Quality educational research outputs and significance of impact: enduring dilemma or stimulus to learning transformations between multiple communities of practice?

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Abstract

With the approach of the new Research Excellence Framework (REF) in 2014, this paper assesses the implications for achieving both quality educational research outputs and significance of impact on educational policy and practice. It is divided into three main sections. The first outlines the background context of more than two decades of criticism of educational research, both in terms of its scientific rigour and perceived relevance. The second draws on theories of communities of practice and activity theory to provide an integrated conceptual framework for understanding more fully the nature of the current challenges facing educational research and possible solutions. The third section examines the practical implications, particularly in achieving sustainable learning transformations between academic researchers, policymakers and practitioners that can enhance both the quality of educational research output and the significance of impact.

Introduction

As we approach the Research Excellence Framework (REF) of 2014 and witness the publication of the controversial Goldacre Report on 'building evidence into education' (2013), it is an opportune time to reflect on educational research, both in terms of its perceived quality and impact.

The paper is structured in three main parts. The first section, by way of background and context, outlines two decades of criticism of educational research in terms of both its perceived quality and relevance, and how policymakers and the educational research community have responded. The second section conflates the conceptual insights of communities of practice and activity theory to help frame the nature of the current challenges and to envision a way forward. The third examines the practical implications, particularly in achieving sustainable learning transformations between professional stakeholder communities, in a way that can enhance both the quality of research output and the significance of its impact.

The Context

On both sides of the Atlantic, education as an academic discipline has found itself caught between a rock and a hard place. Severe criticisms first surfaced nearly two decades ago concerning not only its perceived lack of relevance to educational policy and practice but also its lack of scientific rigour. Tooley and Darby (1998, p.6) in the UK, for instance, referred to much educational research going 'unnoticed and unheeded by anyone else', while Kaestle (1993) in America mourned what he described in the title of his paper as 'the awful reputation of educational research'. Writing from a Scandinavian perspective, Langemann (2000) likewise described a situation in which educational research was demeaned by other disciplines, ignored by practitioners and criticised by policymakers and the public at large.   Such criticisms were reflected in the relatively poor performance of educational research in the Research Assessment Exercises (RAEs) of 2001 and 2008 (Biesta, Allan and Edwards, 2011; Furlong, 2011). All too frequently, it had been denigrated for being poorly communicated and disseminated; too far removed from what really matters; too progressive to be taken seriously by policymakers; and too esoteric and discursively impenetrable to be of much use to practitioners and lay audiences (Gardner, 2011, p.543).

Labaree (2004), far from defending the academic reputation of educational research in his insightful analysis of 'Ed schools', accepted the charge of enduring mediocrity, while offering the apology that education faculties faced peculiar problems above and beyond those of other academic disciplines: namely, the competing pressures to train teachers, conduct leading-edge research and train educational researchers – competing demands which resulted in an inevitable trade-off between achieving academic excellence and professional

relevance. In terms of expectations of REF, this translates into a conflict between, on the one hand, producing quality *outputs* to satisfy the publication requirements of prestigious research journals, and, on the other, to satisfy *impact* requirements in assisting school improvement.

From such an analysis it would be unfair to apportion blame entirely to the educational research community. Whitehall is so remote from the frontline that civil servants 'often have no idea what impact the policies they are in charge of have on the ground' (Hamilton et al., 2010, p.10), while politicians and the media have unrealistic expectations of education in solving society's problems combined with a tendency to oversimplify complex issues (Levin, 2004). As Gardner (2011, p.544) points out:

> Ultimately, our research may be transformational but as a rule it simply does not have the immediacy or clarity of impact that in other fields a new drug or technological innovation might have.

There are no ready answers or quick fixes to complex educational problems, especially those based on policies driven by idealism, ideology or bigotry, bereft of the understanding and insights that high quality educational research can provide.

Given the seriousness of the debate, over the past decade neither academics nor policymakers have failed in their duty to reflect. In the words of Gardner (2011, p.555), criticisms have helped to 'blow away some of the cobwebs of complacency out of our collective consciousness'. As a result, two high-profile research projects, the Teaching and Learning Research Programme (TLRP) across the UK (2000-2011), with a record £43 million investment, and the Applied Educational Research Scheme (AERS) in Scotland (2004-2008), with a £2 million investment from the Scottish Funding Council (SFC), were launched to address these concerns. The projects had similar goals in prioritising research into teaching and learning; the production and application of research knowledge; the building of research capacity across stakeholder communities; improving the quality of educational research; and improving collaboration.

The achievements of both projects have been well-documented in special editions of the *Scottish Educational Review* (2007, volume 39, issue 1), in the case of the AERS, and *Research Papers in Education* (2011, volume 26, issue 3) in the case of the TLRP. Both were well received by all sections of the educational community, attracting international interest and acclaim (James and Pollard, 2011; Brown, 2007; Pollard, 2007). The programmes fully engaged the wider professional community through publications and the dissemination and discussion of research findings at conferences and seminars through a Strategic Forum for Research in Education (SFRE) in association with the British Educational Research Association (BERA) and the Economic and Social Research Council (ESRC). The TLRP also arranged a series of workshops in partnership with members of the Government's National Strategies Team at Westminster on the theme of 'reviewing what we have learned about

pedagogy and what we need in the future'. Key research findings were also distilled into the report, *Principles into Practice*, sent to every school in the country, while audiences across the globe were engaged in a series of international conferences.

Nevertheless, there is concern that a limited number of generously funded, time-limited research projects will be insufficient in themselves to achieve the systemic and cultural transformations necessary to ensure the sustainability of educational research capable of satisfying the impact requirement as well as maintaining the highest standards of academic excellence. In order to understand the nature of this challenge more fully, insights are drawn from two theoretical models, Wenger's conception of communities of practice (Wenger, 1998) and Engeström's activity theory (Engeström, 1999; 1987), which are conflated to help frame the nature of the challenges and to suggest possible long-term solutions.

Challenges and Potential Solutions: A Conceptual Framework

Achieving a closer alignment of interests and greater collaboration between professional stakeholder groups is a significant challenge. The groups can be said to occupy distinctive communities of practice (Wenger, 1998) and to operate within well-bounded activity systems (Engeström, 1999; 1987), each with particular and sometimes contrasting perceptions and priorities. Learning within such communities has been described by Wenger (1998, pp.52-53) as a 'negotiation of meaning' consisting of two inextricably connected dialectical elements. The first, *reification*, is a process of congealing experience through such tools as language, discourse, training, and agreed procedures and standards. It equates with what has been described as *hard* knowledge (Hildreth and Kimble, 2002) that can be readily formalised and transmitted. Reification also embodies the rules, conventions, guidelines and regulatory activities necessary to a human activity system. The second element, *participation*, is described as 'the social experience of living in the world in terms of membership in social communities and active involvement in social enterprises' (Wenger, 1998, pp.55-56). It is a long-term process of acculturation and personal adaptation within the community, generating *soft* knowledge (Hildreth and Kimble, 2002) that is more personal, to some extent tacit-implicit in nature, and consequently more difficult to share or transmit. For Wenger (1998) reification and participation are interdependent elements of a system that must coexist in equilibrium.   If matters are left 'unreified' there is insufficient material to anchor specifications and to co-ordinate or uncover divergent assumptions – the reason 'why lawyers want everything in writing' (p. 65). On the other hand, an overemphasis on reification can stifle 'iterative negotiation' in creating shared and agreed meaning – the reason 'why putting everything in writing does not seem to solve all our problems' (p. 65). This 'negotiation of meaning' is the basis of a dialectical exchange within and between communities of practice: a foundation for what Engeström (1987) describes as an opportunity for 'expansive learning' within and between

activity systems, and in confronting tensions and differences acting as 'a motive force for change and development' (Engeström, 1999, p.9).

In applying these theoretical constructs to professional communities of practice and activity systems within the field of education, three broad professional communities – each with a distinctive *Lebenswelt* or 'life-world' (Moran, 2012) in terms of shared experience, collective perception and habitus – can be discerned: those of educational researchers, policymakers and practitioners. This categorisation, drawing on Weber's ideal-type construct as an analytical device (Eliaeson, 1990), is inevitably a simplification of reality. Educational researchers, for instance, come from a variety of academic and professional backgrounds and encompass a wide range of epistemological traditions and methodological approaches frequently borrowed from other disciplines. Policymakers are also a diverse group. They include politicians, driven by a combination of political ideology and political pragmatism, along with civil servants entrusted with converting policies into practice. There are also policy activists or influencers, such as the media, along with charitable trusts willing to sponsor research that addresses their social and educational concerns. Practitioner communities are no less diverse, ranging from leaders and managers of schools, frontline teachers and teaching assistants, along with various professional support officers employed by local authorities. Nevertheless, despite such internal diversity, within these communities there is a general distinction to be drawn between them in terms of their perspectives and expectations of educational research (see Fig. 1).
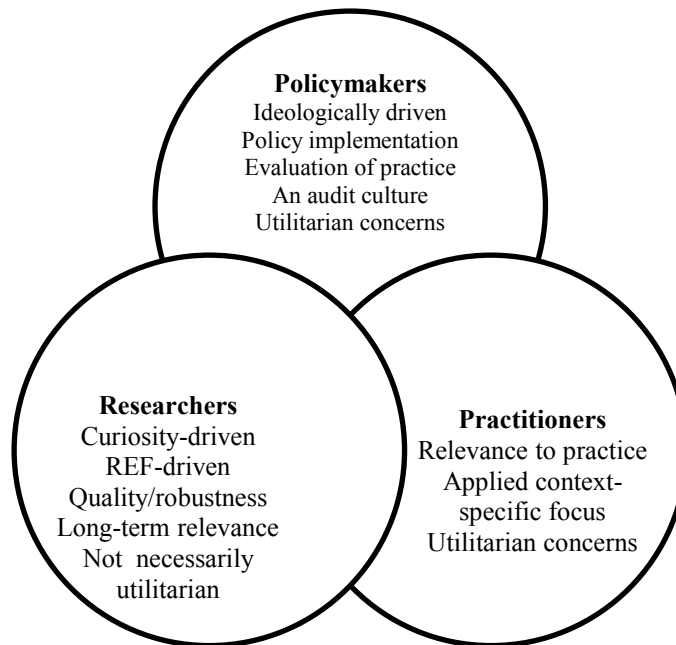

Fig.1: Multiple Communities of Practice/Activity Systems: Diversity versus Synergy of Perspectives and Expectations

For researchers, particularly those working in research-intensive universities, the priority is producing high quality research that will be accepted for publication in leading academic journals and satisfy REF *output* requirements. They are not necessarily dismissive of utilitarian concerns, but are more likely to see research impact in terms of long-term social benefits which are not necessarily predictable or immediately utilitarian, such as serendipitous spin-offs from blue-skies, curiosity-driven enquiry. Policymakers, on the other hand, are driven primarily by utilitarian priorities, whether to promote a particular ideology (e.g. neo-liberalism and the virtues of market competition) or to 'fix' what they see as wrong with the education system. From this perspective, education policies once implemented must be carefully monitored through inspection and research that is evaluative – contributory components of what has become described as an audit culture. Practitioners are also, by and large, utilitarian but with an emphasis on what works in their own schools and classrooms through practitioner-based research or action research which is context-specific. Practitioners are less interested in theoretical generalisation, especially when associated with normative prescription, which they fear will threaten professional autonomy, flexibility and innovation.

Reification has a significant function in school communities of practice, for example through various structures, regulatory frameworks and standardised procedures; but in the actual practice of teaching, McIntyre (2005) indicates how practitioners tend to rely on 'everyday craft knowledge', accumulated through experience and an intuitive understanding of particular children and classroom contexts. Such *soft* insider knowledge is gained through *participation* rather than *reification*, is often tacit-implicit and difficult to articulate or transmit. This stands in sharp contrast to highly reified, 'hard', 'codified research knowledge', rich in theory and compliant with the widely accepted academic conventions for high quality research. It is for this reason that McIntyre (2005, p.358) asserts that 'the kind of knowledge that researchers can offer is a very different kind of knowledge that classroom teachers need to use'. This is the essence of the dilemma facing educational researchers: trying to satisfy both the demand for high-quality scientific research outputs, as determined by peer review, and the demand for impact, as determined by policymakers and the expectations of practitioners.

Recent theoretical developments provide valuable insights into how a closer alignment of interests and greater collaboration can be achieved between researchers, policymakers and practitioners. Both notions of communities of practice (Wenger, 1998) and activity theory (Engeström, 1999) have recently emphasised the importance of an open systems perspective, in Wenger's terms (1998, pp.109-110) featuring 'constellations of communities of practice', linked by 'boundary objects' and 'reificative connections'. Similarly, Engeström (1999) refers to 'multiple interconnected activity systems' leading to 'dialectical exchange' and opportunities for 'expansive learning' or 'learning transformations' (Somekh and Saunders, 2007, p.184) between activity systems.   Such 'boundary encounters' in the pursuit of 'collaboration' and 'expansive learning' require highly skilled 'brokers' able to

engage across multiple communities in order to facilitate the exchange process. 'Brokers' require skills in translation, co-ordination and the adjustment of processes between contrasting perspectives. They also require legitimacy to influence the development of practice and mobilise attention to conflicting interests in order to resolve problems and provide participative connection (Wenger, 1998, pp.109-110).

The Implications for Educational Research

In combining such empirical and theoretical insights, a way forward is considered based on an analysis of three key interrelated perspectives: epistemology, incentivisation and sustainability.

Epistemological divisions have contributed significantly to the enduring dilemma of research excellence and research impact. Three basic educational research paradigms can be discerned: the positivist/postpositivist and interpretive traditions in academic research, and applied practice-based research in which practitioners have an active research role in evaluating professional practice, sometimes in collaboration with academics. The key features of these paradigms are outlined in Fig. 2.
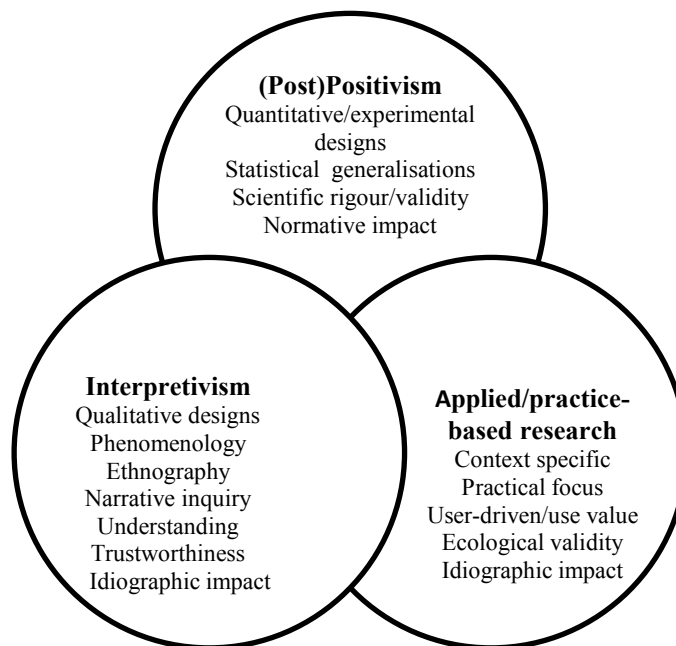

(Post)Positivism
Quantitative/experimental designs
Statistical generalisations
Scientific rigour/validity
Normative impact

Interpretivism
Qualitative designs
Phenomenology
Ethnography
Narrative inquiry
Understanding
Trustworthiness
Idiographic impact

Applied/practice-based research
Context specific
Practical focus
User-driven/use value
Ecological validity
Idiographic impact

Fig. 2: Educational Research Paradigms: Tension as an Opportunity for Learning Transformations

Describing these three forms of research as 'paradigms' requires qualification. Kuhn (1996, p. x) in his seminal work on scientific revolutions applied the concept of 'paradigm' exclusively to a currently accepted standard model of knowledge and understanding in the

natural sciences. Such a minimalist conception excluded the social sciences on account of the polysemic nature of their core concepts, multiple related meanings and associated diverse interpretations. However, paradigms in the social sciences can be understood more holistically by embedding knowledge and an understanding of truth in worldviews, ideologies, mindsets, episteme and discourse, which evolve and change over time (Foucault, 2002). Although the model depicted in Figure 2 is a simplification of a complex reality, firstly it serves to conceptualise the core divisions between the first two paradigms, positivism and interpretivism, graphically described by Pring (2000, p. 31) as 'warring traditions'. Although large-scale quantitative research in the positivist or postpositivist tradition is still widely regarded as the gold standard of social science research, the interpretive paradigm, rooted in qualitative methods, ethnography, phenomenology, case study and narrative enquiry, has greatly enhanced its reputation for methodological rigour. Its value is appreciated not only in complementing quantitative findings through mixed methods, but in offering a unique contribution in its own right by addressing different types of research question and in providing depth of understanding through a *thick* description of the particular (Ponterotto, 2006; Geertz, 1973), impossible from surveys and statistical analysis alone.   Consequently, a new lexicon of research quality has developed around qualitative enquiry, arguably more directly relevant to its nature and purpose, including revised evaluation criteria such as *credibility*, *trustworthiness* and *naturalistic generalisation* (Lincoln and Guba, 1985).

Secondly, the model (Fig.2) reflects the more recent switch in attention to debates about quality relating to the third paradigm, that of applied and practice-based research in education – 'forms of research which have been notoriously difficult to accommodate within the RAE in all disciplines, not just in education' (Furlong and Oancea, 2007, p.115). This paradigm shift can be understood in terms of Foucauldian episteme and discourse: not only in respect to epistemology and notions of truth per se, but also in respect to *who* should be involved in generating such knowledge and *how* such knowledge should be judged in terms of its utility to educational policy and professional practice. Nevertheless, despite the higher profile given to impact in the REF, publication outlets for practice-based research tend to be the so-called 'professional' journals generally deemed of lower status in academic circles. There is substantial evidence to show that academic research which complies with scientific definitions of rigour and methodological solidity can also have significant impact on educational policy and practice, further marginalising practice-based research. The TLRP, AERS and other projects, such as the Effective Pre-School and Primary Education Project (1996-2008) (Sylva et al., 2007) serve as good examples. Moreover, much applied practice-based research is on a small scale bereft of status and funding, its relative marginalisation undermining Pamela Munn's (2008) inclusive collaborative vision of building educational research capacity, not just within the academic research community but across the professional education sector as a whole.

A realisation of Munn's vision requires epistemological reflection and a reconsideration of the status of applied practice-based research. In so doing, academics have begun to question the privileged status ascribed to orthodox scientific research. Gardner (2011, pp.557-8), for example, has argued that it has been 'burdened by a pursuit of theory that is inappropriate to circumstances', and that 'to ensure that we do release the creativity and innovation that educational research is capable of inspiring and delivering, we need to have the courage and confidence to reduce our dependence on established orthodoxies and pseudo-theories'. At the same time the virtues of applied practice-based research have been vigorously promoted. Elliott's (2007) insightful rejoinder to critics outlines no less than sixteen criteria for determining the quality of action research, covering theoretical and methodological robustness, value for use (as perceived by practitioners) and building capacity among teachers as potential agents of worthwhile educational change. Such applied practice-based research can have a major impact when it focuses on the concerns of frontline teachers; empowers teachers to reflect on practice through research-informed pedagogy; facilitates networking and collaboration between practitioners as well as between practitioners and researchers; and collects case study evidence in 'sufficient detail to be of universal significance to other teachers' (Elliott, 2007, p.239). Menter, recalling his experience of the Research to Support Schools of Ambition project (part of the AERS initiative) spoke in similar vein when emphasising the importance of schools taking a lead in defining and implementing their own transformations, with localised impact being no less significant in its 'benefit to the wider community' through the dissemination and diffusion of local experience (Hamilton et al, 2010, p.15).

One epistemological problem related to applied practice-based research is the challenge of tapping the 'soft', 'tacit-implicit', 'everyday craft knowledge' of teachers. A literal interpretation of Polanyi's (1967, p.4) definition of tacit knowledge – that 'we know more than we can tell' – would logically render its complete externalisation impossible. Nevertheless the sharing of experience through research collaboration, dialogue and professional networking has the potential to transform a substantial proportion of tacit knowledge into explicit knowledge that can be externalised when written down, articulated, discussed and debated (Nonaka, 1991). Applied practice-based research therefore has the potential to make a significant contribution to theory generation. Establishing national data banks of high quality practice-based case studies with ready online access can help facilitate this process.

If high quality applied practice-based enquiry is to be afforded the status it deserves it cannot be evaluated according to identical criteria for theory-based academic research. Oancea and Forlong (2007) argue for a cultural, philosophical dimension to research assessment, which is largely absent from recent official discourses of research quality. In particular, they advance a case for a synergy of three domains of quality/excellence in applied practice-based research based on a neo-Aristotelian analysis of the *theoretical*, *technical* and *practical* components of knowledge. They fall short of setting new standards

of quality; but Anderson and Herr (1999) provide a useful alternative framework of evaluation based on five new validity criteria, which specifically address the practical, impact component of knowledge in reflecting more accurately the nature and purpose of applied practice-based research, encompassing inclusion, collaboration and engagement in effecting expansive learning and learning transformations between multiple communities of practice:

- *outcome validity*: the degree of success in resolving the problem

- *process validity*: how framing and working on the problem facilitates learning

- *democratic validity*: evidence of collaboration and stakeholder participation

- *catalytic validity*: the engagement, energising and commitment of participants

- *dialogic validity*: the extent to which the conclusions are supported by others with knowledge of the local context (the principle of 'transferability')

In turning to the issue of incentivisation, it must first be said that school leaders and teachers are already working at full stretch in fulfilling their teaching and administrative duties, while academic researchers, although more conscious of the importance of impact, are primarily motivated by peer review and publication in world-class academic journals. Providing incentives for both communities to engage in practice-based research is therefore challenging.

From an epistemological perspective, raising the status of applied practice-based research will be crucial, both in terms of attracting more funding and in providing incentives for practitioners and academics to engage in such school-based research projects. However, this will be insufficient in itself. Following Wenger's insights of the need for 'brokers' across communities of practice to facilitate learning transformations, key staff will need to be identified and provided with incentives to act in such crucial roles. Teachers with enhanced responsibilities for school improvement are an obvious possibility, but with the recent demise of the Advanced Skills Teacher and Excellent Teacher appointments in English schools, and their eventual replacement with 'leading practitioners', the future looks uncertain, as there is no statutory requirement on schools to appoint staff to such positions. Moreover, the precise nature of the role is yet to be determined, other than to say that the priority will be in leading initiatives in developing, implementing and evaluating policies and practices in the workplace to contribute to school improvement. The part that applied practice-based research is to play remains to be seen.

In Scotland chartered teachers with postgraduate research training are ideally placed as 'brokers'. There is also a close alignment between the standards of the Association of Chartered Teachers of Scotland (ACTS) and the new Standards for Career-Long Professional Development (SCLPD), which make explicit reference to the importance of 'enquiry and

research', underpinned by three 'professional actions': an 'understanding of research and its impact on education'; 'to engage in practitioner enquiry to inform pedagogy, learning and subject knowledge'; and 'to lead and participate in collaborative practitioner enquiry (GCT Scotland, 2012, p.10).

'Leading practitioners' in English schools and chartered teachers in Scottish schools should have the expertise to support and enlarge the use of educational research, especially if firmly embedded in the school improvement agenda, career trajectories and reward structures. A third, overlapping group of potential 'brokers' are teachers already engaged in part-time doctoral study, who can relate research directly to their professional interests and provide a rich pool of talent in developing stronger research cultures in schools. All three groups can, for example, assist in the dissemination of practitioner and action research findings to a wider practitioner audience by encouraging and assisting teachers to publish their thoughts and research findings, so that tacit-implicit knowledge can be externalised and shared in helping to promote dialogue, critical reflection and the dissemination of best practice (Wilkins, 2011). They are also well placed to liaise with academics in marshalling external support for school-based research. Much can be gained from the 'three' professional communities working in partnership on research and writing on topics of mutual interest because they can bring together a rich diversity of perspectives and complementary skills.

Finally, in addressing the issue of sustainability, there is no doubt that this was uppermost in the strategic planning of both the TLRP and AERS, for example, through the inception of SFRE seminars and workshops designed to bring researchers, policymakers and practitioners together to engage in dialogue and establish sustainable collaborative networks. However, there is a danger that the initial momentum will be lost with the withdrawal of the generous funding which supported these high-profile initiatives. Raising the status of applied, practice-based research as a means of providing incentives for both academics and practitioners on account of its relevance will certainly be important to sustainability, but former ad hoc initiatives will need to be replaced by a more strategic approach.

The Goldacre Report (2013) directly addresses this issue with a number of recommendations to raise both the profile and the expertise of the teaching profession in carrying out school-based research to improve pedagogical practice. The suggestion that research agendas should be determined by teachers (as frontline practitioners) is to be welcomed, as research can then be prioritised on matters of greatest concern to schools in their endeavour to improve professional practice and educational outcomes. However, Goldacre's suggestion that such research be in the form of randomised controlled trials is contentious and harks back to the epistemological debate on the relevance of positivistic research designs to social and educational problems. I am not questioning the value of experimental research in education, but as Phillips (2005, pp.593-595) eloquently pointed out eight years ago, there were even major discoveries in the natural sciences in which

'randomised controlled studies played no role at all'; that it is time for social scientists to shake off what he describes as 'physics envy'; and that there is ample evidence to support the need for 'a much broader view of the nature of rigorous scientific inquiry' – to address, it might be added, the complex issues and problems facing schools today. In transcending the recommendations in the Goldacre Report (2013), a wider range of strategic options can be suggested, including:

- Building broadly based research expertise into the training and continuing professional development of teachers, leaders and senior managers in schools, with corresponding incentives through promotion and long-term career trajectories linked to achievement in research-informed practice

- Acknowledging that research-based enquiry is essential to meaningful reflection on practice through the provision of adequate time and financial and material resources to ensure that such research takes place in schools on a regular and systematic basis

- Exploring the potential role of local authorities and teaching school alliances in initiating, supporting and mediating applied practice-based research in partnership with and between schools and university departments

- Enhancing the strategic role of various research associations such as BERA in engaging practitioners, academic researchers and policymakers at annual conferences, in forming research interest groups and in collaborating in the production and publication of cutting-edge research

Conclusion

Two decades of soul-searching to address the criticisms of educational research have resulted in a number of high-profile and highly successful policy research initiatives. However, it has been argued that such time-limited projects are no guarantee of sustained reform and change. In order to understand both the nature of the underlying problems and potential solutions more fully, an analysis was undertaken based on a conflation of insights drawn from the tensions between multiple communities of professional practice operating contrasting activity systems but with the potential to work more closely together through 'boundary objects' and the facilitative role of key 'brokers'.

For educational research to achieve excellence both in terms of quality academic outputs and significance of impact, a case has been made for serious epistemological reflection, especially in raising the status of applied practice-based research, inclusive of practitioners as well as academic researchers in the co-construction of knowledge. Just as partnerships between academia and the industrial-business sector have created 'polyvalent knowledge', capable of satisfying the needs of both communities of practice in producing research

outputs that lead to commercial innovation as well as high quality publications (Etzkowitz and Viale, 2010), educational research can be similarly steered towards achieving excellence in both scientific rigour and impact on research-informed policy and practice.

However, the transition from *enduring dilemma* to *learning transformations* between researchers, policymakers and practitioners will depend on more than epistemological reflection. More strategic approaches will be needed to provide incentives for collaboration across stakeholder communities and to ensure that structures are in place to sustain the progress initiated by the TLRP, AERS and other such high-profile projects.

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