 1999; Dadds 1995, 2002; Elliott 1991; Flyvbjerg 2001; Laidlaw 1996; McNamara 2002; Schon 1983; Sullivan 2000; Whitehead 1989) – which is integral to pedagogical practice. On this view, educational research is not merely instrumental but is an ethically (Stenhouse, Elliott, Whitehead), politically (Flyvbjerg) and even aesthetically (Sullivan) requisite aspect of how practitioners construct and explore their professional knowledge and practice.

We need to acknowledge that teaching is a hugely complex and skilled activity. It is simultaneously both a science and an art – it requires scholarship, rigorous critical inquiry, collective creation of educational knowledge according to collegial and communal norms, *and* it requires intuition, imagination, improvisation: all those spur-of-the-moment, not-to-be-predicted, instinctive and idiosyncratic decisions that more than one commentator has likened to a performance art. So we can say, without stretching the point, that teachers are learners *par excellence* – they model the processes of learning in their own

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professional practice. And that is where research comes in – it manifests the values and processes of learning that support both the science and the art. I shall return to this theme as the paper unfolds, and I think it is a rather different proposition from the notion that you can 'apply' 'evidence' to teaching in a simple and unilinear way.

I also want to acknowledge that, for many years, teachers, local (education) authority advisers and higher education institution staff have poured enormous goodwill, energy and commitment into school-based research. They have led the way in showing how partnerships can bring the resources, values and practices of each domain to bear productively on developing teaching and improving learning. And the extent to which, over the last few years, national agencies have concurred in understanding the value of research in supporting practice is also quite remarkable. The extent of teachers' participation in research is evidenced by a very wide variety of activities, even now when key initiatives like the DfES Best Practice Research Scholarships, the TTA (as was) school-based research consortia, and the NCSL network learning communities initiatives have all been and gone. We are seeing the creation of dynamic, workable models and local/regional efforts to establish and sustain a diversity of practice, and evidence from different countries (for example, DETYA 2000) as well as from England (for example, Sharp et al, 2005) shows that many teachers these days:

- directly access research intelligence, for example, through websites, reading groups, researcher-in-school schemes, as well as journals and other print media
- participate in externally-generated research studies
- undertake research as part of their accredited professional studies
- undertake specific teacher-researcher activities outside accredited study
- actively experiment in their own classrooms using a reflective-evaluative enquiry approach
- work in pairs or groups to read, analyse and discuss research relevant to professional and school development, and to design collaborative studies within or even across schools.

Accessing and Interpreting Research: a professional learning experience in its own right?

On that first bullet point, a great deal has been written about the challenges teachers face when trying to access and interpret other people's, especially academic, research, and then to apply it to their own contexts. Over the last few years, through many local and national initiatives (and notably the work of the Centre for the Use of Research and Evidence in Education), there have been impressive strides in developing the communication of research to practitioners; and the evidence-base about all this is itself developing. (For further information on selected resources, please see the list of web-links at the end of this article.)

So here I'll just tell a brief story of my own. I had the privilege a couple of years ago of observing, and helping to facilitate, the processes by which a small group of practitioners were trying to use the outcomes of a research review on the teaching of sustainable development to support and improve their practice in schools and environmental centres (Rickinson et al, 2003). What I saw taught me that for some practitioners the form and language of research is a foreign one which they have to learn, and the practical application of what are often inconclusive findings presents them with an unfamiliar kind of intellectual struggle. Moreover, I saw that the researcher – who acted as a resource and guide throughout the process – had to yield his expert and specialist ownership of the work in order to create the space for teachers to own their rather different meanings of it. This is an intense, messy and tough process which must be understood in terms of professional development – adult pedagogy – and resourced accordingly.

I could also see that during this process some of the teachers – who were initially united by their passion for the subject rather than by any particular interest in research – were starting to think about conducting small-scale research projects in their classrooms to test out or take further what the academic research was telling them. This supports the idea that there is a direct relationship between being engaged *with* and being engaged *in* research. And at least some teachers are more likely to want to get hold of and use the results of others' research, to see this research as relevant to their practice, and to demand that research should be reliable and accessible, if they or their immediate colleagues are engaged in research themselves.

The Teacher's Relationship with Research: beyond 'what works'?

But what does it mean for a teacher to be involved in doing research? Is it largely about finding out 'what works' and putting it into practice? Or is there something more, or different, involved when a teacher embarks on a relationship with research?

Well, perhaps we cannot agree on what teacher-led research is about until we have agreed a sufficiently subtle understanding of both teaching and research. I am not going to embark on such an ambitious exercise here; I just want to suggest that both teaching and research are intrinsically social and ethical, not just instrumental, undertakings; and that creativity, feeling and intuition, as well as cognition, are crucial to the satisfactory accomplishment of each.

Just to hint at what I have in mind, here are a few ideas I've culled from other writers – many of which, I am sure, will be familiar to you. About teaching, Elliott (1996) has said:

> It is not as if the moral ends are clear and all that is left is a decision
> about the most technically efficient means of satisfying them…
> education [is] a morally complex affair involving a careful

consideration of both the curriculum and pedagogy by teachers.
From this perspective the quality of education depends on the
quality of teachers' deliberation and judgement in the classroom.

'The quality of teachers' deliberation and judgement in the classroom' was the subject of a presentation I heard several years ago which has stayed with me ever since. Maingay (2000) argued that there is much more to effective teaching than the effectiveness of planning, procedures, routines; sound subject knowledge and good but flexible routines are necessary, yes, but not sufficient. He talked convincingly about the 'generally uncodified skills and abilities that all teachers possess to some degree' which he calls 'teaching intelligence'. These skills and abilities are to some extent instinctive: things like improvisation, grace, tact, humour, rapport, rhythm, timing, empathy, being 'in flow' – what some people now like to call 'emotional intelligence'. Maingay's train of thought equated this intelligence with 'tact' in the classroom, which he said involves:

- being personally present
- being open and not over-planned
- creating and using an appropriate tone
- genuine interest
- humour
- being on good form
- being well enough prepared
- being confident but not too confident
- being relaxed but alert
- being the right you for that situation.

On a similar theme, Humphreys & Hyland (2002) wrote a captivating article which draws analogies between 'performance' in teaching and in jazz music – they argue that technical competencies are there to provide the requisite basis for the exercise of artistry, intuition, improvisation, dynamism and expressiveness.

Burton's (2001) fascinating inquiry into the role of intuition, aesthetics and emotion in mathematics as practised by research mathematicians means we have to think about the quality of *researchers'* deliberation and judgement, too, even in this most intractably (so we might think!) objective discipline. She found that in describing their own practice of the subject, i.e. as learners, mathematicians are inclined to use highly personal and subjective terms – they talk about embarking on a journey, they feel excited, moved, by what they call the beauty or elegance of mathematics, they rely to at least some extent on revelation, intuition and visualisation to tackle complex abstractions. Burton argues that in consequence much more needs to be done to 'help [students] to establish links between [their own] insights and the power and function of argument'.

So research and teaching seem to owe much to those ethical and imaginative capacities, the open mind and the open heart. As Elliott elsewhere (2001) argues, invoking the spirits of Peters and Stenhouse writing in the 1970s, pedagogy is a transformational process deeply connected with the construction of knowledge through enquiry. Furthermore, since 'the structures of knowledge into which students are to be inducted are intrinsically problematic and contestable, and therefore objects of speculation' teachers can, and should, 'model [for their students] how to treat knowledge as an object of inquiry' (Elliott, op. cit.). This argument allows Stenhouse – and Elliott – to claim that research is an activity wholly integral to the practice of teaching:

> … educational research can provide a basis for teaching and learning
> about teaching. Professional skill and understanding can be the
> subject of doubt, that is of knowledge, and hence of research.
> (Stenhouse, 1979, cited in Elliott.)

The Australian report on the impact of educational research found that 'It is the teacher who construes meaning from research, from practice and from the relationship between research findings and practice' (DETYA, op. cit.). One of the most important lessons I learnt from my previous work at the National Foundation for Educational Research with teachers on their use of value added performance data was that the meanings of data are *socially constructed*: from the data themselves, from their significance in a politicised context of accountability, and also from the values and attitudes, concerns and expectations of individual staff (see Saunders, 2000).

We cannot speak realistically and truthfully about an 'evidence-based', still less a 'research-informed', profession without acknowledging the many ways in which professionals interact with and therefore inevitably and necessarily modify the meaning of 'evidence', especially in relation to the values they hold dear.

This insistence on the contestability of education, the involvement of practitioners in the construction and not just the transmission of knowledge, won't go away. It helps to explain why we cannot simply synthesise and apply the findings of educational research as if they could unproblematically produce cumulative and predictive knowledge in the manner attributed to the natural sciences. It is obvious that the study of any system which involves people – the world of social sciences – is different from the study of systems which consist of atoms or molecules, the universe of material sciences. Bruce (1999) puts it succinctly: '[People] act as they do, not because they are bound to follow unvarying rules but because they have beliefs, values, interests, and intentions'.

So it is not hard to imagine that, in any experiment about 'what works' in education, it is 'the social processes at work in the experiment [which] may be the determining factor' (Morrison, 2001). Large-scale statistical studies of how people behave, including in schools and on tests, will only ever have probabilistic conclusions, in other words, that they reveal tendencies rather than provide predictions. This means that they are hugely important in discerning

patterns not visible to the naked eye, as it were, such as the distribution and effects of educational and social exclusion. Morrison's article argues for diverse and holistic methodologies in educational research, including qualitative data, surveys, correlational and naturalistic data, precisely because it is only the combination of such methods that is capable of 'building people into the process as sentient and intentional, and interacting with each other'.

One of the corollaries of this view of educational research is that, as Morrison says:

> … what works is a matter of discussion and debate, not simply of data; what works is a value statement not simply an empirical statement…

This consideration, that 'what works' is not self-evident but needs to be held up to full ethical and intellectual discussion, is crucial to hold on to. It seems to me that teacher-led research, which revolves around questions which the profession is most concerned to address, is in a very strong position to tease out, and test, the nuances and ethical complexities of 'what works' in very precise, local contexts.

Thinking Aloud: teachers modelling learning?

For me, this whole debate reveals a tension between what I think of as *convergent* and *divergent* modes of creating knowledge [1] by which I mean, on the one hand, doing the hard, painstaking work of accumulating and synthesising collective knowledge with which to inform broad-based action, which inevitably looks towards the past – what has been done and analysed and reported – and, on the other, also valuing the real-time, knowledge-in-action, changing and dynamic, context-specific understandings, which people use to look towards the future and to solve new problems. And perhaps really valuing the latter kind of knowledge means being prepared to let go of it, not seeking to control it either politically or epistemologically.

This leads me to ask, when teachers '*model how to treat knowledge as an object of inquiry*' what is it that they are modelling? It involves, among other things, a way of thinking out loud together, perhaps. Resnick (1987) gives a working definition of 'high quality thinking' which I find very useful: she characterises it as follows:

- it is not routine – the path of action is not fully known in advance;
- it tends to be complex – the total path is not visible from a single viewpoint;
- it yields multiple rather than unique solutions;
- it involves nuanced judgement and interpretation;
- it can involve the application of multiple criteria which may conflict with one another;
- it involves uncertainty – not everything about the task at hand is known from the outset;
- it involves imposing meaning – finding structure in apparent disorder;

- it is effortful – considerable mental work is needed for the kinds of elaborations and judgements required.

And I'd want to add:

- it depends on a dialogic and dialectical process – people need to share and test and revise their provisional and individual thinking in the light of other people's ideas and evidence.

We all know how crucial is the ability to think, and to enable young people to think, in these 'high quality' ways; I have to say that this puts me in mind of yet another Stenhousian *bon mot*:

> Education as induction into knowledge is successful to the extent
> that it makes the behavioural outcomes of the students
> unpredictable. (Stenhouse, 1975)

'It is by Virtue of Being an Artist that the Teacher is a Researcher…'

Well, I'd say we haven't reliably and universally established that kind of education system yet. The notion of involving learners directly in the reform as well as the processes of education – as many recent studies (for example, Arnot et al, 2004; Fielding 2001, 2004; Flutter & Rudduck 2004; MacBeath et al,1996, 2003; Rudduck et al, 1996; Rudduck & Flutter 2003) have made us aware – might help to make schools more effective for learners as well as more democratic for future citizens. Not only do teachers need to be leading reform rather than having change and development imposed on them, but they will need and want to involve their students even more than before. So we need to promote and resource the ways in which teachers can bring research values and processes into their pupils' work, and guide students to take the initiative in identifying the topics and issues they want to research.

I was very moved by reading a journal article 'Notes from a marine biologist's daughter' (Sullivan, 2000), in which the author quotes Stenhouse – again! – to the effect that "It is by virtue of being an artist that the teacher is a researcher…" (Stenhouse, 1988, p. 48, quoted in Sullivan, p. 226). Sullivan uses her own autobiographical recollections to show what she means:

> My mother, the teacher, held classes in mud and water and light.
> She taught with buckets and shovels and nets. Her students' tennis
> shoes, and hers, squished loudly as they worked, discovered, learned.
> I observed that my mother and her students were happy. I became a
> teacher.
> My mother, the researcher, went into the field twice a day whatever
> the weather for years, methodically, with her plankton nets. Then
> she sat patiently at the microscope on the kitchen table, observing,
> noticing, discovering patterns, making sense. In that kitchen, I

learned the patience of research. My mother made order of the raggedness of the living world…' (Sullivan, p. 221)

Sullivan uses her own poems as a species of report to show us her sensory and emotional as well as intellectual and cognitive processes in close-up, the pleasures as well as the perplexities of 'modelling' learning and creating knowledge.

A Few Closing Thoughts

Many teachers have told me how engaging with and in research re-energises them as professionals. I'm struck by what they actually say, the clusters of ideas and similes that come up when they talk about research in their own working lives – phrases like:

- hunch, creativity, surprise, discovery, excitement, pleasure – even on the part of experienced and battle-hardened teachers
- professional judgement, mutual respect, trust, language of learning
- reflection, self-questioning, shared observation, clearer focus, insight, enlightenment
- gradual change, progressive improvement, making a difference.

Typical quotes from teachers include:

- 'I thought I was a good teacher, and certainly I was competent; but it was research which made me better than just competent'
- '[engaging in research] is what excellent teachers do'.

And there are some lovely similes teachers have used to describe the experience or the process of research:

- 'a bricklayer turning into an architect'
- 'an island waiting to be discovered'
- 'a beehive, pollinating the flowers of the whole countryside'…

It is obvious that there are immense intrinsic gains for teachers and schools who are involved in research. The consensus from the many seminars, conferences and workshops I've been involved in over the last few years is that research-informed practice offers a rich mixture of positive activities and outcomes, such as:

- a growing evidence-base to support the development of teaching skills, both generic and specific
- teacher-led school improvement
- satisfying, robust and relevant professional learning and development for teachers
- a range of data for accountability purposes
- a culture of self and collective evaluation

- an opportunity to think and look beyond one's own horizons and to join other networks/communities of professionals.

It is arguable that the future of education depends on teachers' passion as well as their competence: we must be able to inspire all teachers with a vision of the range of possible pedagogies for the future, enlisting and investing in their creativity, emotions, intellect, curiosity, their wholeness as humans.

So I hope readers feel, as I do, that the connection between research and teaching is intimate and integral rather than incidental or instrumental, and that what the relationship enables is the possibility of teaching-and-learning which is genuinely transformative.

Selected Websites

GTC *Research of the Month* website:
www.gtce.org.uk/PolicyAndResearch/research/AboutROM

GTC Teacher Learning Academy: http://www.gtce.org.uk/TLA/

GTC Networks: http://www.gtce.org.uk/networks/

National Teacher Research Panel: www.standards.dfes.gov.uk/ntrp/

'Research Engaged School' project: http://www.nfer.ac.uk

GTC leaflet on research-informed practice (downloadable PDF):
http://www.gtce.org.uk/PolicyAndResearch/

Developing Innovative Pedagogy with E-Learning Resources action research project:
http://www.esri.mmu.ac.uk/resprojects/pelrs/index.htm

Centre for the Use of Research and Evidence in Education: www.curee-paccts.com/

'*Planning Your Research Project*': www.topiconline.org.uk/03rickinson.pdf

BECTA: http://partners.becta.org.uk and teacher research case studies:
www.evaluation.icttestbed.org.uk

Collaborative Action Research Network: www.mmu.ac.uk/carn/

Practitioner research network: www.TeacherResearch.net

DfES Research Informed Practice Site: www.standards.dfes.gov.uk/research/

Database of current educational research in the UK: www.ceruk.ac.uk/ceruk/

Note

[1] It may be that what I am trying to describe corresponds approximately to the distinction between 'Mode 1' and 'Mode 2' knowledge (Gibbons et al, 1994, cited in the OECD/CERI guidelines for reviews of national educational research and development systems [OECD/CERI, 2000]).

[2] A version of this article was first published in *The Enquirer* (the Cantarnet newsletter), July 2002.

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